DRAFT
ENVIRONMENTAL IMPACT REPORT

Significant Natural Resource Areas Management Plan

PLANNING DEPARTMENT
CASE NO. 2005.1912E

STATE CLEARINGHOUSE NO. 2009042102

Volume 1 – Draft EIR

AUGUST 2011

SAN FRANCISCO
PLANNING
DEPARTMENT

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Written comments should be sent to:
Environmental Review Officer | 1650 Mission Street, Suite 400 | San Francisco, CA 94103



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DATE: August 31, 2011
TO: Distribution List for Significant Natural Resource Areas Management Plan Project
FROM: Bill Wycko, Environmental Review Officer
SUBJECT: Request for the Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project (2005.1912E)

This is the Draft of the Environmental Impact Report (EIR) for the Significant Natural Resource Areas Management Plan Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, the Planning Department will prepare and publish a document titled "Comments and Responses" that will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with a notice of the date reserved for certification of the EIR; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting(s) and certified as a Final EIR if deemed adequate.

After certification, the Planning Department will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. The Final EIR will simply provide the information in one, rather than two, documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them. If you would like a copy of the Final EIR, please fill out and mail the postcard provided inside the back cover to the San Francisco Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADRP	archaeological data recovery plan
AE	Aesthetics
AF	Agriculture and Forest Resources
AMP	archaeological monitoring program
AQ	Air Quality
ARB	California Air Resources Board
BA	Balboa
BAAQMD	Bay Area Air Quality Management District
BG	Billy Goat Hill
BH	Bernal Hill
BI	Biological Resources
BMP	best management practice
BO	biological opinion
BP	Brooks Park and Lakeview/Ashton Mini Park
BV	Buena Vista Park
C-APE	CEQA Area of Potential Effect
CCC	California Coastal Commission
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CH	Corona Heights
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CP	Cultural and Paleontological Resources
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
dbh	diameter at breast height
DBI	Department of Building Inspection
DC	Duncan-Castro
DP	Dorothy Erskine
DPA	dog play area
ED	Everson/Digby
EE	Environmental Evaluation
EIR	Environmental Impact Report
EM	Edgehill Mountain
EP	Environmental Planning
EPA	US Environmental Protection Agency
ERO	Environmental Review Officer
ESA	Endangered Species Act
FARR	Final Archaeological Resources Report
FEMA	Federal Emergency Management Agency
FI	15th Avenue Steps
FIRM	Flood Insurance Rate Map
FP	Fairmount Park
GC/OH	Glen Canyon Park and O'Shaughnessy Hollow
GGNRA	Golden Gate National Recreation Area

ACRONYMS AND ABBREVIATIONS

GGRH	Golden Gate Heights Park, Grandview Park, Hawk Hill, and Rock Outcrop
GHG	greenhouse gas
GIS	Geographic Information System
GR	General Recommendations
HRE	historical resources evaluation
HRER	historic resource evaluation response
HY	Hydrology and Water Quality
HZ	Hazards and Hazardous Materials
IB	India Basin Shoreline Park
IG	Interior Greenbelt
IPM	Integrated Pest Management
KH	Kite Hill
LM	Lake Merced
LS	locally sensitive
LTS	Less Than Significant Impact
LTS/M	Less Than Significant Impact with Mitigation
LU	Land Use and Land Use Planning
MA	management area
MBTA	Migratory Bird Treaty Act
MD	Mount Davidson
ME	Mineral and Energy Resources
MLD	Most Likely Descendant
MMT	million metric tons
$MMTCO_2e$	million gross metric tons of CO_2e
MP	McLaren Park
mph	miles per hour
msl	above mean sea level
NAHC	Native American Heritage Commission
Natural Areas	Significant Natural Resource Areas
NFIP	National Flood Insurance Program
NI	No Impact
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OSHA	Occupational Safety and Health Administration
OW	Golden Gate Park Oak Woodlands
PL	Pine Lake
PM_{10}	inhalable particulate matter
$PM_{2.5}$	fine particulate matter
PP	Palou-Phelps
PS	Potentially Significant Impact
RE	Recreation
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
S	Significant Impact
SB	Senate Bill
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SFGS	San Francisco garter snake
SFHA	special flood hazard area

ACRONYMS AND ABBREVIATIONS

SFPUC	San Francisco Public Utilities Commission
SFRPD	San Francisco Recreation and Park Department
SMCMVCD	San Mateo County Mosquito and Vector Control District
SNRAMP	Significant Natural Resource Areas Management Plan
SP	Sharp Park
SU	Significant and Unavoidable Impact
SU/M	Significant and Unavoidable Impact with Mitigation
SWMP	stormwater management plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TK	Tank Hill
TAC	toxic air contaminant
TP	Twin Peaks
TSS	total suspended solids
UCMP	University of California Museum of Paleontology
URBEMIS	Urban Land Use Emissions Model
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VP	Bayview Park
WPA	Works Progress Administration
WS	Wind and Shadow

GLOSSARY

A Horizon—In a soil profile, the mineral horizon that forms at the surface or below an O horizon (dark-colored surface accumulation of organic matter). Characterized by the accumulation of decomposed organic matter mixed with solid mineral grains, however the mineral portion of the matrix is dominant. Typically darker in color than underlying horizons.

A zone—A FEMA Flood Zone designation for high risk zones, with a 1% annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones on the FEMA Flood Insurance Rate Map.

Adaptive management—A flexible, learning-based approach to managing complex ecosystems.

Ambient air—Outside air; any portion of the atmosphere not confined by walls and a roof.

Ambient noise—The background noise in an area or environment, being a composite of sounds from many sources near and far.

Anaerobic process—A process which only occurs in the absence of molecular oxygen.

Architectural resource—The preferred term to refer to a building or structure.

Attainment—A designation used when an area meets an air quality standard.

B Horizon—In a soil profile, the mineral horizon that forms below and A, E (matrix characterized by loss of clay, soluble iron, soluble aluminum, organic matter, or some combination of these), or O horizon and shows little or no evidence of the original sediment or rock structure and is primarily characterized by illuvial concentrations of clay, iron, aluminum, humus, carbonates, gypsum, or silica.

Basal area—A measure, typically in square feet per acre, of the area covered by trees within a given urban forest. Basal area is used as an index of tree production.

Carbon sequestration—The removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests, and soils) through physical or biological processes, such as photosynthesis.

CEQA area of potential effects (C-APE)—The geographic area or areas within which the proposed project may directly indirectly cause alterations in the character or use of historical resources, if any such properties exist. The C-APE is influenced by the scale and nature of a proposed project and may be different for different kinds of effects caused by the project. The C-APE is likely to be the location physically inspected for cultural resources.

Cherry picker—A maneuverable vertical boom with an open bucket or cage at the end from which a worker can perform aerial work such as pruning trees or repairing electrical lines.

Chippage—Flakes resulting from the process of human modification to lithic materials.

Cultural resource—A generic term that may be used to refer to architectural resources, archaeological resources, and/or traditional cultural properties, or sacred sites regardless of National Register of Historic Place or California Register of Historical Resources evaluation.

Diameter at breast height (dbh)**—**A standard means of tree measurement, with the diameter of the trunk measured at breast height, defined as 4.5 feet above the forest floor on the uphill side of the tree.

Discharge—The flow of surface water into a stream or canal or the outflow of groundwater from a flowing artesian well, ditch, or spring. Also refers to the discharge of liquid effluent from a facility.

Ecological restoration—The process of repairing damage caused by humans to natural systems.

Ecotone—A transitional zone between two vegetation communities that contains the characteristic species of each community.

GLOSSARY

Escape habitat—Natural or man-made features that allow animals to avoid predators or other threats.

Expansive soils—Soils or rocks characterized by clayey material that shrinks and swells as it dries or becomes wet, respectively. Expansive soils are subject to changes in volume and settlement in response to wetting and drying, often resulting in severe damage to structures.

Extirpate—To remove or destroy totally.

Farmlands of Significance

Prime Farmland is land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed.

Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production.

Unique Farmland does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has been used for the production of specific high-economic-value crops.

Farmland of Local Importance is either currently producing crops or has the capability of production but does not meet the criteria of the categories above.

Grazing Land is land on which the vegetation is suited to the grazing of livestock.

Floodplain—Land adjacent to a watercourse over which water flows in times of flood. The limits of the floodplain are defined by the peak level of a 1-in-100-year return period flood.

Fossil fuel—A general term for subsurface combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the Earth's crust over hundreds of millions of years.

Freeboard—The space between the top of the transported materials and the top of the truck that is transporting the materials.

Fugitive dust—Fugitive emissions generally refer to those emissions that are released to the atmosphere by some means other than through a stack or tailpipe.

Greenhouse gas—A gas which traps solar radiation, such as carbon dioxide.

Ground-Borne vibration—The noise that is manifested inside a building or structure as a result of vibrations produced by a source located outside the building (and its foundations) and transmitted as vibration through the ground between the source and the building.

Groundwater recharge—Inflow to aquifers from precipitation, infiltration, through-flow, or other means that replaces groundwater lost through pumping or other forms of discharge. The process of water being added to the saturated zone *or* the volume of water added by this process.

Hazardous materials—Defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment.

GLOSSARY

Hazardous waste—Any material that is relinquished, recycled, or inherently waste-like and falls under Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damages materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including hazardous wastes, as defined by the Resource Conservation and Recovery Act, non-Resource Conservation and Recovery Act hazardous wastes, extremely hazardous wastes, and special wastes.

Herbaceous—Having the texture, color, and other characteristics of an ordinary foliage leaf; not woody.

Historic landscape—Landscapes or areas that are either 1) associated with an event or series of events of historical note; or 2) represent the visual perception of a particular period of civilization, a way of life, or patterns of living.

Historic resource—An ambiguous term that is sometimes used to refer to architectural resources or archaeological resources of the historic era.

Historical resource—Any property that is either listed in or eligible for listing in the California Register of Historical Resources.

Hydrology—The science that deals with the waters above and below land surfaces; their occurrence, circulation, and distribution, both in time and space; their biological, chemical, and physical properties; and their reaction with their environment, including their relation to living beings.

Integrated pest management—The use of multiple treatment methods to control undesirable weeds and other pests.

Integrity (archaeological or architectural)—A resource's "intactness" and the extent to which it resembles its original form.

Lateral Spreading—landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement, like water.

Liquefaction—The process of changing soil and unconsolidated sediments into water mixture immediately following an earthquake; often results in foundation failure, with sliding of the ground under buildings and structures.

Native—Grown, produced, or originating from a particular geographic area.

Neotropical migrant—A bird that breeds in North America and spends the nonbreeding season in warmer climates, often in Central and South America.

Nonnative—Not originating from the current geographic area.

Paleontological resource—Fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period.

Particulate matter—Tiny solid or liquid particles, generally soot and aerosols.

Passive recreation—Recreational activities that occur in a natural setting and that require minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

Pathogen—A disease-causing agent, especially a living microorganism such as a bacterium or fungus.

Riparian—land next to a natural watercourse such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank.

GLOSSARY

Rookery—Colony or aggregation of animals of the same species.

Roosting habitat—Natural or man-made features on which birds perch to rest or sleep.

Sacred site—Locality of traditional significance or importance to a Native American community.

Scenic highway—A highway from which a high quality scenic natural landscape can be seen by travelers and with little intrusion by development.

Scenic resource—The visible physical features on a landscape.

Scenic vista—A visually appealing distant view.

Scrub—Low trees or shrubs collectively.

Sediment Load—The total quantity of sediment, as measured by dry weight or volume, that moves past a site during a given time.

Sedimentation—The deposition of material suspended in a stream system, whether in suspension (suspended load) or on the bottom (bedload).

Sensitive receptor—People or institutions with people that are particularly susceptible to illness from environmental pollution, such as the elderly, very young children, people already weakened by illness (e.g., asthmatics), and persons engaged in strenuous exercise.

Sensitive species—Species that are listed on the California Native Plant Society plant list or *Inventory of Rare and Endangered Vascular Plants*.

Siltation—Sediment influx from either erosion or from sediment carried into a water body by inflowing rivers and tributaries.

Social trail—An undesignated, user-developed pathway that has developed through use of a Natural Area.

Special status species—Species that are accorded special status because of their recognized rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection in federal or state endangered species legislation. Others have been designated sensitive species or species of special concern on the basis of adopted policies of federal, state, or local resource agencies. These species are referred to collectively as special-status species.

Subsidence—A lowering of the land surface in response to subsurface weathering, collapse or slow settlement of underground mines, or the production of subsurface fluids such as ground water or oil.

Suspended particulates (PM_{10} and $PM_{2.5}$)—Particulate matter is a class of air pollutants that consists of solid and liquid airborne particles in an extremely small size range. Particulate matter is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter.

Topsoil—Surface soil usually including the organic layer in which plants have most of their roots and which a farmer turns over in plowing.

Understory—The shrubs and plants growing beneath the main canopy of a forest or stand of trees.

Unique archaeological resource—An archaeological property that meets the criteria listed in Section 21083.2 of the California Public Resources Code. An archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge there is a high probability that it meets one of a set of criteria.

Urban forest—A significant stand of nonindigenous trees.

GLOSSARY

V zones—A FEMA Flood Zone designation for high risk zones that consist of coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones on the FEMA Flood Insurance Rate Map.

Viewshed—The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

Wetland—A zone periodically or continuously submerged or having high soil moisture, which has aquatic or riparian vegetation components and is maintained by water supplies significantly in excess of those otherwise available through local precipitation.

Williamson Act—Also known as the Land Conservation Act of 1965, this act provides for lowered property taxes for lands maintained in agricultural and certain open space uses. Under a Williamson Act contract, generally the landowner agrees to limit the use of the land to agriculture and compatible uses for a period of at least 10 years. In return, the land is taxed at a rate based on the agricultural production of the land, rather than its real estate market value.

Windthrow—The effects of wind on a stand of trees.

Wind-toughened edge trees—Trees in a stand that have become tough or resistant to the wind.

I. SUMMARY

I.A PROJECT SYNOPSIS

Fragments of unique plant and animal habitats within San Francisco and Pacifica, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks that are managed by the San Francisco Recreation and Park Department (SFRPD). In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan; see Appendix E for a copy of this plan.

Over the course of several years, the SFRPD developed a new Significant Natural Resource Areas Management Plan (SNRAMP), with the final draft plan based on the 1995 plan published in February 2006. This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 of which are in San Francisco and one of which (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

The SNRAMP delineates the acreage within each Natural Area into management area categories based on management priorities—MA-1, MA-2, and MA-3. The management area categories represent differing levels of sensitivity, species presence, and habitat complexity. The SNRAMP prescribes both general management activities that apply to all Natural Areas and management activities specific to each Natural Area.

I.B SUMMARY OF PROJECT ALTERNATIVES

A number of alternatives were analyzed that would avoid or substantially lessen some of the significant effects of the project. These alternatives, based on public comments received during the Notice of Preparation scoping period, are fully addressed in Chapter VII (Alternatives) of this document, include the following:

- No Project Alternative—Under this alternative, the SFRPD would continue with management activities authorized under the 1995 management plan.
- Maximum Restoration Alternative—This alternative seeks to restore native habitat and convert nonnative habitat to native habitat wherever possible throughout the Natural Areas, including all management areas.

- Maximum Recreation Alternative—This alternative seeks to restore and improve recreational access to the Natural Areas wherever it does not interfere with the continued existence of native species and federally or state-listed sensitive species.
- Maintenance Alternative—This alternative seeks to maintain the current distribution of native and nonnative habitat and species throughout the Natural Areas. Under this alternative, there would be no conversion of nonnative habitat to native habitat; other features of the Natural Areas also would be retained.

The Maximum Restoration Alternative is the Environmentally Superior Alternative.

Table 1 summarizes the effects of the proposed project and alternatives.

I.C AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The Environmental Planning (EP) Division of the San Francisco Planning Department has prepared this Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) (*California Public Resources Code*, Sections 21000-21177) and the Guidelines for Implementation of the California Environmental Quality Act (*California Code of Regulations*, Title 14, Sections 15000-15387). It evaluates environmental impacts associated with the project, identifies feasible mitigation measures to reduce these impacts to a less than significant level, and includes improvement measures to further reduce impacts identified as less than significant.

EP issued a Notice of Preparation (NOP) for the proposed project and published an environmental review notice in the *San Francisco Examiner* and *Pacifica Tribune* on April 22, 2009. During the 30-day public review period for the NOP, which began on April 22, 2009, and ended on May 26, 2009, comment letters were received from public agencies and individuals. Additional comments were also received during the May 12 and May 14, 2009, public scoping meetings. The NOP, Initial Study, and scoping report are included in Appendix A (Notice of Preparation and Scoping Report) of this EIR, and are considered in the EIR analyses, where appropriate.

Throughout the scoping process, 45 sets of scoping comments were received. Comments on the NOP addressed the following topics and are summarized in the scoping report in Appendix A:

- Sharp Park Golf Course
- General Project
- General CEQA
- General Environmental

Table 1
Summary of Environmental Effects

	Proposed Project	Maximum Restoration Alternative	Maximum Recreation Alternative	Maintenance Alternative	No Project Alternative
Land Use and Land Use Planning	LTS	LTS	LTS	LTS	NI
Aesthetics	LTS	LTS	LTS	LTS	LTS
Cultural and Paleontological Resources	SU/M	SU/M	LTS/M	LTS/M	LTS/M
Cultural and Paleontological Resources (Cumulative)	SU	SU	LTS	LTS	LTS
Wind and Shadow	LTS	LTS	LTS	LTS	LTS
Recreation	LTS/M	LTS/M	LTS	LTS	LTS
Recreation (Cumulative)	SU	SU	LTS	LTS	LTS
Biological Resources	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Biological Resources (Cumulative)	SU	SU	LTS	LTS	LTS
Hydrology and Water Quality	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Hazards and Hazardous Materials	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Agriculture and Forest Resources	LTS	LTS	LTS	LTS	LTS
Air Quality	SU/M	SU/M	SU/M	SU/M	LTS
Air Quality (Cumulative)	SU/M	SU/M	SU/M	SU/M	LTS

LEGEND:

SU = Significant and unavoidable impact
SU/M = Significant and unavoidable impact with mitigation
LTS/M = Less than significant impact with mitigation
LTS = Less than significant impact
NI = No impact

- Cumulative Impacts
- Land Use and Land Use Planning
- Aesthetics
- Cultural and Paleontological Resources
- Transportation and Circulation
- Noise
- Air Quality
- Wind and Shadow
- Recreation
- Utilities and Service Systems
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials.

The Draft EIR has considered the CEQA-related concerns and other issues raised through the scoping process. These issues are addressed in Chapter V (Environmental Setting and Impacts) and Section VI.F (Effects Found Not to be Significant).

The following resources are addressed in this EIR:

- Land use and land use planning (Section V.B);
- Aesthetics (Section V.C);
- Cultural and paleontological resources (Section V.D);
- Wind and shadow (Section V.E);
- Recreation (Section V.F);
- Biological resources (Section V.G);
- Hydrology and water quality (Section V.H);
- Hazards and hazardous materials (Section V.I);
- Agriculture and forest resources (Section V.J); and
- Air quality (Section V.K).

The following resources are addressed only in the Initial Study:

- Population and housing;
- Public services; and
- Mineral and energy resources.

For the following resources found to have less than significant effects in the Initial Study, additional or clarifying text is provided to address the concerns expressed in comments received during the NOP scoping process:

- Transportation and circulation (Section VI.F.1);
- Noise (Section VI.F.2);
- Greenhouse gas emissions (Section VI.F.3);
- Utilities and service systems (Section VI.F.4); and
- Geology and soils (Section VI.F.5).

I.D SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 2 summarizes the significant environmental impacts of the proposed project, mitigation measures, and the impact level following mitigation. Throughout this table, the following identifiers are used to identify the impacts and mitigation measures:

- LU – Land Use and Land Use Planning
- AE – Aesthetics
- CP – Cultural and Paleontological Resources
- WS – Wind and Shadow
- RE – Recreation
- BI – Biological Resources
- HY – Hydrology and Water Quality
- HZ – Hazards and Hazardous Materials
- AF – Agriculture and Forest Resources
- AQ – Air Quality
- ME – Mineral and Energy Resources

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
LAND USE AND LAND USE PLANNING			
Impact LU-1 Implementation of programmatic projects under the SNRAMP would not physically divide an existing community	LTS	Not applicable	LTS
Impact LU-2 Implementation of routine maintenance activities under the SNRAMP would not physically divide an existing community	LTS	Not applicable	LTS
Impact LU-3 Implementation of the Sharp Park restoration activities under the SNRAMP would not physically divide an existing community	LTS	Not applicable	LTS
Impact LU-4 Implementation of programmatic projects under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact LU-5 Implementation of routine maintenance activities under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project	LTS	Not applicable	LTS
Impact LU-6 Implementation of the Sharp Park restoration activities under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project	LTS	Not applicable	LTS
Impact LU-7 Implementation of programmatic projects under the SNRAMP would not have a substantial impact upon the existing character of the vicinity	LTS	Not applicable	LTS
Impact LU-8 Implementation of routine maintenance activities under the SNRAMP would not have a substantial impact upon the existing character of the vicinity	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact LU-9 Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial impact upon the existing character of the vicinity	LTS	Not applicable	LTS
Impact LU-10 The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact related to land use and land use planning	LTS	Not applicable	LTS
AESTHETICS			
Impact AE-1 Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on a scenic vista	LTS	Not applicable	LTS
Impact AE-2 Implementation of routine maintenance under the SNRAMP would not have a substantial adverse effect on a scenic vista	NI	Not applicable	NI

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact AE-3 Implementation of Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on a scenic vista	LTS	Not applicable	LTS
Impact AE-4 Implementation of programmatic projects under the SNRAMP would not substantially damage scenic resources	LTS	Not applicable	LTS
Impact AE-5 Implementation of routine maintenance under the SNRAMP would not substantially damage scenic resources	NI	Not applicable	NI
Impact AE-6 Implementation of Sharp Park restoration under the SNRAMP would not substantially damage scenic resources	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact AE-7 Implementation of programmatic projects under the SNRAMP would not substantially degrade the visual character or quality of the Natural Areas and their surroundings	LTS	Not applicable	LTS
Impact AE-8 Implementation of routine maintenance under the SNRAMP would not substantially degrade the existing visual character or quality of the Natural Areas and their surroundings	NI	Not applicable	NI
Impact AE-9 Implementation of Sharp Park restoration under the SNRAMP would not substantially degrade the existing visual character or quality of the Natural Areas	LTS	Not applicable	LTS
Impact AE-10 The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact on aesthetics	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
CULTURAL AND PALEONTOLOGICAL RESOURCES			
Impact CP-1 Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of historical architectural resources, including historic landscapes	LTS/M	**M-CP-1: Consultation with the San Francisco Planning Department** The SFRPD would coordinate with the San Francisco Planning Department's Historic Preservation Planners and would submit plans before constructing stabilizing and erosion control measures that require installation of structures, such as gabions, near any potentially eligible resources. The Planning Department would assist in determining if any proposed construction or other activities would impact identified historic resources under CEQA on a site-by-site basis; if such impacts may occur, the project would be required to be redesigned to avoid significant impacts to historic architectural resources. The Planning Department also would assess potential impacts on any historic landscapes that are present.	LTS
Impact CP-2 Invasive tree and vegetation removal and planting activities, as part of programmatic projects, would not result in a substantial adverse change in the significance of historic landscapes or urban forests	LTS	Not applicable	LTS
Impact CP-3 Invasive tree and vegetation removal activities as part of programmatic projects under the SNRAMP would not result in a substantial adverse change in the significance of the Golden Gate Park Historic District contributing sites	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-4	LTS	Not applicable	LTS
Invasive tree and vegetation removal and planting activities under the SNRAMP would not result in a substantial adverse change in the significance of historic landscapes or urban forests			
Impact CP-5	LTS	Not applicable	LTS
Invasive tree and vegetation removal as part of routine maintenance under the SNRAMP would not result in a substantial adverse change in the significance of the Golden Gate Park Historic District contributing sites			
Impact CP-6	LTS	Not applicable	LTS
Implementation of the Sharp Park restoration activities that include raising holes 10, 14, 15, and 18 would not result in a substantial adverse change in the significance of the Sharp Park Golf Course, a historic resource under CEQA			

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-7	SU/M	**M-CP-7: Documentation of the Sharp Park Golf Course**	SU
Implementing restoration activities to close Hole 12 of the Sharp Park Golf Course would result in a substantial adverse change in the significance of the golf course, a historic resource under CEQA		The SFRPD would document, or would retain a consultant to document, Sharp Park Golf Course before the wetland restoration activities take place. The National Park Service has published guidance for preserving cultural landscapes in Preservation Brief 36: Protecting Cultural Landscapes, Planning, Treatment and Management of Historic Landscapes and in the more complete Secretary of the Interior's Standards for Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes. The appropriate level of documentation would be selected by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation would consist of the following: • Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course; • Digital photographs of Sharp Park Golf Course; • A written history and description of Sharp Park Golf Course and its alterations. The professional historian would prepare the documentation and submit it for review and approval by a San Francisco Planning Department Preservation Specialist. The documentation would be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-8 Implementation of the Sharp Park restoration activity to construct a post and rail fence along the seawall of the golf course would not cause a substantial adverse change in the significance of the Sharp Park Golf Course, a historic resource under CEQA	LTS	Not applicable	LTS
Impact CP-9 Implementation of the Sharp Park restoration activity that requires modification of the Sharp Park Golf Course to create upland habitat on the east side of the lagoon and shorten or narrow Holes 10 and 13 would be a substantial adverse change in the significance of the golf course, a historic resource under CEQA	SU/M	M-CP-7 applies to this impact	SU
Impact CP-10 Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in Natural Areas of high archaeological sensitivity	LTS/M	**M-CP-10: Archaeological Monitoring Program for Programmatic Projects in Natural Areas with High Archaeological Sensitivity, Routine Maintenance Activities at Tank Hill and Lake Merced, and the Sharp Park Restoration Project** The following archaeological monitoring program (AMP) mitigation measure is required in order to avoid any potential adverse effect on accidentally discovered buried or submerged archaeological or historical resources as defined in CEQA Guidelines Section 15064.5(a)(c), as a result of SNRAMP programmatic projects in Natural Areas of high archaeological sensitivity and	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		routine maintenance activities at Tank Hill and Lake Merced. In addition, based on a reasonable potential that archeological resources may be present within the C-APE of the Sharp Park restoration project, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Sharp Park restoration on archaeological resources. Before implementation of the SNRAMP and the Sharp Park restoration project, the SFRPD shall retain a qualified archaeological consultant from the San Francisco Planning Department's pool of qualified archaeological consultants, as provided by the Department archaeologist. The archaeological consultant will prepare one or multiple AMPs that addresses the following impacts on archaeological resources: 1) programmatic projects in Natural Areas with high archaeological sensitivity, 2) routine maintenance activities in Tank Hill and Lake Merced Natural Areas, and 3) the Sharp Park restoration project. All plans and reports prepared by the consultant shall be submitted first and directly to the Environmental Review Officer (ERO) for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. Any AMP and/or data recovery programs required by this measure could suspend SNRAMP activities covered under this mitigation measure for up to four weeks. At the direction of the ERO, the suspension of construction could be extended beyond four weeks only if such a suspension were the only feasible means to reduce impacts to a less than significant level on a significant archaeological resource, as defined in CEQA Guidelines Sect. 15064.5 (a)(c). *Archaeological monitoring program*. The AMP will minimally include the following provisions: • The archaeological consultant, SFRPD, and ERO will meet and consult on the scope of each AMP reasonably before implementation of the SNRAMP. The ERO, in consultation with the Project Archaeologist, will determine what programmatic projects in which high-sensitivity Natural Areas and what routine maintenance activities in Tank Hill and Lake	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		Merced Natural Areas shall be archaeologically monitored. Additionally, the ERO and Project Archaeologist will determine which activities and portions of the Sharp Park restoration project will be archeologically monitored. In most cases, any ground-disturbing activities, such as demolition, excavation, grading, utilities installation, site remediation, etc. shall require archaeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context; • The archaeological consultant will advise all project contractors and Natural Areas Program staff to be on the alert for evidence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of discovery of an apparent archaeological resource. A standard EP ALERT Sheet will be issued to participating project contractors and Natural Areas Program staff. Additionally, Natural Areas Program staff will advise all project volunteers of the potential for archaeological resources; • The archaeological monitors will be on the project site according to a schedule agreed on by the archaeological consultant and the ERO until the ERO has, in consultation with the archaeological consultant, determined that project construction would have no effects on significant archaeological deposits; • The archaeological monitor will record and be authorized to collect soil samples and artifactual/ecofactual material warranted for analysis; and • If an intact archaeological deposit is encountered, all ground-disturbing activities in the vicinity of the deposit should cease. The archaeological monitor will be empowered to temporarily redirect project activities and heavy equipment until the deposit is evaluated. The archaeological consultant will immediately notify the ERO of the encountered archaeological deposit. After making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, the archaeological consultant will present the findings to the	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		ERO. If the ERO, in consultation with the archaeological consultant, determines that a significant archaeological resource is present and that it could be adversely affected by the project, at the discretion of the SFRPD, the situation shall be resolved by one of the following actions: • The project shall be redesigned so as to avoid any adverse effect on the significant archaeological resource, or • An archaeological data recovery program shall be implemented, unless the ERO were to determine that the archaeological resource is of greater interpretive value than research significance and that interpretive use of the resource were feasible. If the ERO requires an archaeological data recovery program to mitigate for adverse effects on the significant archaeological resource, it shall be conducted in accordance with an archaeological data recovery plan (ADRP). The project archaeological consultant, SFRPD, and ERO shall meet and consult on the scope of the ADRP. The archaeological consultant shall prepare a draft ADRP and submit it to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain; that is, the ADRP would identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods were practical. The ADRP shall include the following elements: • *Field Methods and Procedures.* Descriptions of proposed field strategies,	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		procedures, and operations; • *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures; • *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies; • *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program. • *Security Measures.* Recommended security measures to protect the archaeological resource from vandalism, looting, and unintentional damage; • *Final Report.* Description of proposed report format and distribution of results; and • *Curation.* Description of the procedures and recommendations for curating any recovered data having potential research value, identifying appropriate curation facilities, and summarizing the accession policies of the curation facilities. *Final Archaeological Resources Report.* The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods used in the archaeological monitoring or data recovery program. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the draft final report. Copies of the Draft FARR shall be sent to the ERO for review and approval. Once the FARR is approved, copies shall be distributed as follows: • One copy to the NWIC with a copy of the transmittal sent to the ERO;	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		and • Three copies to the EP division of the San Francisco Planning Department; EP shall also receive one unlocked, searchable PDF copy of the FARR on a CD or DVD, along with copies of any formal site recordation forms (CA DPR 523 series) and documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.	
Impact CP-11 Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in Natural Areas of moderate and low archaeological sensitivity	LTS/M	**M-CP-11: Accidental Discovery** Prior to any ground disturbing activity resulting from implementation of the SNRAMP, including Natural Areas of moderate and low archaeological sensitivity, a copy of EP's standard archaeological alert sheet will be issued to project staff. The project sponsor shall distribute the Planning Department archaeological resource "ALERT" sheet to the involved Natural Areas Program staff and volunteers, project prime contractor, any project subcontractors (including, but not limited to, demolition, excavation, grading, etc. firms), and any utilities firm involved in ground-disturbing activities. Prior to any ground-disturbing activities being undertaken, each contractor (or Natural Areas Program staff for projects without contractors) is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, including machine operators, field crew, supervisory personnel, etc. The project sponsor shall provide the ERO with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the "ALERT" sheet. Should any indication of an archaeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or SFRPD shall immediately notify the ERO and immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		If the ERO determines that an archaeological resource may be present within the project site, SFRPD shall retain the services of an archaeological consultant from the pool of qualified archaeological consultants maintained by the Planning Department archaeologist. The archaeological consultant shall advise the ERO as to whether the discovery is an archaeological resource, retains sufficient integrity, and is of potential scientific, historical, or cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by SFRPD. Measures might include: • Preservation *in situ* of the archaeological resource; • An AMP; or • An archaeological testing program. If an AMP or archaeological testing program is required, it shall be consistent with the EP division guidelines for such programs and as described above under M-CP-10. The ERO may also require that SFRPD immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions. The project archaeological consultant shall submit a FARR to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the AMP and/or ADRP. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR and associated items (i.e. site record forms) shall be distributed in the same numbers and to the same recipients outlined in M-CP-10.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-12	LTS/M	M-CP-11 applies to this impact	LTS
Implementation of routine maintenance under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in any of the Natural Areas, with the exception of Lake Merced and Tank Hill Natural Areas		**M-CP-12: Annual Archaeological Sensitivity Training for Natural Areas Program Staff Involved with Routine Maintenance Activities in all Natural Areas** SFRPD staff working within the Natural Areas will be trained by a qualified archaeologist regarding the potential for archaeological resources within the Natural Areas and how to identify such resources. The training will also include a review of penalties for looting and disturbance of these resources. At a minimum, the training will include the following: • Assigned archaeological sensitivity level of each Natural Area; • A discussion of the potential to encounter archaeological resources; • Instructions for how to identify archaeological resources; • Instructions for reporting observed looting, disturbances of known archaeological resources, or the presence of a previously unidentified archaeological site; • An overview of the AMP for routine maintenance activities and accidental discovery procedures in the Natural Areas (see M-CP-10 and M-CP-11, respectively); and • An overview of M-CP-18, Treatment of Human Remains and Associated or Unassociated Funerary Objects. It shall be the responsibility of SFRPD Natural Areas Program staff, at the beginning of any management activities involving persons outside of the Natural Areas Program, to educate volunteers or other personnel on the potential to encounter archeological resources and instructions for reporting the presence of potential resources to SFRPD Natural Areas Program staff.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-13 Implementation of routine maintenance under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in the Lake Merced and Tank Hill Natural Areas	LTS/M	M-CP-10 and M-CP-12 apply to this impact	LTS
Impact CP-14 Implementation of the Sharp Park restoration efforts under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources	LTS/M	M-CP-10 applies to this impact	LTS
Impact CP-15 Implementation of programmatic projects under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations	LTS/M	**M-CP-15: Coordination with EP Regarding Paleontological Resources Prior to Implementation of Programmatic Projects** To mitigate the potential for the SNRAMP to affect paleontological resources, this mitigation measure will apply to programmatic projects. The SFRPD shall coordinate with EP prior to conducting any programmatic projects that would result in ground disturbance. In such instances, EP shall review the proposed activities to determine if ground-disturbing activities could occur at or near bedrock or other geologic features of CEQA significance. If such features exist and could be affected by project activities, a training program will be conducted and an alert sheet will be disseminated to all field personnel. Any paleontological training will be conducted by a qualified paleontologist and will discuss the potential for such resources to exist in the Natural Area(s) and how to identify such resources. The training will also include a review of penalties for looting and disturbance of these resources. Alert sheets will be	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		issued for all such projects and will include the following: • A discussion of the potential to encounter paleontological resources; • Instructions for reporting observed looting of a paleontological resource; and • Instructions that if a paleontological deposit were encountered within a project area, all ground-disturbing activities in the vicinity of the deposit shall cease and the ERO shall be notified immediately. When unanticipated paleontological resources are encountered during programmatic project activities, all project activities shall stop, and a professional paleontologist shall be hired to assess the find and its significance. The findings shall be presented to the ERO who would decide the additional steps to be taken before work in the vicinity of the deposit is authorized to continue.	
Impact CP-16 Implementation of routine maintenance under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations	LTS/M	**M-CP-16: Avoidance of Surface Bedrock in Routine Maintenance Activities** To mitigate the potential for the SNRAMP to affect paleontological resources the following mitigation measure will apply to routine maintenance activities. Natural Areas Program staff and volunteers will avoid ground-disturbing activities in areas where surface bedrock exists. If routine maintenance activities cannot avoid bedrock, SFRPD will implement M-CP-15, discussed above.	LTS
Impact CP-17 Implementation of Sharp Park restoration activities under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations	LTS/M	**M-CP-17: Paleontological Training Program and Alert Sheet for the Sharp Park Restoration Project** To mitigate the potential for the Sharp Park restoration project to affect paleontological resources, the SFRPD shall arrange for a paleontological training by a qualified paleontologist regarding the potential for such resources to exist in the restoration area and how to identify such resources. The training shall also include a review of penalties for looting and disturbance of these resources. An alert sheet shall be issued and will include	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		the following: • A discussion of the potential to encounter paleontological resources; • Instructions for reporting observed looting of a paleontological resource; and • Instruct that if a paleontological deposit were encountered within a project area, all soil-disturbing activities in the vicinity of the deposit shall cease and the ERO would be notified immediately. If an unanticipated paleontological resource is encountered during project activities, all project activities shall stop, and a professional paleontologist shall be hired to assess the find and its significance. The findings shall be presented to the ERO who would decide the additional steps to be taken before work in the vicinity of the deposit was authorized to continue.	
Impact CP-18 Implementation of programmatic projects under the SNRAMP would disturb human remains	LTS/M	**M-CP-18: Human Remains, Associated or Unassociated Funerary Objects.** The treatment of human remains and of associated or unassociated funerary objects discovered during any ground-disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco (or San Mateo County Coroner if found at Sharp Park) and in the event of the Coroner's determination that the human remains are Native American remains, notification of the NAHC who shall appoint a Most Likely Descendant (Pub. Res. Code Sec. 5097.98). The archaeological consultant, SFRPD, and Most Likely Descendant shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact CP-19 Implementation of routine maintenance under the SNRAMP would disturb human remains	LTS/M	M-CP-18 applies to this impact	LTS
Impact CP-20 Implementation of Sharp Park restoration activities under the SNRAMP would disturb human remains	LTS/M	M-CP-18 applies to this impact	LTS
Impact CP-21 The proposed project, in combination with other planned and foreseeable future projects, would have a cumulatively considerable significant impact related to cultural and paleontological resources	SU/M		SU
WIND AND SHADOW			
Impact WS-1 Implementation of the programmatic projects under the SNRAMP would not result in significant ground-level wind hazards and windthrow risks	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact WS-2 Implementation of the routine maintenance activities under the SNRAMP would not result in significant ground-level wind hazards and windthrow risks	LTS	Not applicable	LTS
Impact WS-3 Implementation of the Sharp Park Restoration under the SNRAMP would not result in ground-level wind hazards and windthrow risks	NI	Not applicable	NI
Impact WS-4 The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively significant impact related to wind and shadow	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
RECREATION			
Impact RE-1 Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities	LTS	Not applicable	LTS
Impact RE-2 Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities	NI	Not applicable	NI
Impact RE-3 Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact RE-4 Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on the physical characteristics of existing recreation facilities	LTS	Not applicable	LTS
Impact RE-5 Implementation of routine maintenance projects under the SNRAMP would not have a substantial adverse effect on the physical characteristics of existing recreation facilities	LTS	Not applicable	LTS
Impact RE-6 Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on the physical characteristics of existing recreation facilities	LTS/M	**M-RE-6: Restoration of the Sharp Park Golf Course to 18 Playable Holes** The SFRPD would coordinate with a golf course consultant and would restore the playability of the Sharp Park Golf Course, which would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway to retain playability and flow of the course, thereby increasing the number of holes west of the highway to 15 and decreasing to three the number of holes to the east. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increase to five the number of holes to the east. The determination of where the replacement hole is constructed and whether additional holes need to be moved would require additional environmental review.	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact RE-7 The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to recreation	SU	None available	SU
BIOLOGICAL RESOURCES			
Impact BI-1 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on special status plant species	LTS/M	**M-BI-1a: Protection of Protected Species and Riparian and Wetland Habitat** Where there is potential for protected species or their habitats (plants, birds, terrestrial, and aquatic species) or other protected habitats, namely riparian and wetland habitat (as protected by California Department of Fish and Game, California Coastal Commission, San Francisco Bay Regional Water Quality Control Board and/or US Army Corps of Engineers) to be affected directly or indirectly by a programmatic project, the SFRPD will prepare and provide for ERO review a compliance plan that details the proposed project, whether any protected species, protected species habitat, riparian habitat, or wetland habitat exists, the appropriate life histories of such resources (as applicable to special status species), and how the project will achieve compliance with this mitigation measure, including details as to how the SFRPD will first avoid, then minimize and if necessary restore, and/or compensate for any impacts to protected species and/or their habitats or other regulated habitats. Where there is potential for impacts to protected species and/or riparian and wetland habitats that are regulated by state, federal and/or local agencies, the compliance plan shall identify those agencies, and the SFRPD shall coordinate with all applicable resource agencies to obtain the appropriate permits and/or consultation as required by state or federal law. This mitigation measure requires SFRPD to implement the following, subject to modification through the regulatory approval	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		processes required for an individual project: 1. To avoid disturbance to protected species, their habitats, and riparian or wetland habitat, the following measures will be implemented by the SFRPD: a. For protected species, a qualified SFRPD biologist shall survey for suitable habitat within the project area before the project begins, according to US Fish and Wildlife Service and California Department of Fish and Game protocol for the protected species having the potential to occur. If no protocol exists, surveys shall be conducted according to generally accepted survey methods. If individuals were found or if it is determined that the potential exists for protected species to be present, the SFRPD shall redesign the proposed project to avoid impacts on protected species. Avoidance/minimization measures shall include conducting project activities during periods of the species lifecycle when the species would not be affected or may be minimally affected by project activities. If it is infeasible to avoid disturbance of protected species, the SFRPD will contact the US Fish and Wildlife Service or California Department of Fish and Game and undertake appropriate consultation according to the California Endangered Species Act or Endangered Species Act (unless an existing Biological Opinion is already in place and the proposed activities fall under the actions of that Biological Opinion, as may be the case for impacts to the mission blue butterfly at Twin Peaks). Any additional requirements agreed to during consultation with the US Fish and Wildlife Service and California Department of Fish and Game, or other regulatory agencies, to protect the species would be implemented, including restoration and compensation, where required. b. Where there is potential for wetland or riparian areas to be affected by programmatic activities, the SFRPD shall coordinate with California Department of Fish and Game, California Coastal Commission, San Francisco Bay Regional Water Quality Control	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		Board, US Army Corps of Engineers and/or other applicable agencies to determine the jurisdictional boundaries of protected riparian and wetland habitat. SFRPD shall apply for all appropriate permits for effects to riparian areas and wetlands (including, but not limited to, US Army Corps of Engineers 404 permits, California Department of Fish and Game Section 1602 permits, San Francisco Bay Regional Water Quality Control Board 401 Water Quality Certifications, and coastal development permits). Any additional requirements to protect riparian and wetland habitat resulting from the regulatory approval processes would be implemented, including restoration and compensation, where required. c. As discussed in Section III.E.5, new trails would be designed to avoid sensitive species habitat and riparian and wetland habitat. Where habitat for protected species or riparian and wetland habitat cannot be avoided, the programmatic project would be required to restore and/or compensate for habitat losses in accordance with measures 4 and 5 of this mitigation measure. Restoration and/or compensation shall be required at a minimum of a 1:1 ratio of habitat affected to habitat restored and/or compensated. 2. To minimize disturbance to protected species, their habitat, and wetland and riparian habitat, as a result of programmatic projects, the following minimization measures will be implemented by SFRPD, as applicable. a. Post signs or install flagging and temporary fencing around protected species habitats and riparian and/or wetland habitats that are not being directly restored. No activities shall be allowed within fenced areas, including moving equipment, storing materials, or temporarily stockpiling soils. All exclusion fencing will be removed when work in the project area is completed. b. Where stream crossings are necessary, temporary stream crossings will be located in previously disturbed areas lacking riparian vegetation, pools, side ponds or other sensitive habitats unless	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		otherwise permitted by natural resource agencies for habitat improvement activities or hazard abatement. At a minimum, all temporarily impacted areas shall be restored to their previous condition. c. In or near riparian or wetland habitat, programmatic project activities shall be limited to the dry season (generally April 15 to October 15) and include protective practices such as the use of geotextile cushions and other materials if heavy equipment will result in rutting or soil displacement (i.e. timber pads, prefabricated equipment pads, thick vegetative slash, geotextile fabric) and/or vehicles with balloon tires shall be employed. d. Where protected species are potentially present, a biological monitor shall be required (as determined after appropriate consultation with US Fish and Wildlife Service and California Department of Fish and Game) during implementation of the proposed project. The biological monitor shall survey for protected species to ensure avoidance of those species, wherever feasible; where avoidance is not feasible, the monitor would relocate any species throughout implementation of the programmatic project, as permitted by natural resource agencies. The exact relocation sites and requirements for relocation shall be determined through consultation/coordination with US Fish and Wildlife Service and/or California Department of Fish and Game. 3. To minimize impacts from the continued use of the Natural Areas on protected species, their habitats, and riparian and wetland habitat, the SFRPD shall undertake the following: a. If visitor use of the Natural Areas is resulting in impacts on protected species, their habitat and/or riparian and wetland habitat, the SFRPD shall post signs or install fences along trails to protect those habitats. Fences would allow public access on designated trails but would discourage dogs and people from drifting off-trail. If use continues to adversely impact protected species, their habitats, riparian and/or	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		wetland habitat, the SFRPD shall reroute trails and/or restore affected habitat to avoid continued impacts of human disturbance. b. Dog play areas within the Natural Areas shall continue to be evaluated in accordance with the SFRPD's Dog Policy and shall be monitored for adverse effects to biological resources. If substantial adverse impacts to protected species are confirmed, the SFRPD shall take actions to protect those species, which may include installing signs, fencing, or protections including, but not limited to, decommissioning dog play areas, in accordance with the SFRPD Dog Policy. 4. Where disturbance of protected species, their habitat, or riparian or wetland habitat cannot be avoided or sufficiently minimized, the SFRPD shall restore the habitat functions and services of areas that are subject to disturbance during programmatic project activities at a minimum of a 1:1 ratio, in accordance with a detailed restoration plan or plans prepared by a qualified restoration ecologist and would be consistent with all required permits. Final restoration plans would include the following: a. Detailed work descriptions for the restoration actions; and b. Ecologically based criteria that shall be used to determine whether the restoration project(s) were achieving identified performance objectives. A schedule for monitoring and reporting on monitoring results shall be included, as agreed upon in coordination with applicable permitting agencies, and as needed to verify whether the vegetation is fully established. The final restoration plan may include the following: • Detailed description of restoration activities; • Restoration goals; • Restoration work plan; • Management and maintenance plan;	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• Success criteria and performance indicators; • Monitoring plan; and • Site protection measures. 5. Where avoidance and minimization measures are not sufficient to prevent a programmatic project from permanently removing protected species habitat, riparian, and/or wetland habitat and on- or off-site restoration or enhancement is not practicable, SFRPD shall provide compensatory mitigation for the impacts created at a minimum of a 1:1 ratio, unless otherwise determined by natural resources agencies. Examples include mitigation banking, in-lieu funds to parks for their restoration, or off-site preservation. Such activities would be evaluated in subsequent environmental reviews. **M-BI-1b: Protection of Locally Significant Plant Species during Implementation of Programmatic Projects** Where there is potential to impact locally significant plant species and SFRPD has not substantially enhanced the habitat for that species through restoration activities implemented by the SNRAMP already, SFRPD shall undertake the following measures to avoid and minimize impacts to locally significant plant species: • A qualified SFRPD biologist shall survey suitable habitat within the project area before the project begins. If locally significant plant species are found, the SFRPD shall redesign the proposed project to avoid or minimize impacts on locally significant plant species. • Where impacts to locally significant plant species cannot be avoided, SFRPD shall harvest the seeds of, or salvage, the affected species and use collected plants or seeds to enhance and/or restore similar habitat within the Natural Areas or outside of the Natural Areas, if necessary. To the extent feasible, habitat enhancement or restoration shall take place at sites already planned for other mitigation for the project or as part of other	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		restoration activities carried out by SFRPD; if habitat is not suitable at those sites, habitat enhancement or restoration shall be carried out at appropriate nearby sites through strategies such as transplantation, relocation or seed harvest. Enhancement and/or restoration of locally significant plant species habitat shall be designed to meet a minimum of a 1:1 ratio of affected plants/habitat to enhanced and/or restored habitat.	
Impact BI-2 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on special status bird species	LTS/M	M-BI-1a applies to this impact	LTS
Impact BI-3 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on other protected terrestrial wildlife species (other than bird species)	LTS/M	M-BI-1a applies to this impact	LTS
Impact BI-4 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on protected aquatic species	LTS/M	M-BI-1a applies to this impact	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact BI-5 Implementation of routine maintenance activities under the SNRAMP would result in a substantial adverse effect on special status species	LTS/M	**Measure M-BI-5: Protection of Special Status Species during Routine Maintenance** The SFRPD shall avoid disturbance to biological resources by undertaking the following measures during routine maintenance activities: • Natural Areas Program staff and/or SFRPD staff engaged in routine maintenance activities as part of the SNRAMP shall receive annual training on the special status species that occur within the Natural Areas. The training shall identify the special status species that occur within the Natural Areas, their life history, measures to be implemented to avoid impacts to those species, and the proper protocol for encountering special status species. The SFRPD shall confirm that all SFRPD staff engaged in routine maintenance activities as part of the SNRAMP has been trained appropriately. • An education program for other field personnel (e.g. volunteers) shall be conducted by the SFRPD staff before field activities begin at a new site that has the potential to contain special status species. The field education program will consist of a brief presentation by persons knowledgeable in the applicable special status species and will include identifying the locations of protected species and locally significant plant species and an explanation of the measures being taken to avoid these species. The SFRPD shall confirm that all workers and volunteers have been trained appropriately. • Disturbance of special status plant species shall be avoided. SFRPD staff shall conduct a reconnaissance survey of maintenance areas prior to undertaking routine maintenance activities to ensure that no special status plant species are present. If such species are found to be present, activities in those areas would be relocated or modified so as to avoid potentially affecting those species. SFRPD staff shall ensure that all volunteers and others involved in maintenance or restoration activities follow protection protocols.	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• Vehicle operators shall use existing access roads and would remain outside of habitat supporting protected species to the extent feasible. • All vehicles shall be brought in clean and free of weeds to prevent the spread or introduction of invasive plant species. • Protected terrestrial and aquatic species impacts shall be avoided during routine maintenance activities by implementing the following measures: o **California Red-Legged Frog and San Francisco Garter Snake:** These species both potentially occur at the Sharp Park upper canyon. The following measures shall apply to this Natural Area: ▪ To avoid disturbance of these species, maintenance work shall not occur in the vicinity of ponds and wetlands between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. ▪ If maintenance cannot be avoided during the abovementioned time period, the SFRPD staff will conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to ensure that no California red-legged frogs or San Francisco garter snakes are present. ▪ Vegetation in all maintenance areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of snakes prior to disturbance and prior to equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake and California red-legged frog shall be conducted in the maintenance area. ▪ In the event that a California red-legged frog or San Francisco garter snake is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm the species has moved outside of the work	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		zone, or the work zone shall be adjusted to avoid the species. ▪ SFRPD staff shall provide verbal notification to the US Fish and Wildlife Service and/or to the local California Department of Fish and Game warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to the US Fish and Wildlife Service and/or California Department of Fish and Game (as applicable) within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with US Fish and Wildlife Service and/or California Department of Fish and Game. Field personnel shall submit all observations of protected species to the California Natural Diversity Database. o **Western Pond Turtle:** This species occurs at Lake Merced and Sharp Park and may occur at Pine Lake. The following measures shall apply to these Natural Areas: ▪ To avoid disturbance of this species, routine maintenance work shall be avoided within wetlands, ponds and adjacent uplands, between May 15 and July 15, the nesting season for western pond turtles. ▪ If maintenance work cannot be avoided during the abovementioned time period, the SFRPD staff shall conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to ensure that no western pond turtles or their nests are present. ▪ In the event that a western pond turtle is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species. ▪ SFRPD staff shall provide verbal notification to the local	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		California Department of Fish and Game warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to California Department of Fish and Game within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with California Department of Fish and Game. Field personnel shall submit all observations of protected species to the California Natural Diversity Database. o **San Francisco Dusky-Footed Woodrat:** This species occurs in the Sharp Park upper canyon. The following measure shall apply to this Natural Area: ▪ SFRPD staff will conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to identify locations of woodrat middens. ▪ To avoid disturbance of the San Francisco dusky-footed woodrat, no vegetation shall be cleared within a 10-foot buffer of an active or potentially active woodrat middens. o **Western Red Bat:** If an occupied or active roost is identified during maintenance activities, the roost shall not be disturbed. No maintenance work within 150 feet of the potentially occupied roost shall occur until it has been determined that bats are no longer using the site. ▪ In the event that a western red bat is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who shall confirm that the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species. ▪ SFRPD staff shall provide verbal notification to the local California Department of Fish and Game warden or biologist (as applicable) within one working day of the encounter. The SFRPD	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		shall follow up with written notification to California Department of Fish and Game within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with California Department of Fish and Game. Field personnel shall submit all observations of protected species to the California Natural Diversity Database. o **Mission Blue Butterfly:** This species occurs at Twin Peaks and Sharp Park. The following measures shall apply to these Natural Areas: ▪ To avoid impacts to this species, SFRPD shall adhere to the long-term management and monitoring guidelines as described in the Recovery Action Plan for the Mission Blue Butterfly at Twin Peaks Natural Area and the corresponding Biological Opinion and as agreed to with the US Fish and Wildlife Service. These guidelines include conducting vegetation removal by manual, mechanical and chemical treatments that would be applied consistent with the SFRPD Integrated Pest Management program, such as hand pulling, cutting and grubbing. To avoid impacts from trampling of host plants by recreational users, the SFRPD shall continue to conduct regular maintenance on the existing trail network including trimming trailside vegetation and replacing trail base materials.	
Impact BI-6 Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on special status species	LTS/M	**M-BI-6a: Protection of Protected Species during Implementation of the Sharp Park Restoration Project** The SFRPD shall implement the following, subject to modification during the required regulatory approval processes: **Avoidance Measures:** • The number of access routes, the size of staging areas, and the total area of activity would be the minimum necessary to achieve the project goals and to the extent feasible access routes shall be located in upland	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		areas; • Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project; • After surveying the construction site for special status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no snakes, frogs, or turtles enter the area; fencing will meet California Department of Fish and Game specifications so as to avoid impacts to species potentially getting trapped in the fence. • No restoration and construction shall occur between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows, although shrubs and willow posts may be planted by hand after the first rains, and weeds may be removed within 15 feet of aquatic areas during these times; • Before moving any vehicles that remain stationary for longer than 30 minutes, the biological monitor would inspect those vehicles to ensure that no animals had crawled beneath them for cover; • During project activities, all trash that could attract predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas. **Pre-Construction Activities:** • A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and the proper protocol should a protected species be encountered. The training shall include a discussion of the importance	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		of maintaining speed limits and respecting exclusion zones. The SFRPD and its construction contractor shall confirm that all workers have been trained appropriately. • Two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the US Fish and Wildlife Service and/or California Department of Fish and Game to determine whether relocating any life stages is appropriate. Collection of frogs, snakes, and turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat; • Upland vegetation in all construction areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of protected species prior to disturbance and prior to construction equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake, western pond turtles, and California red-legged frogs will be conducted in the impact area. • Prior to construction near wetlands or ponds, all rodent burrows in the construction area will be hand excavated until the burrows terminate or to a maximum depth of 30 centimeters in areas where soil or fill will be removed or placed. **Biological Monitor:** • A biological monitor familiar with the identification and life history of California red-legged frog, San Francisco garter snake, western pond turtle, and other potentially present protected species, and with the appropriate agency authorization, shall be designated to periodically inspect onsite compliance with all mitigation measures.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• The biological monitor shall perform a daily survey of the entire project area during construction activities. During these surveys, the monitor shall inspect the exclusion fencing for individuals trapped within the fence and determine the need for fence repair. Throughout the duration of the project, the monitor shall continue to perform daily fence surveys and compliance reviews at the project site. The monitor shall be designated prior to project implementation and shall have at least one specialty environmental monitor on call, with a valid 10(a)(1)(A) permit to handle listed species. The specialty monitor shall direct all personnel in regards to interactions with protected species, perform authorized species relocations, and supervise all reporting on such species. • Bullfrog monitoring will occur and egg masses detected shall be removed. **M-BI-6b: Protection of Protected Species during Maintenance of the Sharp Park Restoration Project** The SFRPD shall implement the following, subject to modification during the required regulatory approval processes: • To avoid disturbance of the San Francisco garter snake, California red-legged frog and western pond turtle, maintenance work shall not occur in the vicinity of ponds and wetlands between November 15 and April 15, the breeding/nesting season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. • If maintenance cannot be avoided during the abovementioned time period, the Natural Areas Program will conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to ensure that no California red-legged frogs, western pond turtles or San Francisco garter snakes are present. • Heavy equipment would remain outside of wetlands to the extent feasible. If it is infeasible to avoid wetlands, no heavy equipment shall be used within wetlands between October 15 and April 15.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• In the event that a California red-legged frog, western pond turtle or San Francisco garter snake is encountered, all work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm that the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species. • SFRPD staff shall provide verbal notification to the US Fish and Wildlife Service and/or to the local California Department of Fish and Game warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to the US Fish and Wildlife Service and/or California Department of Fish and Game (as applicable) within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with US Fish and Wildlife Service and/or California Department of Fish and Game. Field personnel shall submit all observations of protected species to the California Natural Diversity Database.	
Impact BI-7 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on sensitive natural communities	LTS/M	M-BI-1a applies to this impact	LTS
Impact BI-8 Implementation of routine maintenance under the SNRAMP would not result in a substantial adverse effect on sensitive natural communities	LTS	Not applicable	LTS
Impact BI-9	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial adverse effect on sensitive natural communities			
Impact BI-10 The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on wetlands	LTS/M	M-BI-1a applies to this impact	LTS
Impact BI-11 Implementation of routine maintenance under the SNRAMP would not result in a substantial adverse effect on wetlands	LTS	Not applicable	LTS
Impact BI-12 Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on wetlands	LTS/M	**M-BI-12a: Protection of Wetlands during the Sharp Park Restoration Project** The SFRPD shall obtain all applicable permits from San Francisco Bay Regional Water Quality Control Board, California Coastal Commission, US Army Corps of Engineers, and California Department of Fish and Game for impacts to wetland habitat. Measures identified in these permits shall be applied, in addition to the following measures, unless otherwise specified by resource agencies: • Except for those areas directly being restored, a minimum 100-foot buffer surrounding all wetlands, ponds, streams, drainages, and other aquatic	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		habitats located on or within 100 feet of the project site shall be clearly designated on the final project construction plans and marked on the site with orange construction fencing or silt fencing. If the area is on a slope, silt fencing or other comparable management measures will be installed to prevent polluted runoff, as well as equipment, from entering the buffer area. Signs shall be installed every 100 feet on or adjacent to the buffer fence that read, "Environmentally Sensitive Area – Keep Out." Fencing and management measures shall be installed and inspected prior to project implementation and maintained throughout the restoration period. No equipment mobilization, grading, clearing, storage of equipment or machinery, vehicle or equipment washing, or similar activity, may occur until a representative of the SFRPD has inspected and approved the fencing and/or management measures installed around these features; • Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not directly associated with habitat restoration. Project construction and staging areas would be delineated with construction fencing and shall avoid wetland habitat to the maximum extent feasible; • All vehicles would be brought in clean and free of weeds to prevent the spread or introduction of invasive plant species. Vehicles and equipment would be fueled, maintained, and parked at least 100 feet from wetlands. Each morning, operators would inspect all equipment that requires the use of fuel or fluids for leaks; • Silt barriers, such as sand bags, silt fences/curtains, or basins, would be installed before the project begins; • Wet sediments taken from the wetlands would be stockpiled so water could drain or evaporate before removal. Stockpiles would be placed in upland areas with the perimeters protected by best management practices to avoid polluted runoff; • All soil stockpiles shall be protected against wind and rainfall erosion at all times. Plastic sheeting or other similar material shall be used to cover	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		soils and would be securely anchored by sandbags or other suitable means. At no time would any stockpiled materials be allowed to erode into any water body or drainage facility or onto any roadway; and • Ground disturbing construction and maintenance activities shall be avoided during the rainy season and consistent with Mitigation Measure M-BI-6a. **M-BI-12b: Laguna Salada Restoration Project Wetland Mitigation Plan** Consistent with the requirements for a Section 401 water quality certification permit, the SFRPD shall prepare a mitigation plan. Additionally, because this is a restoration project, the California Coastal Commission may require an objective performance evaluation to determine project success which would include a monitoring program and methods for evaluating performance, which could be accomplished through implementation of the wetland mitigation plan. The wetland mitigation plan shall include, at a minimum, a description of the following: • Proposed project's physical and biological impacts; • Mitigation goals; • Mitigation work plan; • Management and maintenance plan; • Success criteria and performance indicators • Monitoring plan; and • Site protection measures. The components of the above mitigation plan may be altered, supplemented, or deleted during the San Francisco Bay Regional Water Quality Control Board's review process, as the San Francisco Bay Regional Water Quality Control Board has final authority over the terms of the water quality certification.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact BI-13 The SNRAMP and implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on fish and wildlife movement, migratory corridors, or nursery sites	LTS	Not applicable	LTS
Impact BI-14 Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on fish and wildlife movement, migratory corridors and nursery sites	LTS	Not applicable	LTS
Impact BI-15 Implementation of Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on fish and wildlife movement, migratory corridors and nursery sites	LTS/M	M-BI-6a, M-BI-6b, M-BI-12a, and M-BI-12b apply to this impact	LTS
Impact BI-16 The SNRAMP and implementation of	NI	Not applicable	NI

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
programmatic projects under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources			
Impact BI-17 Implementation of routine maintenance activities under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources	NI	Not applicable	NI
Impact BI-18 Implementation of Sharp Park restoration activities under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources	NI	Not applicable	NI
Impact BI-19 The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively considerable significant impact related to biological resources	SU	None available	SU

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
HYDROLOGY AND WATER QUALITY			
Impact HY-1 Implementation of programmatic projects under the SNRAMP would violate water quality standards or otherwise degrade water quality	LTS/M	M-HZ-13 applies to this impact **M-HY-1: Implementation of Stormwater Pollution Prevention Measures** Construction projects that do not drain to San Francisco's combined sewer system and involve one or more acres of land disturbance are required to obtain coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activity. In accordance with the NPDES General Permit requirements, the SFRPD or its contractors would submit a notice of intent to the SWRCB's Division of Water Quality, would develop a SWPPP, and would implement site-specific BMPs to prevent discharges of nonpoint source pollutants in construction-related stormwater runoff to storm drains and water bodies. As required by the NPDES General Construction Permit, trained and certified persons would prepare the SWPPPs and would conduct inspections to ensure the effectiveness of the BMPs. Listed below are BMPs that would be implemented at the Natural Areas to meet the minimum requirements of the NPDES General Construction Permit. These measures may be altered, supplemented, or deleted during the SFBRWQCB's review process, as it has final authority over the terms of the SWPPP. Other programmatic projects shall implement the following measures, where applicable to a project, unless other equally or more effective measures are determined to be necessary during future project-specific environmental review. These projects are those on less than one acre and that do not require a NPDES General Construction Permit or that drain to San Francisco's combined sewer system and are regulated by the SFPUC. a. <u>Schedule to Avoid or Minimize Impacts</u> • Schedule construction to minimize ground disturbance during the rainy season; • Sequence construction activities to minimize the amount of time that	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		soils remain disturbed; • Stabilize all disturbed soils as soon as possible following the completion of ground-disturbing work in any area of the project site; • Provide plans to stabilize soil with vegetation or physical means in the event rainfall is expected; and • Install erosion and sediment control best management practices prior to the start of any ground-disturbing activities. b. Erosion and Sediment Controls • Preserve existing vegetation in areas where no construction activity is planned or where construction activity will occur at a later date; • Stabilize and revegetate disturbed areas as soon as possible after construction with planting, seeding, and/or mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material), except in actively cultivated areas; • Install silt fences, coir rolls, and other suitable measures around the perimeter of the construction zone, staging areas, storm drains, temporary stockpiles, spoil areas, stream channels, swales, down-slope of all exposed soil areas, and other locations determined necessary to prevent off-site sedimentation; • Install temporary slope breakers during the rainy season on slopes greater than 5 percent where the base of the slope is less than 50 feet from a water body, wetland, or road crossing, at spacing intervals required by the San Francisco Bay Regional Water Quality Control Board; • Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets; and • Detain and treat stormwater and water produced by construction site dewatering using sedimentation basins, sediment traps (when water	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		is flowing and there is sediment), baker tanks, or other measures to ensure that discharges to receiving waters meet applicable water quality objectives. c. <u>Housekeeping</u> • Store all equipment, materials, fuels, lubricants, solvents, and other possible contaminants away from waterways and in secured locations; • Check equipment for leaks regularly; • Wash construction equipment in a designated enclosed area regularly; and • Refuel all vehicles and equipment at least 100 feet from any water bodies d. <u>Waste Management and Hazardous Materials Pollution Control</u> • Remove trash and construction debris from the project area daily; • Locate sanitary facilities a minimum of 300 feet from water bodies; • Maintain sanitary facilities regularly; • Maintain spill containment and cleanup equipment onsite and properly label and dispose of wastes; • Locate waste collection areas close to construction entrances and away from roadways, storm drains, and water bodies; • Inspect trash receptacles and other waste and debris containers regularly for leaks and remove and properly dispose of any hazardous materials and liquid wastes placed in these containers; and • Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		e. Best Management Practices Inspection, Maintenance, and Repair • Inspect all best management practices regularly to confirm proper installation and function; • Inspect all stormwater best management practices daily during storms; • Inspect sediment basins, sediment traps, and other detention and treatment facilities regularly throughout the construction period; • Provide sufficient devices and materials (e.g., silt fence, coir rolls, and erosion blankets) throughout project construction to enable immediate repair or replacement of failed best management practices; and • Inspect all seeded and revegetated areas regularly for failures and remediate or repair them immediately. f. Post-construction Best Management Practices • Revegetate all temporarily disturbed areas as required after construction; • Remove any remaining construction debris and trash from the project site and area on project completion; • Phase the removal of temporary best management practices as necessary to ensure stabilization of the site; • Maintain post-construction site conditions to avoid any unintended drainage channels, erosion, or areas of sedimentation; and • Correct post-construction site conditions as necessary to comply with the stormwater pollution prevention plan and any other pertinent San Francisco Bay Regional Water Quality Control Board requirements.	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HY-2 Implementation of routine maintenance activities under the SNRAMP would violate water quality standards or otherwise degrade water quality	LTS/M	M-HZ-14 applies to this impact	LTS
Impact HY-3 Implementation of the Sharp Park restoration under the SNRAMP would violate water quality standards or otherwise degrade water quality	LTS/M	M-BI-1a, M-BI-12b, HY-1, and HZ-13 apply to this impact	LTS
Impact HY-4 Implementation of the programmatic projects under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge	LTS	Not applicable	LTS
Impact HY-5 Implementation of routine maintenance under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge	NI	Not applicable	NI

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HY-6 Implementation of the Sharp Park restoration under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge	LTS	Not applicable	LTS
Impact HY-7 Implementation of the programmatic projects under the SNRAMP would result in substantial erosion or siltation	LTS/M	M-HY-1 applies to this impact	LTS
Impact HY-8 Implementation of the routine maintenance activities under the SNRAMP would not result in substantial erosion or siltation	LTS	Not applicable	LTS
Impact HY-9 Implementation of the Sharp Park restoration under the SNRAMP would not result in substantial erosion or siltation	LTS/M	M-HY-1 applies to this impact	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HY-10 Implementation of the programmatic projects under the SNRAMP would not result in flooding	LTS	Not applicable	LTS
Impact HY-11 Implementation of routine maintenance activities under the SNRAMP would not result in flooding	NI	Not applicable	NI
Impact HY-12 Implementation of the Sharp Park restoration under the SNRAMP would not result in flooding	LTS	Not applicable	LTS
Impact HY-13 Implementation of the programmatic projects under the SNRAMP would affect stormwater runoff quantity or quality	LTS/M	M-HY-1 applies to this impact	LTS
Impact HY-14 Implementation of the routine maintenance activities under the SNRAMP would not substantially affect stormwater runoff quantity or quality	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HY-15 Implementation of the Sharp Park restoration under the SNRAMP would affect stormwater runoff quantity or quality	LTS/M	M-BI-1a, HY-1, and HZ-13 apply to this impact	LTS
Impact HY-16 The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively considerable significant impact related to hydrology and water quality	LTS	Not applicable	LTS
HAZARDS AND HAZARDOUS MATERIALS			
Impact HZ-1 Implementation of programmatic projects under the SNRAMP would not result in significant impacts on public safety from windthrow effects	LTS	Not applicable	LTS
Impact HZ-2 Implementation of the programmatic projects under the SNRAMP would not increase the mosquito and tick population	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HZ-3 Implementation of the routine maintenance activities under the SNRAMP would not result in significant impacts on public safety from windthrow effects	LTS	Not applicable	LTS
Impact HZ-4 Implementation of the routine maintenance activities under the SNRAMP would not increase the mosquito and tick population	NI	Not applicable	NI
Impact HZ-5 Implementation of the Sharp Park restoration activities under the SNRAMP would not impact public safety from windthrow effects	NI	Not applicable	NI
Impact HZ-6 Implementation of the Sharp Park restoration activities under the SNRAMP would not result in a significant increase in the mosquito and tick population	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HZ-7 Implementation of the programmatic projects under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control	LTS	Not applicable	LTS
Impact HZ-8 Implementation of the programmatic projects under the SNRAMP would not disturb lead-contaminated soil	NI	Not applicable	NI
Impact HZ-9 Implementation of the routine maintenance activities under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control	LTS	Not applicable	LTS
Impact HZ-10 Implementation of the routine maintenance activities under the SNRAMP would not disturb lead-contaminated soil	NI	Not applicable	NI

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HZ-11 Implementation of the Sharp Park restoration activities under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control	LTS	Not applicable	LTS
Impact HZ-12 Implementation of the Sharp Park restoration under the SNRAMP would not disturb lead-contaminated soil	NI	Not applicable	NI
Impact HZ-13 Implementation of the programmatic projects under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment	LTS/M	**M-HZ-13: Emergency Response Plan for Accidental Releases of Hazardous Materials** To reduce impacts from the accidental release of hazardous materials, the SFRPD shall prepare an emergency response plan for the Sharp Park restoration and each programmatic project that uses gasoline- or diesel-powered equipment before the project began. The plan shall include emergency procedures for hazardous materials releases. These procedures shall include requirements for the necessary personal protective equipment, spill containment procedures, and worker training to respond to accidental spills and releases. The plan shall also require equipment to be refueled at least 100 feet from any streams or water bodies. During the implementation of programmatic projects, all hazardous materials, including any hazardous wastes, shall be used, stored, transported, and disposed of in accordance with local, state, and federal hazardous materials regulations. Developing and implementing the plan will ensure the proper storage and use of hazardous materials, proper response to accidental releases, and worker training, all of which will minimize contamination from hazardous materials.	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HZ-14 Implementation of the routine maintenance activities under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment	LTS/M	**M-HZ-14: General Emergency Response Plan for Routine Management Activities Using Gasoline- or Diesel-Powered Equipment** To reduce impacts from accidental releases of hazardous materials, the SFRPD shall prepare a general emergency response plan to address routine management activities that use gasoline- or diesel-powered equipment. The plan shall include emergency procedures for hazardous materials releases with requirements for the necessary personal protective equipment, spill containment procedures, and worker training to respond to accidental spills and releases. The plan shall also require equipment to be refueled at least 100 feet from any streams or water bodies. During routine maintenance, all hazardous materials, including any hazardous wastes, shall be used, stored, transported, and disposed of in accordance with local, state, and federal hazardous materials regulations. Developing and implementing the plan will ensure the proper storage and use of hazardous materials, proper response to accidental releases, and worker training, all of which will minimize contamination from hazardous materials.	LTS
Impact HZ-15 Implementation of the Sharp Park restoration under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment	LTS/M	M-HZ-13 applies to this impact	LTS
Impact HZ-16 Implementation of programmatic projects under the SNRAMP would not result in substantial fire hazards	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact HZ-17 Implementation of the routine maintenance activities under the SNRAMP would not result in substantial fire hazards	LTS	Not applicable	LTS
Impact HZ-18 Implementation of the Sharp Park restoration activities under the SNRAMP would not result in substantial fire hazard impacts	LTS	Not applicable	LTS
Impact HZ-19 The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact related to hazards and hazardous materials	LTS	Not applicable	LTS
AGRICULTURE AND FOREST RESOURCES			
Impact AF-1 Implementation of the programmatic projects under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland	NI	Not applicable	NI

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact AF-2 Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland	NI	Not applicable	NI
Impact AF-3 Implementation of the Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland	NI	Not applicable	NI
Impact AF-4 Implementation of the programmatic projects under the SNRAMP would not have a substantial adverse effect on the loss or conversion of farmland or forest land	LTS	Not applicable	LTS
Impact AF-5 Implementation of the routine maintenance activities under the SNRAMP would not have a substantial adverse effect on the loss or conversion of forest land	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact AF-6 Implementation of the Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on the conversion of forest land	NI	Not applicable	NI
Impact AF-7 The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively considerable substantial adverse effect related to agriculture and forest resources	LTS	Not applicable	LTS
AIR QUALITY			
Impact AQ-1 Programmatic projects under the SNRAMP would result in substantial fugitive dust emissions	LTS/M	**M-AQ-1: Fugitive Dust Reduction** The SFRPD would implement the requirements of the Dust Control Ordinance for all programmatic projects that are outside of San Francisco to reduce fugitive dust emissions. For projects less than half an acre, the SFRPD would comply with the general dust control requirements listed in Section 106.3.2.6.3(c) of the San Francisco Building Code, which are: • Water all active construction areas sufficiently to prevent dust from becoming airborne. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		used whenever possible. • Provide as much water as necessary to control dust (without creating runoff) in any area of land clearing, earth movement, excavation, drillings, and other dust-generating activity. • During excavation and dirt-moving activities, wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday. • Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down or use other equivalent soil stabilization techniques. • Use dust enclosures, curtains, and dust collectors as necessary to control dust in the excavation area. For projects greater than half an acre, in addition to the general dust control requirements above, the SFRPD would prepare a site-specific dust control plan that requires the project sponsor to: • Submit a map to the director of the San Francisco Department of Public Health, showing all sensitive receptors within 1,000 feet of the site; • Wet down areas of soil at least three times per day; • Provide an analysis of wind direction, and install upwind and downwind particulate dust monitors; • Record particulate monitoring results; • Hire an independent third party to conduct inspections and keep a record of those inspections; • Establish shutdown conditions based on wind, soil migration, and other factors;	

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• Establish a hotline for surrounding community members who may be affected by project-related dust; • Limit the area subject to construction activities at any one time; • Install dust curtains and windbreaks on the property lines, as necessary; • Limit the amount of soil in hauling trucks to the size of the truck bed, and secure the load with a tarpaulin; • Enforce a 15-mile per hour speed limit for vehicles entering and exiting construction areas; • Sweep affected streets with water sweepers at the end of the day; • Install and use wheel washers to clean truck tires; • Stop construction activities when winds exceed 25 miles per hour; • Apply soil stabilizers to inactive areas; and • Sweep off adjacent streets to reduce particulate emissions.	
Impact AQ-2 The routine maintenance activities under the SNRAMP would not result in substantial fugitive dust emissions	LTS	Not applicable	LTS
Impact AQ-3 The Sharp Park restoration under the SNRAMP would result in substantial fugitive dust emissions	LTS/M	M-AQ-1 applies to this impact	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Impact AQ-4 Programmatic projects under the SNRAMP would contribute substantially to an existing or projected air quality violation and would result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard	SU/M	**M-AQ-4: Construction Contract Specification to Reduce Construction Vehicle Emissions** The SFRPD will consult with EP before implementing each programmatic project. Under EP's direction, the SFRPD will either conduct a refined air quality analysis prior to project implementation, or EP will provide a list of all feasible mitigation measures to incorporate into the construction specifications to reduce construction vehicle emissions. If SFRPD were to conduct a refined air quality analysis and find that construction-related criteria air pollutant emissions would be below the Bay Area Air Quality Management District thresholds, SFRPD would not be required to incorporate mitigation measures into the project's construction specifications. The following mitigation measures are examples of mitigation measures that EP might direct the SFRPD to incorporate into construction specifications for the Sharp Park restoration project or the programmatic projects. • For programmatic projects between 2011 and 2015, use Tier 3 equipment with best available control technology where feasible. For programmatic projects conducted after 2015, use Tier 4 equipment or interim Tier 4 equipment equipped with best available control technology where such equipment exists. • Use temporary power provided by the Pacific Gas & Electric Company instead of diesel generators; where it is not possible to plug into the electric grid, use Tier 3 diesel generators and air compressors. • Use concrete batched from local plants to limit concrete trucks' travel time and the amount of diesel exhaust emitted. • Minimize idling times by either shutting equipment and vehicles off when not in use or limiting the maximum idling time to five minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage of idling rules for construction workers at all access points. • Use on-road haul trucks model year 2007 or later.	SU

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
		• Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Have all equipment checked by a certified mechanic to determine that equipment is running in proper condition prior to operation.	
Impact AQ-5 The routine maintenance activities under the SNRAMP would not contribute substantially to an existing or projected air quality violation and would not result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard	LTS	Not applicable	LTS
Impact AQ-6 The Sharp Park restoration under the SNRAMP would contribute substantially to an existing or projected air quality violation and would result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard	SU/M	M-AQ-4 applies to this impact	SU
Impact AQ-7	LTS	Not applicable	LTS

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Programmatic projects under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations			
Impact AQ-8 Routine maintenance under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations	LTS	Not applicable	LTS
Impact AQ-9 Sharp Park restoration under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations	LTS	Not applicable	LTS
Impact AQ-10 Implementation of the proposed project in combination with past, present, and reasonably foreseeable projects in the vicinity would result in cumulatively considerable significant air quality impacts	SU/M	M-AQ-4 applies to this impact **M-AQ-10: Cumulative Health Risk Analysis for Programmatic Projects** As part of the environmental review for all programmatic projects, the SFRPD will conduct a cumulative site-specific health risk analysis to determine if nearby sensitive receptors would be affected by those projects in combination with other known sources (e.g., roadway sources and permitted stationary sources) and existing construction projects within 1,000 feet. Based on the results of those analyses, EP would determine the need for and the scope of additional measures to reduce health risk impacts from construction activities. Mitigation measures to reduce construction-related health risks could include those listed under M-AQ-4.	SU

Table 2
Summary of Environmental Impacts and Mitigation Measures

Impact	Impact Significance	Mitigation Measures	Impact Significance With Mitigation
Improvement Measure from the Initial Study			
		I-ME-1 Consistent with the 2005 California Energy Action Plan II priorities for reducing energy use, the SFRPD would ensure that energy-efficient equipment is used to the extent practicable during project implementation.	

LEGEND:

SU = Significant and unavoidable impact
SU/M = Significant and unavoidable impact with mitigation
LTS/M = Less than significant impact with mitigation
LTS = Less than significant impact
NI = No impact

II. INTRODUCTION

The Environmental Planning (EP) Division of the San Francisco Planning Department has prepared this Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Sections 21000-21177) and the *Guidelines for Implementation of the California Environmental Quality Act* (California Code of Regulations, Title 14, Sections 15000-15387). It evaluates environmental impacts associated with the project, identifies feasible mitigation measures to reduce the impacts to a less than significant level, and includes improvement measures to further reduce impacts identified as less than significant.

This EIR meets the CEQA requirements to (1) assess the expected direct, indirect, and cumulative impacts of the project; (2) identify means of avoiding, minimizing, or mitigating potential significant adverse environmental impacts; and (3) evaluate a reasonable range of alternatives to the project, including the No Project Alternative.

The proposed project is the San Francisco Recreation and Park Department (SFRPD) implementation of its Significant Natural Resource Areas Management Plan (SNRAMP; SFRPD 2006). The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance for 32 Natural Areas in San Francisco and Pacifica over the next 20 years.

II.A PROJECT-LEVEL REVIEW

The most common type of EIR examines the environmental impacts of a specific project. This level of CEQA review focuses primarily on the changes in the environment that would result from a project and examines all phases of the project, including planning, construction, and operation (CEQA Guidelines Section 15168).

Project-level review has been selected as the appropriate level of CEQA review for the SNRAMP's routine maintenance activities and the Sharp Park restoration activities. These components of SNRAMP have been developed to a sufficient level of detail to allow project-level environmental review.

II.B PROGRAM-LEVEL REVIEW

Program-level CEQA review is used in environmental analyses for a series of actions that can be characterized as one large project because they are logically related. The series of actions can be related geographically, or be logical parts in the chain of contemplated actions. Program-level

review is used in connection with the issuance of rules, plans, or other general criteria to govern the conduct of a continuing program.

Programmatic review is also appropriate for individual activities carried out under the same authorizing statutory or regulator authority, that have generally similar environmental effects which can be mitigated in similar ways (CEQA Guidelines Section 15168).

Program-level review has been selected as the appropriate level of CEQA review for the SNRAMP's large-scale projects because these projects are long-term projects that have not been fully developed to enable project-level environmental review. Once funding is available for long-term projects, additional design and development of the project would commence, allowing for a greater understanding of project-level environmental impacts. Per CEQA Guidelines Section 15168(c), subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared. If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.

However, if upon subsequent environmental review of programmatic projects it was determined that the activity would have effects not examined in the program EIR, a new environmental document would be required.

II.C ENVIRONMENTAL REVIEW PROCESS

The SFRPD filed an Environmental Evaluation (EE) application with EP that initiated the environmental review process outlined below. The EIR process provides an opportunity for the public to review and comment on the project's potential environmental effects and to further inform the environmental analysis.

As a first step in complying with the procedural requirements of CEQA, EP used the Notice of Preparation (NOP) and Initial Study process to determine whether any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment and, if so, to narrow the scope of the environmental analysis.

EP issued the NOP and Initial Study on April 22, 2009, and filed it with the California Office of Planning and Research, State Clearinghouse. An environmental review notice associated with the NOP was published in the *San Francisco Examiner* and *Pacifica Tribune* on April 22, 2009. The NOP

Notice of Availability was sent to more than 2,400 interested parties. The NOP initiated a 30-day public review period that ended on May 26, 2009; its purpose was to solicit comments on the scope and content of the environmental analysis contained in the EIR. In addition, EP held two public scoping meetings on May 12 and 14, 2009, to solicit further comments on the scope and content of the environmental analysis to be included in the EIR. The NOP, Initial Study, and scoping report are included in Appendix A of this EIR.

After an internal development period, EP will issue the Draft EIR for public review. This Draft EIR public review and comment period is intended to solicit public comment on the information presented in the Draft EIR. Public hearings also will be scheduled during the public review period on the Draft EIR.

II.D PUBLIC COMMENTS

Comments were received from public agencies and individuals during the scoping period and during the two public scoping meetings.

Throughout the scoping process, 45 sets of scoping comments were received. A scoping report summarizing scoping comments and how they are addressed in the EIR is included in Appendix A of this EIR. Comments on the NOP addressed the following topics:

- Sharp Park Golf Course;
- General Project:
- General CEQA;
- General Environmental;
- Cumulative Impacts;
- Land Use and Land Use Planning;
- Aesthetics;
- Cultural and Paleontological Resources;
- Transportation and Circulation;
- Noise;
- Air Quality;
- Wind and Shadow;

- Recreation;
- Utilities and Service Systems;
- Biological Resources;
- Geology and Soils;
- Hydrology and Water Quality; and
- Hazards and Hazardous Materials.

The Draft EIR has considered the CEQA-related concerns and other issues raised through the scoping process. These issues are addressed in Chapter V (Environmental Setting and Impacts) and Section VI.F (Effects Found Not to be Significant).

II.E PUBLIC REVIEW OF THE DRAFT EIR

The Draft EIR is available for public review at the Planning Department offices at 1660 Mission Street, 1st Floor Planning Information Counter. The Draft EIR is also available through the EP web site: http://www.sf-planning.org/index.aspx?page=1828. The documents referenced in this Draft EIR are available for public review at the San Francisco Planning Department, 1650 Mission Street, Fourth Floor, (415) 558-6378.

After the Draft EIR is published, there will be a 45-day public review and comment period to solicit public comment on the information presented in the Draft EIR. This period is from August 31, 2011, through October 17, 2011. Additionally, a public hearing on this Draft EIR will be held at the San Francisco Planning Commission on October 6, 2011. Prior to the public hearing at the Planning Commission, the Historic Preservation Commission will have the opportunity to hear the project and prepare written comments to be forwarded to the Planning Commission on September 21, 2011.

Reviewers are invited to submit written comments on the Draft EIR. Written comments should be submitted to:

Bill Wycko
Environmental Review Officer
SNRAMP EIR
City and County of San Francisco
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

II.F ORGANIZATION OF THE EIR

This EIR has been organized for ease of use and reference. To help the reader locate information of particular interest, the following is a brief summary of the contents of the EIR:

- **Chapter I (Summary)**—The Summary chapter includes a brief project description, a summary of significant project impacts and mitigation measures, a summary of project alternatives, and areas of controversy and issues to be resolved.
- **Chapter II (Introduction)**—The Introduction chapter includes the type and purpose of the EIR, a summary of the environmental and public review process, and a brief outline of this document's organization.
- **Chapter III (Project Description)**—The Project Description chapter provides a detailed description of the project, including its location, components, and characteristics. The Project Description also includes approval requirements and intended uses of the EIR.
- **Chapter IV (Plans and Policies)**—The Plans and Policies chapter discusses the project's consistency with applicable plans and policies.
- **Chapter V (Environmental Setting and Impacts)**—The Environmental Setting and Impacts chapter discusses the existing conditions, project impacts, and mitigation and improvement measures for the nine resources addressed in detail in this EIR. The impact discussion includes the significance thresholds used to evaluate the nature or magnitude of environmental impacts, significance conclusions, and feasible mitigation measures that would avoid, minimize, or mitigate significant or potentially significant environmental impacts.
- **Chapter VI (Other CEQA Issues)**—As required by Section 15126.2 of the CEQA guidelines, this chapter summarizes growth-inducing impacts, significant and unavoidable environmental impacts, irreversible changes to the environment, and significant impacts of the project. This chapter also discusses areas of known controversy, issues to be resolved, and effects found not to be significant.
- **Chapter VII (Alternatives)**—The Alternatives chapter analyzes alternatives to the project, including the required No Project Alternative, compares their environmental effects with those of the project, and identifies the environmentally superior alternative. Alternatives evaluated in this chapter include the No Project Alternative, the Maximum Restoration Alternative, the Maximum Recreation Alternative, and the Maintenance Alternative.

- **Chapter VIII (References)**—The References chapter includes bibliographic information for reference materials cited throughout the document.
- **Chapter IX (EIR Preparers and Persons and Organizations Contacted)**—This chapter identifies the individuals responsible for preparation of this EIR, as well as the persons and organizations contacted during preparation of the EIR.

Acronyms and Abbreviations and a Glossary are provided at the end of the Table of Contents.

Appendices and a fold-out list of the General Recommendations are provided at the end of the document.

III. PROJECT DESCRIPTION

III.A INTRODUCTION

III.A.1 Background

While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks of San Francisco and Pacifica that are managed by the SFRPD. In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan.

Over the course of several years, the SFRPD updated and expanded the level of detail in the 1995 plan, ultimately resulting in a new Significant Natural Resource Areas Management Plan (SNRAMP, SFRPD 2006), with a final draft plan published in February 2006. The San Francisco Recreation and Park Commission approved the final draft plan for CEQA evaluation in August 2006. This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 in San Francisco and one (Sharp Park) in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP.

Specific management issues include:

- Loss of special status or unusual native species or habitats;
- Loss of diversity and components of a healthy ecosystem;
- Effect of nonnative invasive species on the local native flora and fauna;
- Erosion of Natural Areas from inappropriately located or constructed trails and access roads;
- Effect of human uses (recreation, poor trail location or too many trails, and a general increase in use) that conflict with conservation values; and
- Effects of feral animals and domestic pets on native flora and fauna.

III.A.2 Overview of the 1995 Management Plan

Below is a summary of the plan's general policies and management actions (SFRPD 1995):

- **Vegetation**
  - Maintain and promote indigenous plant species,
  - Control or remove invasive species,
  - Provide fire breaks where appropriate and maximize indigenous vegetation for fire control,
  - Use indigenous vegetation for erosion control,
  - Protect species listed as rare, threatened, or of special concern,
  - Remove exotic plants that adversely affect indigenous plant growth,
  - Enhance riparian areas,
  - Reforest or replant areas to maintain diversity, and
  - Preserve habitat that supports wildlife;
- **Wildlife**
  - Monitor wildlife,
  - Consult with other agencies on habitat enhancement,
  - Cooperate with other agencies to address issues of such nuisances as feral cats, domestic dogs, and feral geese, and
  - Develop educational programs with other agencies for wildlife protection;
- **Water Resources**
  - Maintain or improve water quality,
  - Protect riparian zones from erosion and sedimentation,
  - Maintain drainage and erosion prevention devices along roads and service trails,
  - Control drainage and runoff from roads,
  - Establish and maintain tule encroachment zone around lakes, and
  - Use proper controls when applying aquatic herbicides;

- **Geotechnical/Soils**
  - Minimize erosion along roads and trails,
  - Seed or plant bare soils with indigenous vegetation,
  - Stabilize embankments where it is not in conflict with habitat,
  - Minimize access on unstable slopes,
  - Cooperate with adjacent property owners to minimize erosion and runoff,
  - Clear landslide debris on park property, and
  - Install retaining devices where necessary to stabilize slopes;
- **Education**
  - Promote natural resource management among SFRPD staff,
  - Develop nature programs to promote recreation and education values,
  - Develop education programs aimed at private property owners, and
  - Develop education programs with the San Francisco Unified School District;
- **Public Use**
  - Develop guidelines for pathways and trails and for interpretive signs,
  - Control dirt bike and off-road use, and
  - Encourage community participation in a public stewardship program.

III.B INTENDED USES OF THE EIR

An EIR is an informational document that is intended to inform the public and the decision makers of the environmental consequences of a proposed project and to present mitigation measures and feasible alternatives to avoid or reduce the adverse environmental effects of that project. This EIR examines the potential significant physical environmental impacts that could result from implementation of the proposed project. This EIR is both a program and project EIR, in that it analyzes some portions of the SNRAMP at a programmatic level and some portions at a project-specific level. Because the specific details of the programmatic projects, as defined in Section III.E, are not known, those projects are analyzed at the program level; once individual programmatic projects are proposed and specific details are available, additional environmental review will be conducted, as appropriate. There is sufficient detail for project-level analysis of the routine

maintenance activities, defined in Section III.E, and the Laguna Salada habitat restoration activities proposed at Sharp Park, as detailed in Section III.F.23.

Before any discretionary project approvals may be granted for the project, the Planning Commission must certify the EIR as adequate, accurate, and complete. This Draft EIR will undergo a public review period, during which time the Planning Commission will hold a public hearing on the Draft EIR. Prior to the Planning Commission hearing, the Historic Preservation Commission will have an opportunity to review and provide written comments to the Planning Commission on the adequacy of the Draft EIR at a duly noticed public hearing. Following the close of the public comment period, EP will prepare and publish a Comments and Responses document containing a summary of all substantive comments received that raise environmental issues and EP's responses to those comments. The Comments and Responses document may also contain specific changes to the Draft EIR text. The Draft EIR, together with the Comments and Responses document, including revisions to the Draft EIR, if any, will be considered by the Planning Commission in a public meeting and presented to the Planning Commission for certification. No approvals or permits may be issued before certification of the EIR.

Following certification of the EIR, the Recreation and Park Commission would consider the final SNRAMP for approval and would adopt CEQA findings for the project. If the SNRAMP is approved, the SFRPD would then implement the SNRAMP in compliance with the Mitigation Monitoring and Reporting Program.

In addition to compliance with CEQA, the SFRPD anticipates that the proposed project will be subject to additional compliance and permitting requirements administered by various federal, state, and local resource agencies. These potentially required regulatory approvals are presented in Table 3.

Table 3
Potentially Required Regulatory Approvals

Agency	Permit/Approval	Applicable Natural Areas
US Fish and Wildlife Service (USFWS)	• Incidental take authorization in accordance with the Endangered Species Act (ESA)	• Bayview Park, India Basin Shoreline Park, Lake Merced, Sharp Park, Twin Peaks
	• Review for compliance with the Migratory Bird Treaty Act (MBTA)	• All
US Army Corps of Engineers (USACE)	• Permit under Section 404 of the Clean Water Act, which regulates wetlands and other Waters of the United States	• Sharp Park, Lake Merced, Glen Canyon and O'Shaughnessy Hollow, Bayview Park
California Department of Fish and Game (CDFG)	• Take authorization in accordance with the California Endangered Species Act (CESA)	• Lake Merced, Sharp Park
	• Lake or streambed alteration agreement under Section 1602 of the California Fish and Game Code	• Glen Canyon Park and O'Shaughnessy Hollow, Lake Merced, Pine Lake, Sharp Park
California Coastal Commission	• Coastal development permit, in accordance with the California Coastal Act	• Sharp Park
San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)	• Water quality certification under Section 401 of the Clean Water Act	• Sharp Park
State Water Quality Control Board (SWQCB)	• National Pollutant Discharge Elimination System general construction activity permit under Section 402 of the Clean Water Act	• All
Bay Conservation and Development Commission	• Permit in accordance with the McAteer-Petris Act and the California Coastal Act	• India Basin Shoreline Park
City and County of San Francisco	• Coastal development permit, in accordance with the California Coastal Act	• Balboa and Lake Merced
City of Pacifica Local Coastal Land Use Program	• Coastal development permit, in accordance with the California Coastal Act	• Sharp Park (west of Highway 1 and outside the Laguna Salada wetland complex)

III.C PROJECT OBJECTIVES

The SNRAMP identifies a number of objectives and goals of the Natural Areas Program on pages 1-3 to 1-4 and 2-1 and 2-2 of the plan. While these objectives and goals guided the content of the SNRAMP itself, CEQA requires that an EIR identify the objectives sought by implementing the proposed project. For purposes of CEQA, the project objectives are as follows:

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native[1] ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management[2] approach;
- To provide guidelines for passive recreation[3] compatible with San Francisco's natural resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex for the benefit of special status species.

III.D PROJECT LOCATION

The 32 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately four percent of the total city area; one Natural Area is in Pacifica. The areas range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some Natural Areas are managed by other public and private entities; for properties that the SFRPD does not own and manage, management agreements are in place to guide activities at some of those Natural Areas. The SNRAMP will guide activities on properties owned or maintained by the SFRPD through its Natural Areas Program. Figure 1 is an overview map of the Natural Areas.

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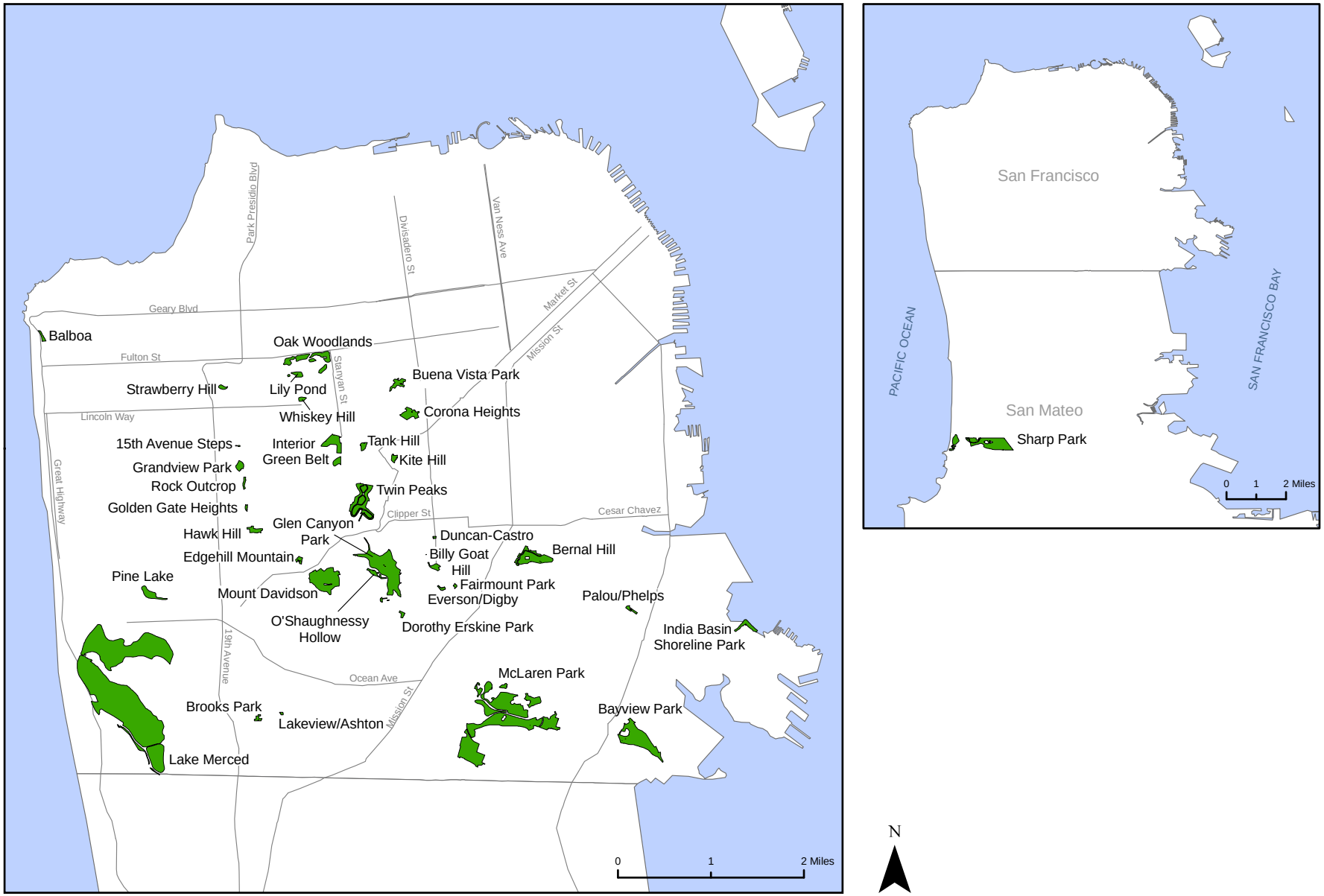
[1] Native—Grown, produced, or originating from a particular geographic area.

[2] Adaptive management—A flexible, learning-based approach to managing complex ecosystems.

[3] Passive recreation—Recreation that occurs in a natural setting and that requires minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.



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The 32 Natural Areas total approximately 1,107 acres and range in size from 0.3 acres (15th Avenue Steps) to 395 acres (Lake Merced).

Natural Area

Roadway

Natural Areas

Tetra Tech, Inc

Figure 1

Detailed maps of each Natural Area depicting the designated management areas described below can be found in Appendix B.

III.E PROJECT OVERVIEW

The *Significant Natural Resource Areas Management Plan, Final Draft* (SFRPD 2006) is incorporated by reference into this description of the project. During the development of this EIR, the SFRPD has modified management activities to address evolving management concerns and changes in conditions at the Natural Areas; these modifications are summarized in Section III.G; a memorandum documenting these modifications will be appended to the final draft SNRAMP and is included in Appendix J. The final SNRAMP will also incorporate the mitigation measures identified in this EIR.

As envisioned, the SNRAMP will provide the framework for long-term management of the Natural Areas. One goal is to provide resource managers with a framework that can be used for the next 20 years. During this period, restoration actions will be taken within the framework of an evolving urban fabric, and monitoring will determine the success of those actions and influence future actions. The SNRAMP outlines both routine maintenance and programmatic projects within the Natural Areas.

III.E.1 Objectives and Goals of the SNRAMP

Section III.C lists the CEQA objectives of the proposed project. The SNRAMP, however, identified a number of additional goals and objectives. The objectives of the SNRAMP are as follows:

- To inventory biological resources in Natural Areas, which will inform planning, restoration, and management;
- To develop a geographic information system database containing baseline information for each of the Natural Areas;
- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify and prioritize restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management approach;

- To provide guidelines for passive recreation that is compatible with San Francisco's natural resources; and
- To provide guidelines for education, research, and stewardship.

Summarized below are the goals of the SNRAMP.

Conservation and Restoration Goals

- To identify natural resources;
- To maintain viable populations of all special status species;[4]
- To maintain and enhance native plant and animal communities;
- To maintain and enhance local biodiversity;
- To reestablish native community diversity, structure, and ecosystem function where degraded;
- To improve Natural Area connectivity; and
- To decrease the extent of invasive exotic species.

Education Goals

- To provide services that will enable all age groups to better understand the values of the Natural Areas, including ecosystem functions and socioeconomic values;
- To provide learning opportunities to students in the San Francisco Unified School District; and
- To provide diverse outdoor classroom opportunities.

Research Goals

- To provide a research framework and research opportunities to schools and universities that will lead to an enhanced understanding of the natural systems and an informed adaptive management approach;
- To contribute to the scientific understanding of local natural systems; and

[4] Special status species—Species that are accorded special status because of their recognized rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection in federal or state endangered species legislation. Others have been designated sensitive species or species of special concern on the basis of adopted policies of federal, state, or local resource agencies or conservation groups (e.g., the California Native Plant Society, Audubon Society, etc). These species are referred to collectively as special status species.

- To contribute to the field of restoration ecology and other applied sciences.

Stewardship Goals

- To develop and support opportunities for public stewardship of Natural Areas;
- To foster neighborhood stewardship and volunteer groups; and
- To provide diverse opportunities for participation by stewardship groups.

Recreation Goals

- To provide opportunities for passive recreation, such as hiking and nature observation, that are compatible with conservation and restoration goals; and
- To improve and develop a recreation trail system that provides the greatest amount of accessibility while protecting natural resources.

Monitoring Goals

- To establish a long-term monitoring program to:
  - Identify the species on which monitoring should focus;
  - Detect increases and declines in abundance, distribution, or health of special status species;
  - Detect significant changes in acreage of native communities, wildlife habitats, and invasive species;
  - Detect significant increases and declines in native species richness;
  - Assess success of restoration in achieving conservation and restoration goals; and
  - Provide an adaptive management framework for evaluating changes (e.g., conceptual model).

Design and Aesthetic Goals

- Where possible, to develop aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions, especially where adjacent parklands and traditionally landscaped areas abut Natural Areas;

- To maintain and develop viewpoints and viewsheds[5] to enhance park experiences; and
- Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments.

Safety Goal

- To design and maintain landscapes that promote public safety.

III.E.2 Description of the Management Areas

The management areas (MAs) addressed in the SNRAMP represent differing levels of sensitivity, species presence, and habitat complexity within the 32 Natural Areas. Three levels of MAs have been defined as MA-1, MA-2 and MA-3, and the acreage of each Natural Area is divided among these three categories. MA-1, MA-2, and MA-3 areas make up approximately 18, 39, and 43 percent of the total Natural Areas, respectively. In general, MA-1 areas are the most biologically rich and represent the priority areas for conservation and management activities, where management actions provide the greatest conservation benefit. MA-2 areas are the next most important conservation areas and offer the greatest opportunity for habitat restoration. MA-3 areas are the least biologically sensitive areas, yet offer unique opportunities for conservation and enhancement. As additional resources become available, management activities may shift to MA-2 or MA-3 areas. Individual maps of the Natural Areas showing the designated management areas and proposed actions within those management areas are included in Appendix B.

Portions of Natural Areas designated MA-1 are those that:

- Support listed species or special status species;
- Provide habitat for a significant number of sensitive species of plants or animals;
- Contain a relatively high portion of native plants or plant richness;
- Contain unique remnant native vegetation (such as native grasslands or wetlands[6]);
- Contain habitats or species most likely to be impacted by human use;
- May support vegetation assemblages of limited distribution (locally or regionally); or
- Contain erosion-prone areas.

[5] Viewshed—The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

[6] Wetland—A zone periodically or continuously submerged or having high soil moisture, which has aquatic or riparian vegetation components and is maintained by water supplies significantly in excess of those otherwise available through local precipitation.

Management actions within areas designated MA-1 may include:

- The most focused restoration work, possibly to the degree of manipulating individual plants and vegetation series;
- Reintroduction of sensitive species;
- Tree removal in conformance with forestry statements (Appendix F of the SNRAMP);
- Implementation of erosion-control measures as problems arise, including the closure of informal and social trails;[7] and
- Prohibition of planting nonnative[8] species.

Areas designated MA-2 areas are comparatively more resilient to human disturbance than MA-1 areas, and their criteria for designation include:

- Important habitats, such as coastal scrub, wetlands, native grasslands;
- Remnant native vegetation of otherwise widespread plant communities, such as coyote brush, scrub, blackberry scrub;
- Habitats or species moderately susceptible to human impact;
- Habitat for local native wildlife species, such as resident and migratory bird species;
- Native vegetation with some nonnative elements; or
- Buffer areas for MA-1s.

Management actions within areas designated as MA-2 may include the following:

- Management focused on maintaining native plant communities;
- Reintroduction of sensitive plants;
- Tree removal that is limited to a prescribed number of acres or trees in compliance with forestry statements (Appendix F of the SNRAMP);
- Implementation of erosion control measures as problems arise, including closing informal and social trails; and
- Prohibition on planting nonnative species.

[7] Social trail—An undesignated user-developed pathway through a Natural Area.

[8] Nonnative—Not originating from the current geographic area.

The remaining lands within the Natural Areas are those designated as MA-3, which are the least sensitive. Specific criteria for areas to be designated MA-3 include:

- Absence (current or historic) of sensitive plants or animals but where there are some native plants and habitat for wildlife species;
- Predominance of nonnative vegetation that serves as a buffer for MA-1 and MA-2 areas from surrounding developed recreational and other land uses; or
- Unusual geological features.

Management actions within areas designated as MA-3 include:

- Activities to promote the health and diversity of urban forests[9] and the wildlife habitat they provide;
- Prohibition on (re)introduction of sensitive species;
- Few restrictions on recreational use (subject to the standard park rules and codes); and
- Implementation of erosion control measures as problems arise, including the closure of informal and social trails.

Implementation of the SNRAMP would prioritize activities at MA-1 areas, then MA-2 areas, then MA-3 areas. Removal of vegetation would be followed by revegetation with species appropriate for that location.

III.E.3 Description of Natural Areas Program Management

The Natural Areas Program staff is composed of biologists, ecologists, and natural resource managers that conduct routine maintenance within the Natural Areas on a daily basis. The Natural Areas Program staff of approximately ten gardeners would continue to conduct the management actions at the Natural Areas. The Natural Areas Program also uses groups of volunteers that range in size from 10 to 50 people.

For larger projects, generally defined as programmatic projects in this EIR, the SFRPD Natural Areas Program or Capital Division staff would hire a contractor and would oversee the contractor's work to ensure that those projects are carried out in conformance with the Mitigation Monitoring and Reporting Program requirements established in this EIR. The Natural Areas Program staff would

[9] Urban forest—A significant stand of nonindigenous trees.

require that the contractor provide a work plan addressing erosion control, species awareness and management, and other environmental considerations.

III.E.4 Adaptive Management Approach

The strategy for managing Natural Areas is based on adaptive management, which is a flexible learning-based approach to managing complex ecosystems. Adaptive management recognizes that some uncertainty exists about the nature of ecosystems and the organisms and processes that define them. Adaptive management, as applied to natural systems, involves a continuous cycle of systematically monitoring biodiversity and other ecosystem goals, and reassessing the plans, strategies and goals, methods, and questions that underlie the management approach. Land managers then use this information to evaluate successes and failures of management actions and to refine techniques and approaches. In this approach, adaptive management is executed in three phases. First, site-specific issues and recommendations are developed. Second, a plan based on these recommendations and on priorities assigned by the Natural Areas Program is implemented. Third, a monitoring program is implemented to evaluate the plan's site-specific success and, based on the information gathered, the implementation strategies, priorities, and methods are modified, as necessary.

III.E.5 Management Practices

Integrated Pest Management

Integrated Pest Management (IPM) is the use of multiple treatment methods to control undesirable weeds and other pests. While IPM has a range of meanings and is subject to various interpretations, the Natural Areas Program defines it as the optimal integration of management methods to control pests with the least possible hazard to people, property, and the environment. The Natural Areas Program uses a least toxic decision making model in its vegetation management. Although the IPM process has been formally adopted by many public and private organizations, it continues to evolve as management strategies are fine-tuned and innovative new pest control methods are found to be effective.

IPM is a multistep ecologically based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests. Conventional pest control methods attempt to control the symptoms of a pest problem, but IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem. IPM implements effective, long-term management solutions through the use of a broad range of expertise, a combination of treatment methods, and comprehensive monitoring and evaluation.

In accordance with Chapter 39 of the San Francisco Administrative Code, the Natural Areas Program employs IPM as its strategy for preventing new and managing existing pest infestations. Four general weed management strategies exist: prevention, containment, reduction, and eradication; each of these results in a different level of weed control and reflects available resources. The Natural Areas Program's policy is to use the least-toxic control methods whenever feasible and practical.

Factors that make manual and/or mechanical methods impractical include:

- Direct threats to human health and safety (e.g., steep, inaccessible, unstable slopes, significant poison oak infestations, etc.);
- Large infestations requiring ongoing repeated strenuous physical labor, such as picking and lifting, that may cause injury to staff, contract field crews, or volunteers; and
- Areas where access, human trampling, or soil disturbance may directly or indirectly damage native plant communities, affect wildlife, or cause soil erosion.

Management methods to be employed by the Natural Areas Program include:

- Physical control methods, which range from hand-pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
- Biological control, which involves revegetating cleared areas and introducing native plants in an area to encourage competition with weeds;
- Chemical control, which involves the use of herbicides to suppress wildland weeds; and
- Public education and outreach.

Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies.

Best Management Practices

The SNRAMP identifies best management practices (BMPs) for erosion control, pathogen[10] control, and West Nile virus.

[10] Pathogen—A disease-causing agent, especially a living microorganism such as a bacterium or fungus.

Depending on site conditions, trails may or may not be created in previously inaccessible areas, as opposed to improving existing social trails. Trail placement would be designed to avoid sensitive vegetation and habitat to the extent possible. Trail alignments in the SNRAMP are conceptual and require further refinement and site-by-site evaluation to confirm the best alignment to provide access and minimize effects on surrounding natural resources. Natural Areas Program staff would avoid disturbing undeveloped portions of Natural Areas that are not planned for restoration or other management actions.

The Natural Areas Program gardeners would continue to carry fire extinguishers in their trucks and would use appropriate fire prevention and suppression measures for more extensive tree and shrub removal. The SFRPD would continue to hold regular meetings with the San Francisco Fire Department and would coordinate management activities, such as tree removal, with that department.

Tree Removal and Replacement. Invasive trees removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area. The SFRPD would take into consideration the views from Natural Areas when locations are being selected for new trees; locations of replacement trees in San Francisco Natural Areas would be selected to preserve views from important points. Tree removal and other activities conducted at the edges of Natural Areas may require temporary closure of sidewalks and roads. For Sharp Park in Pacifica, many of the trees would be replaced not with trees but with more appropriate native vegetation, specifically coastal scrub. Tree removal is discussed in detail in Appendix F of the SNRAMP. For accounting purposes, the SNRAMP defines a tree as any plant having a dominant vertical trunk that is over 15 feet tall; tree species less than 15 feet tall are considered seedlings or saplings in the SNRAMP. Natural Areas Program staff could remove trees that have a diameter at breast height[11] (dbh) of six inches or less; Natural Areas Program staff would coordinate with the SFRPD arborist, who would evaluate the removal of larger trees. Tree work would generally be limited to the nonbreeding season for bird species. Where tree work is required during the breeding season, surveys would be conducted before tree removal to determine the presence or absence of breeding birds, in accordance with General Recommendation GR-4b (see page 109). Typically, trees would be removed limb-by-limb, rather than felling an entire tree; limb-by-limb removal techniques would always be applied in areas adjacent to other trees or sensitive habitat unless this technique is not feasible or practical from a safety perspective. Minimally

[11] Diameter at breast height—A standard means of tree measurement, with the diameter of the trunk measured at breast height, defined as 4.5 feet above the forest floor on the uphill side of the tree.

impacting tree removal techniques would be employed and would involve removing the individual limbs of a tree, then cutting the trunk into individual sections. Tree removal would be conducted manually by someone climbing the tree or someone on a mechanical cherry picker next to the tree. If tree removal occurs in an area that is roadway-accessible, the limbs and trunk sections typically would be transported from the area by a flatbed truck; in other areas, the limbs and trunk sections would be left in place on the ground. Tree removal would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance; stumps may be ground to below grade where necessary to avoid tripping hazards. The SFRPD would spread tree removal across targeted portions of Natural Areas and would not concentrate it in a particular location. Larger-scale tree removal (that exceeds half an acre or on average more than 20 trees), identified and analyzed as long-term programmatic projects in this EIR, would remove trees within urban forests (MA-2 and MA-3) over time and not simultaneously in one portion of a Natural Area. The SFRPD's Tree Removal Procedures require that all trees designated for removal be posted at least 30 days before removal. The public is invited to comment about the proposed removal, and the SFRPD may or may not modify its plans based on public input.

Implementing the SNRAMP would involve thinning both individual trees and small clusters of trees. In most cases, some trees within the area would be left, and the surrounding forest would remain intact. Removal of other vegetation in MA-1 areas would primarily affect individual plants within roughly half-acre plots.

Erosion Control. The erosion control BMPs applicable and appropriate to managing the Natural Areas include the following:

- Straw mulch—This method can be applied quickly in areas where long-term erosion protection is not required;
- Rolled erosion control products—These materials are supplied in rolls and are used to protect exposed soil areas from water and wind erosion;
- Wood mulch—This material is typically broadcast by hand onto exposed soil to prevent wind and water erosion;
- Silt fences—This method involves staking a permeable geotextile fabric along the contours of a slope. The bottom of the silt fence is typically trenched into the soil, allowing the fence to intercept and reduce the velocity of sediment-laden sheet flow;

- Fiber rolls—These roll materials are shaped into tubes that can be placed along the contour of a slope to intercept sediment-laden sheet flow and can also be placed around storm drain inlets; and
- Straw bales—These can be applied in much the same way as the fiber rolls, but they are taller and sturdier.

Pathogen Control. The SNRAMP identified the following BMPs to control the spread of pathogens from one area to another. For work conducted in a known site of sudden oak death infestation, tools should be cleaned and disinfected after use on infected trees and should be sanitized before use on healthy trees. Generally, to prevent the spread of aquatic pathogens, dirt and debris should be removed from equipment, and the equipment should be disinfected.

West Nile Virus. To control the spread of this mosquito-borne disease, the following BMPs are recommended:

- Educate staff about the most effective ways to avoid being bitten by mosquitoes;
- Remove small water features that contain standing water or treat those features with BT (*Bacillus thuringiensis israelensis*), a biological control agent for mosquito larvae, if the features are to remain and Public Health Services identifies a potential health hazard; and
- Encourage staff to drain any standing water that is caused by stored equipment or by temporary depressions.

III.E.6 Monitoring Plan

Monitoring activities will be designed within the conceptual framework to address the following questions:

- What is the population status of selected special status species? Where are these populations located? What are the growth trends for each of these populations and for the species as a whole within the Natural Areas?
- How successful are restoration and enhancement projects in terms of project goals? What are the best ways to measure success criteria? How do selected management activities, including restoration and conservation projects, affect the diversity and abundance of native species in relation to the diversity and abundance of invasive species within the project areas?

The following standardized protocols have been developed to address those questions:

Monitoring Populations of Special Status Species

- Monitoring special status plant species
  - Locate populations,
  - Map populations,
  - Estimate population/cover, and
  - Assess population/cover change.
- Monitoring Special Status Wildlife Species
  - Locate populations, and
  - Assess population change.

Measuring the Success of Restoration and Conservation Programs

- Qualitative methods for assessing project success
  - Timing of photo-monitoring, and
  - Location of photo-monitoring.
- Quantitative Methods for Assessing Project Success
  - Map project area,
  - Randomize samples,
  - Conduct point intercept sampling, and
  - Record and analyze.
- Tracking changes in avian and butterfly diversity and abundance
  - Qualitative methods for avian species monitoring,
  - Quantitative methods for avian species monitoring,
  - Qualitative methods for monitoring butterfly species, and
  - Quantitative methods for monitoring butterfly species.

A monitoring program can be successful only if it is applied uniformly and consistently. Once a monitoring effort has begun, the methods for collecting data must continue in the manner that they were initially implemented, or the data will not be comparable over time and between sites.

Therefore, the protocols associated with the SNRAMP monitoring plan should not be altered in any significant way.

III.F ACTIVITIES COVERED IN THIS EIR

The activities planned for the Natural Areas can generally be divided between routine maintenance and programmatic projects, as described below. In this EIR, routine maintenance is addressed at a project level, while the programmatic projects are addressed programmatically; programmatic projects would undergo additional environmental review, as appropriate, at the time they are proposed. This EIR also analyzes the Sharp Park restoration at the project-level.

III.F.1 Program-Level Activities

Programmatic projects would include the following:

- Rerouting or constructing trails, using heavy equipment (such as bobcats, backhoes, and excavators) at a typical grading depth of two feet. This activity is typically conducted by contractors.
- Stabilizing hillsides, using erosion control measures that require heavy equipment and grading and possible installation of structures, such as gabions. This activity is typically conducted by contractors.
- Undertaking initial invasive weed or tree removal projects that typically exceed half an acre (or on average 20 trees) at any one time. Trees will be removed manually and limb-by-limb, as described previously. This activity can be conducted by contractors or SFRPD staff.

While the SNRAMP may identify additional types of programmatic projects, the environmental effects of those projects are anticipated to be similar to or less than the above categories of program-level projects.

III.F.2 Project-Level Activities

Routine Maintenance

Routine maintenance would include the following:

- Removing invasive weeds by hand, either as follow-up on a previously treated site or as initial treatment in small areas (less than half an acre). This activity mostly involves the use of hand tools and volunteers, with some use of power equipment by SFRPD staff, such as

brush blades or chainsaws. Ground disturbance from this activity is typically within the top inch or so of ground around the root zone.

- Installing plants using hand tools and plants in one-gallon containers or smaller. In addition to planting, volunteers also may assist Natural Areas Program staff with installation of erosion control materials, including coir rolls, straw bales, wattles, jute netting, and straw matting. These materials are installed with pins or two- to three-foot-long wooden stakes. This activity typically disturbs up to 12 inches of surface soil.
- Removing invasive trees (mostly eucalyptus), as well as overhanging tree limbs. This activity typically occurs in places where trees are expanding into or threatening a native habitat or presenting a safety concern. Following removal, stumps are left in place, resulting in little, if any, ground disturbance. Typically, no more than 20 trees (or half an acre) are treated at one time. This removal covers saplings and any tree over 15 feet high. Trees over six inches dbh are typically removed by tree crews at a rate of one to a few trees at a time. Trees will be removed manually and limb-by-limb, as described above.
- Maintaining trails, which includes clearing deposited soil from steps, replacing or installing steps or trail edging, and rerouting and benching trails. Ground disturbance for this activity is usually six inches or less.
- Maintaining catchment basins and sediment dams through hand removal of accumulated materials.

Sharp Park Restoration

As part of the Sharp Park restoration activities, the following measures from the SNRAMP would be implemented. The full set of Sharp Park SNRAMP measures are presented in Section III.I.23 and include additional measures that may fall under either programmatic projects or routine maintenance.

- SP-4a—Implement improvements to protect and enhance the habitat for the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following:
  - Create upland mounds for foraging, resting, and escape cover for the California red-legged frog and the San Francisco garter snake;
  - Dredge excess sediments and accumulated organic matter, including stands of encroaching tules, to maintain open water and fringe habitat in the wetlands complex

and use appropriate dredged material on site to create or enhance upland habitat or to increase the elevation of certain golf course fairways;

- Continue monitoring for California red-legged frogs and San Francisco garter snakes; and
- Install and maintain signs and barriers to prevent disturbance of sensitive habitat in Horse Stable Pond and Laguna Salada by dogs or other possible nuisances.

- SP-4b—Construct upland mounds in the area directly south and southeast of Laguna Salada and plant with native grasses and herbs to provide snake and frog basking sites, and to provide nesting habitat for riparian birds; and
- SP-9b—Establish a vegetation management plan for the canal connecting Laguna Salada and Horse Stable Pond that would allow channel maintenance without affecting the forktail damselfly, California red-legged frog, or San Francisco garter snake.

The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. These restoration activities are intended to establish conditions that more resemble previous conditions and allow for thriving populations of these listed species. Figure 2 shows the restoration project footprint and the current vegetation communities, and Figure 3 shows the conceptual plan for restoring these areas. The goals of the Sharp Park restoration are to restore and enhance the wetland and upland habitat for the benefit of the San Francisco garter snake and California red-legged frog, which will contribute to the recovery of these species, and to reduce the potential recurrence of the conditions that negatively affect the wetland complex and habitat for these species, including sedimentation, eutrophication[12] due to the accumulation of dead and decaying vegetation, and loss of open water habitat due to accumulation of sediment and the proliferation of encroaching plant species. Although the primary restoration features discussed in this section are not likely to change, some modification may occur during consultation with the USFWS and/or CDFG pursuant to the state and federal Endangered Species Acts and during other regulatory approval processes. The main components of the restoration to achieve recovery of the California red-legged frog and San Francisco garter snake populations are as follows:

[12] Eutrophication—The process by which a body of water becomes enriched in dissolved nutrients that stimulate the growth of aquatic plant life resulting in the depletion of dissolved oxygen.

- Dredging up to 60,000 cubic yards of material to remove sediment, encroaching plant species, and decaying vegetation in Laguna Salada, Horse Stable Pond, and the channel that connects the two water bodies, resulting in the conversion of freshwater marsh, willow scrub, and wet meadow wetland habitat to open water habitat;
- Recontouring freshwater marsh wetland and ruderal (disturbed) habitat along the Laguna Salada, Horse Stable Pond, and channel shorelines to create shallow water wetland habitat;
- Creating an upland and wetland habitat corridor between Horse Stable Pond and Laguna Salada;
- Converting about half an acre of wet meadow/freshwater marsh wetland to upland habitat, creating an upland refuge in the middle of Laguna Salada to provide snakes and frogs with refugia from feral cats and other terrestrial predators, and creating about an acre of replacement wetland along the northern and western edges of the lagoon in place of coastal scrub habitat; and
- Constructing up to four acres of upland mounds on landscaped grass on the east side of the lagoon and between Laguna Salada and Horse Stable Pond**.** These mounds would be placed in the area currently occupied by part of the Hole 13 fairway, which would be narrowed and reconfigured.

Some areas that are currently open water within Laguna Salada and Horse Stable Pond would be deepened by one to three feet, and parts of the eastern portions of the lagoon and pond shorelines, as well as the connector channel, would be excavated to restore open water habitat and to ensure that ample edge habitat consisting of open water/emergent vegetation interface would persist for the foreseeable future. Excavation of accumulated sediments and encroaching wetland plants would result in the conversion of vegetated wetlands to open water habitat. This deepening would be conducted using excavating equipment positioned along the shore of the two water bodies. Up to 60,000 cubic yards of material would be excavated; of this, approximately 40,000 cubic yards would be used on-site and approximately 20,000 cubic yards would be stockpiled or spread at the Sharp Park rifle range site or disposed of at the Sharp Park organic dump. Excavated dredge spoils appropriate for use as golf course substrate materials would be used on-site to raise the elevation of Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. Prior to on-site use of dredged material, the sediments to be removed as part of the wetland restoration project would be tested for elevated concentrations of sulfides and other characteristics to determine whether the sediments would serve as soils suitable for supporting desired vegetation. If the



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0 200 400
Feet

N

- Restoration Footprint
- Vehicle Access
- Golf Course
- Coastal Scrub
- Vegetated Upland
- Ruderal and Monterey Pine Habitat
- Wet Meadow
- Willow Scrub
- Unvegetated Pond/Open Water
- Freshwater Marsh
- Paved

TETRA TECH

Laguna Salada Restoration Footprint

Pacifica, California

Figure 2

Vehicle Access
Staging
North sediment basin
Raise fairways to reduce flooding
Raise hole 18 to allow 2% slope relative to hole 14
Create new wetlands
Create shallow water habitat
Convert wetland to upland habitat
Restore coastal scrub/shrub grassland community
Staging
Clubhouse
Install post and rail fence around lagoon
Excavate for open water habitat
Restore coastal scrub/shrub grassland community
Excavate for open water habitat
Vehicle turn around area
Create shallow water bench
East sediment basin

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0 200 400
Feet

N

TETRA TECH

Vehicle Access
Habitat Boundary
Fence
Raise to 10' Contour
Upland Mounds for SFGS Habitat
Remove Non-Native Trees
Restore Coastal Scrub/Shrub
New Wetlands
Shallow Water Habitat
Sediment Basin
Open Water
Staging

Laguna Salada Restoration Features

Pacifica, California

Figure 3

sediment proves unsuitable, it would be placed in a nonsensitive location or treated to render it capable of supporting the desired vegetation. Treatment may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils or adding lime to neutralize acidic soils. Excavation of the eastern portions of the lagoon, pond and the connector shoreline would convert up to six acres of freshwater marsh, willow scrub, and wet meadow wetland habitat to open water habitat.

To facilitate deepening of Laguna Salada, Horse Stable Pond, and the channel that connects them, as well as removal of encroaching bulrushes and tules, the water levels would be lowered temporarily to allow equipment to access the shoreline for removal of accumulated vegetation and sediments. This would be accomplished by operating the pumps at Horse Stable Pond to draw water through the wetland complex and out to the Pacific Ocean. It is anticipated that the water level in the wetland complex would be lowered from an approximate elevation of 7.5 feet above mean sea level (msl) to an elevation of approximately 4.5 feet msl, a decrease of 3 feet. Following lowering of the water levels, a qualified USFWS-approved biologist would survey the entire project area for California red-legged frogs and San Francisco garter snakes. If individuals are found during the survey, the biologist would relocate them to appropriate aquatic habitat, such as that near Mori Point, located south of Horse Stable Pond (or other suitable location as agreed to as part of consultation with the USFWS and/or CDFG); these activities would be conducted in coordination with the USFWS and CDFG.

An upland and wetland habitat corridor between the lagoon and the pond would be constructed with upland features designed to support the San Francisco garter snake; this action would necessitate permanently closing Hole 12 of the Sharp Park Golf Course. Sediment basins would be installed in two locations, one where Sanchez Creek enters a culvert to pass under Highway 1 and the other at the northern boundary of Sharp Park; the former sediment basin would be developed on about half an acre of the golf course (primarily upland Monterey pine habitat), and the latter sediment basin would be expanded onto about half an acre of ruderal and upland Monterey pine habitat. A post and rail fence would also be installed along the seawall to the west of the lagoon, with additional fencing around the wetland complex, to discourage human and pet intrusion into the restored habitat area.

Creating an upland refuge in the middle of the lagoon would require filling approximately half an acre of wet meadow and freshwater marsh wetlands. To compensate for this and other incidental loss of vegetated wetlands during construction, in-kind creation of approximately one acre of wetlands would occur in several upland locations around the northern and western edges of the

lagoon. The newly created wetlands would cover the same or a greater amount of area as the wetlands that would be converted to upland habitat.

During the restoration activities, temporary equipment staging and materials storage would occur at the northwest corner of Sharp Park, at or near Hole 17 of the golf course. Equipment access to the project area from the north would be from Clarendon Street, which runs along the north side of Sharp Park. Access to the southern part of the project area would be from the sea wall levee road and the dirt road near the Horse Stable Pond pump house. Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

Creating, restoring, and enhancing California red-legged frog and San Francisco garter snake habitat at Laguna Salada would also involve a reconfiguration of some holes of Sharp Park Golf Course and converting a portion of the area currently occupied by the course to Natural Area. Approximately 13 acres of the golf course would be modified to create important upland habitat adjacent to the wetlands for the endangered San Francisco garter snake, to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded, and to allow for creation of new wetlands to compensate for those filled during restoration. In order to create a habitat corridor between Horse Stable Pond and Laguna Salada, Holes 10 and 13 would be slightly shortened or narrowed, and the existing Hole 12 would be permanently closed. The habitat corridor would cover approximately six acres, bringing the total of modified area at the golf course to about 19 acres.

To protect the frogs and snakes during restoration work, the SFRPD anticipates conducting the restoration activities between May 1 and October 15 and would continue to coordinate the planning and undertaking of those activities with the USFWS and CDFG; this activity period avoids the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. The SFRPD would coordinate with the San Mateo County Mosquito and Vector Control District on the proposed changes to Laguna Salada to minimize the potential for development of mosquito breeding habitat.

While management options for the Sharp Park sea wall, including a naturally managed sea wall and shoreline, have been considered by the SFRPD, those options are not proposed as part of the SNRAMP. Thus, they are not addressed in this EIR.

Following completion of the restoration activities, the SFRPD would conduct maintenance to ensure the success of those activities. The scope of the maintenance is subject to modification during consultation with the USFWS pursuant to the ESA and through other regulatory approval processes. Maintenance would include weeding and maintaining the restored areas. Maintenance of the wetland areas may include removal of encroaching or invasive plant species and additional planting of wetland plant species. As needed, the SFRPD would also conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe. Maintaining the sediment basins would involve the periodic removal of accumulated sediment. Needed surveys would be coordinated with the USFWS and CDFG to ensure compliance with endangered species laws and regulations (SFRPD 2009a). Wetland functionality would be assessed using ecologically based criteria to determine success of the project objectives.

Presented in Table 4 are the approximate areas of those habitat types that are present within the restoration project footprint; this footprint and these habitats are also illustrated in Figure 2. Habitats within the footprint are potentially subject to temporary disturbance during the restoration activities. Following completion of each season's restoration activities, the disturbed areas would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition, as needed based on the level of disturbance. Also summarized in Table 4 are the approximate post-restoration areas of the restoration habitat types.

Table 4
Laguna Salada Habitat Types within Restoration Footprint

Type of Habitat	Existing Acreage*	Post-Restoration Acreage*
Landscaped Golf Course	30	11
Wetlands	23	17.5
Freshwater Marsh	19.5	14
Willow Scrub	1	0.5
Wet Meadow	2.5	3
Coastal Scrub	9	27.5
Open Water	4.5	10.5
Vegetated Upland	3	3
Ruderal and Monterey Pine	0.5	0.5

*The acreages within the Figure 2 restoration footprint have been rounded to the half acre

III.G CHANGES MADE TO THE SNRAMP SINCE PUBLICATION

When the San Francisco Recreation and Park Commission approved the SNRAMP for environmental analysis under CEQA, it passed the following two amendments:

- MA-3 areas would be maintained by the SFRPD Urban Forestry staff and may be reforested with native or nonnative species. Weed and brush removal and erosion control in MA-3 areas would be undertaken in accordance with the SNRAMP.
- Where appropriate in the SNRAMP, feral cat relocation would be implemented only on a determination by the San Francisco Recreation and Park Commission that other methods of population reduction failed to adequately reduce cat populations in the Natural Areas.

During the CEQA review process, changes have been made to the activities proposed under the SNRAMP for one or more of the following reasons:

- The activity was determined to be infeasible;
- The activity has been completed under separate environmental review;
- The activity was incorrectly described;
- The activity has been re-assessed as contrary to policy; and
- Additional details and specificity have been developed for the activity.

During the CEQA review process, the following changes have been made to the SNRAMP (additional detail on these changes is provided in Appendix J):

- While General Recommendation GR-3b of the SNRAMP mentions prescribed burning, no burning is proposed;
- While General Recommendation GR-8b of the SNRAMP mentions consideration of new dog play areas (DPAs), no new DPAs are proposed as part of the project, due to the current moratorium on new DPAs;[13]

[13] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

- While Recommendation VP-8a of the SNRAMP mentions modifying the Key Avenue roadway, some of those modifications have been completed and are not proposed as part of the project;
- While Recommendation LM-7a of the SNRAMP mentions relocating a DPA at Lake Merced, no relocation of DPAs is proposed as part of the project, in compliance with the current moratorium on new DPAs;
- While Recommendation LM-8b of the SNRAMP mentions development of an environmental education center at Lake Merced, no such center is proposed;
- While Recommendation SP-12a of the SNRAMP mentions cleanup and remediation of the former rifle range at Sharp Park, those activities are not proposed as part of the project. Remediation of the rifle range is complete and the CEQA lead agency for this project is the California Department of Toxic Substances Control;
- Additional details were developed for the SNRAMP BMPs, the program-level activities and routine maintenance activities proposed under the SNRAMP;
- For General Recommendation GR-4b, the bird breeding season was changed from April to September 1 to February 1 to August 31;
- For General Recommendation GR-15c, the following language was added to the end of the description: "retain snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations;"
- For Recommendation VP-7b, the following text was added: "(note that this new entryway may not be feasible given the steepness of the slopes);"
- For Recommendation CH-1e, the following text was added: "(note that a portion of these trees on the north side of Corona Heights were removed in August 2010 because they were determined to be hazardous);"
- For Recommendation DP-1b, the number of existing eucalyptus trees was changed from 120 to 100;
- For Recommendations DP-2a, GC/OH-4a, and LM-3a the text was changed so that tree removal is prohibited within 150 feet of an occupied bird nest, rather than within 500 feet;
- For Recommendation IG-2a, the following text was added: "(note that this work was completed in June 2011);"

- For Recommendation LM-3b, heron nesting areas were added to the list of areas that could require closure of social trails to reduce disturbance of such areas;
- For Sharp Park, the bulleted text under SP-4a was modified and deleted. Under SP-4c, language was added indicating that the goal is to ensure that red-legged frog egg masses remain hydrated. SP-4e, SP-6a, SP-6b, and SP-9c were deleted, and the remaining measures were re-labeled. SP-10a was modified to specify that the subject trenches are located north of Sharp Park Road. The discussion of recommended management actions were modified to add a detailed description of the Laguna Salada wetland complex restoration activities;
- The Everson/Digby Natural Area was added as the 32nd Natural Area in the Natural Areas Program;
- For General Recommendation GR-8a, Lake Merced was removed from the list of DPAs whose boundaries and locations would be retained;
- For Recommendation IB-1c, California seablite (*Suaeda californica*) was added to the list of plants whose populations should be augmented;
- Recommendation IG-2b was modified to clarify that only appropriate social trails would be formalized and inappropriate trails would be eliminated;
- For Recommendation MP-9b, monitoring was expanded to include the Geneva Avenue DPA;
- For Recommendation PL-1b, the phrase associated with the Pine Lake Park Improvement Project was removed, as that project has been completed;
- For Recommendation PL-7a, the number of dedicated access points to Pine Lake was changed from two to one;
- For Recommendation TK-2a, language was added indicating that installed vegetation would include oaks; and
- For Recommendation TP-3a, the following text was added: "Explore options with the San Francisco Municipal Transit Agency to convert a portion of Twin Peaks Boulevard to a multi-use trail."

III.H General Recommendations for all Natural Areas

This section presents management recommendations common throughout the various Natural Areas. For use while reading this EIR, a fold-out list of the General Recommendations (GRs) is included at the end of this document. Site-specific recommendations are presented in Section III.I.

Invasive Plant Control and Revegetation

- GR-1a—Reduce invasive plant populations;
- GR-1b—Where native plant seed banks do not exist or have diminished, appropriate native species may be used for revegetation. Plant native species to approximate the diversity, cover, and density of adjacent habitats or of reference sites in similar habitats;
- GR-1c—Conduct restoration during the appropriate time of the year and at an appropriate scale to avoid impacts on wildlife and to minimize erosion;
- GR-1d—In areas where it may not be feasible to reduce large infestations of invasive vegetation immediately, conduct containment actions along the interface between native and nonnative habitats;
- GR-1e—Annually monitor MAs, restoration areas, and other sensitive habitats for undesired plant species.

Sensitive Plant Species

- GR-2a—Prioritize invasive weed reduction and management in areas supporting sensitive species or other vegetation series;
- GR-2b—Give sensitive species priority in revegetation and reintroduction activities throughout Natural Areas;
- GR-2c—Protect areas of sensitive species and vegetation series of limited distribution from human disturbance;
- GR-2d—Closely monitor plant populations and vegetation series of limited distribution;
- GR-2e—Continue to work with the scientific community to better understand key biological factors affecting the survival and reproduction of sensitive species and to better inform adaptive management decision making.

Native Grasslands

- GR-3a—monitor annually, if feasible, native grasslands and control invasive species;
- GR-3b—Explore alternative methods of grassland management for large grassland expanses, such as prescribed burning, livestock grazing, and use of motorized equipment.

  (Note: The SNRAMP no longer is proposing prescribed burning. The SNRAMP will be updated to reflect this change. Should the SFRPD later determine prescribed burning to be a desirable and feasible method for managing native grasslands, a separate environmental

review would be required to comply with CEQA, and applicable permits and other regulatory agency approvals would be obtained.)

Breeding Bird Habitat

- GR-4a—Conduct annual breeding bird surveys, if resources are available, using the standard point count or transect method, to develop a list of species nesting in Natural Areas;
- GR-4b—Conduct vegetation management activities outside the breeding season (February 1 to August 31) if breeding birds could be affected, unless the following specific conditions are met: projects begun before the breeding season have already disturbed the area, or a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot-radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest;
- GR-4c—If surveys indicate that parasitism by brown-headed cowbirds is a significant problem, consult with the CDFG and the USFWS to determine proper protocols to minimize the negative effects of this species on breeding birds;
- GR-4d—Use material from brush and tree trimming to increase nesting or escape habitat[14] for ground-dwelling birds and to mitigate any loss of habitat from other vegetation clearing;
- GR-4e—Create corridors of shrubs between landscaped areas and Natural Areas to provide cover and transitional habitat for birds and other wildlife.

Avian Foraging Habitat

- GR-5a—Prevent invasive shrubs and trees from colonizing grasslands.

Avian Cavity Nesting Habitat

- GR-6a—Leave snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations;
- GR-6b—Provide nest boxes for native species where natural cavities are absent or in limited supply;
- GR-6c—Provide nest boxes for wood ducks at Impound Lake (a sub-lake of Lake Merced), Sharp Park, and Pine Lake.

[14] Escape habitat—Natural or man-made features that allow animals to avoid predators or other threats.

Predators

- GR-7a—Implement the feral cat control policy from the Quail Recovery Plan approved by the San Francisco Commission on the Environment;
- GR-7b—Develop outreach materials to educate neighbors and users of Natural Areas about feral cats;
- GR-7c—Undertake control of non-cat predators only where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations.

Dog Use

- GR-8a—Retain the boundaries and locations of seven DPAs in Natural Areas (Corona Heights, Pine Lake Park, Golden Gate Park Southeast, McLaren Park Crocker Amazon, McLaren Park Geneva, Golden Gate Park Northeast, and Buena Vista Park) and modify two DPAs (Shelley Drive Loop at McLaren Park and Bernal Hill) to protect sensitive habitat areas;
- GR-8b—Match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas;

  (Note: An underlying assumption of this EIR is that there would be no new DPAs because there is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee. Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)
- GR-8c—Restrict dogs from three sensitive habitat areas (a portion of Gray Fox Creek at McLaren Park, habitat used by the San Francisco garter snake or California red-legged frog at Sharp Park, and the water at Pine Lake).

Small Mammal Habitat

- GR-9a—Preserve during vegetation management activities any brush, logs, rocks, and other natural elements that function as habitat for small mammals and place them at appropriate locations within the Natural Areas.

Invertebrate Habitat

- GR-10a—As invasive plants are removed, install native plants or seeds that are beneficial to local insects;
- GR-10b—In MA-3 grasslands, maintain some invasive plant species that are host plants for local butterflies and other native insects.

Trails and Views

- GR-11a—Maintain and improve primary designated trails;
- GR-11b—Encourage users to stay on the trails in all Natural Areas;
- GR-11c—Routinely monitor Natural Areas for new social trails and close or reroute any trails that impact sensitive species or sensitive habitat or that contribute to erosion;
- GR-11d—Maintain viewsheds to maintain and enhance public recreation;
- GR-11e—Consider adding amenities, such as overlooks and seating areas, when evaluating overall trail use.

Erosion Control

- GR-12a—Revegetate steep slopes that have very thin vegetation to promote general soil stability;
- GR-12b—Reduce erosion risk during the transition between removing invasive species and growth of native species that replace them, including gradual implementation of restoration efforts.

Safety

- GR-13a—Discourage establishment of vegetation with high fire hazard ratings, such as French broom and eucalyptus stands, next to homes and other structures;
- GR-13b—Maintain clear passageways by removing encroaching vegetation and maintaining sight lines to increase safety on trails.

Education

- GR-14a—Continue to network with local schools and research institutions to provide environmental education resources and opportunities for school children in San Francisco and Pacifica;

- GR-14b—Develop appropriate signage that explains the importance of natural resources, ecosystem functions, management activities and goals, and public involvement contacts;
- GR-14c—Develop education materials that discuss the impacts of feeding wildlife and wild animals and the problems with releasing unwanted pets into Natural Areas;
- GR-14d—Conduct special outreach to adjacent property owners about the impacts mentioned in GR-14c.

Urban Forests

- GR-15a—Maintain urban forests within the MA-3 areas with a basal area[15] per acre of between 200 and 600 square feet (this would provide a shaded forest environment);
- GR-15b—Maintain a stocking rate that will perpetuate the urban forest and promote forest health;
- GR-15c—To promote forest health, focus tree removal on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding; retain snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations;
- GR-15d—Do not plant sensitive species in MA-3 urban forests;
- GR-15e—Remove invasive Cape (*Delairea odorata*), English (*Hedera helix*), and Algerian ivy (*Hedera algeriensis*) and Himalayan blackberry (*Rubus discolor*) to promote and maintain urban forest health in MA-3 areas;
- GR-15f—Consult the SFRPD arborist when tree removals or plantings are proposed in MA-3 urban forests;
- GR-15g—Plant trees and shrubs in the urban forests that promote species diversity and improve wildlife habitat; and
- GR-15h—Use San Francisco-approved insecticides to treat cut stumps.

III.I SPECIFIC RECOMMENDATIONS FOR EACH NATURAL AREA

The *Significant Natural Resource Areas Management Plan, Final Draft* (SFRPD 2006) is incorporated by reference into this description of the proposed project. The information presented below for each of

[15]Basal area—A measure, typically in square feet per acre, of the area covered by trees within a given urban forest. Basal area is used as an index of tree production.

the Natural Areas is grouped into sections on general description, management areas, and recommended management actions. The systemwide recommendations that apply to the entire Natural Area are presented first, followed by site-specific recommendations, including an alphabetical code unique to each Natural Area; the GRs referenced in the discussions below are described in Section III.H and are included in a fold-out list at the end of this document for use while reading this EIR. Where appropriate, the changes to the SNRAMP summarized in Section III.G are also listed in applicable subsection of Sections III.H and III.I. As presented in the SNRAMP, a number of the Natural Areas have been grouped in this section; as a result, the 32 Natural Areas are addressed in 27 subsections below. Table 5 is an overview of the management activities proposed for each of the Natural Areas. Figure 1 is an overview of the Natural Areas, and individual maps of the Natural Areas are included in Appendix B.

III.I.1 Balboa (BA)

General Description

The 1.8-acre Balboa Natural Area, also referred to as Sutro Dunes and Parcel 4, is at the corner of Balboa Street and the Great Highway in western San Francisco. The National Park Service (NPS) currently maintains the Balboa Natural Area for the City and County of San Francisco under the terms of a Cooperative Management Agreement approved in 2007. It is in the southern corner of the Sutro Heights Park and is across the Great Highway from Ocean Beach and the Pacific Ocean; it also is next to NPS lands administered by the Golden Gate National Recreation Area (GGNRA). This all-sand area has one of the few foredune communities in San Francisco. An elevated boardwalk provides public access and is intended to keep people out of the sensitive sand dune vegetation.

Management Areas

The 1.1-acre MA-1 area of the Balboa Natural Area includes restored dune scrub habitat and sensitive species. The 0.7-acre MA-2 area is a sandy substrate area with potential for expansion of the dune community. There is no MA-3 area at the Balboa Natural Area.

Table 5
Summary of Natural Areas Management Plan

Natural Area Site	Park Acreage	Natural Area Acreage*	Management Area (acres)				Invasive Trees			Trails (feet)				Dog Play Areas (acres)			
			MA-1	MA-2	MA-3	Total MA[1]	Existing	To Remove	To Remain	Existing	To Close/ Relocate	To Create	Resulting	Existing	To Remove	To Remain	Monitor**
Balboa	1.8	1.8	1.1	0.7	0	1.8	0	0	0	637	90	0	547				
Bayview Park	43.9	43.9	8.2	15.8	19.7	43.7	6,000	511	5,489	8,496	1,439	1,020	8,077				
Bernal Hill	24.3	24.3	7.6	5.8	10.7	24.1	100	0	100	12,239	4,544	464	8,159	21.0	6.0	15.0	No
Billy Goat Hill	3.5	3.5	0.6	1.1	1.6	3.3	20	0	20	2,600	745	0	1,855				
Brooks Park	3.5	2.0	0.8	0.9	0.3	2.0	20	3	17	1,340	456	0	884				
Buena Vista Park	36.1	6.1	0	6.1	0	6.1	140	10	130	3,741	0	0	3,741	1.0	0	1.0	Yes
Corona Heights	12.6	9.6	2.9	2.5	4.2	9.6	200	15	185	6,701	1,845	0	4,856	0.4	0	0.4	No
Dorothy Erskine Park	1.5	1.5	0.2	0.3	1.0	1.5	100	14	86	771	0	0	771				
Duncan-Castro	0.5	0.5	0.3	0.1	0.1	0.5	0	0	0	333	0	0	333				
Edgehill Mountain	2.3	2.3	0	0.9	1.4	2.3	300	0	300	747	0	438	1,185				
Everson/Digby	1.2	1.2	0.9	0.1	0.2	1.2	0	0	0	0	0	0	0				
Fairmount Park	0.7	0.7	0	0	0.7	0.7	100	0	100	187	0	0	187				
Glen Canyon Park and O'Shaughnessy Hollow***	72.6	63.8	8.1	33.0	22.4	63.5	6,000	120	5,880	23,242	3,653	0	19,589				
Golden Gate Heights	6.0	0.8	0.2	0.5	0.1	0.8	30	0	30	559	390	188	357				
Golden Gate Park Oak Woodlands	1,021.0	26.2	0.7	25.5	0	26.2	900	82	818	24,844	12,381	0	12,463	2.8	0	2.8	Yes
Grandview Park	4.0	4.0	0.9	2.4	0.7	4.0	25	5	20	1,722	409	0	1,313				
Hawk Hill	4.5	4.5	1.4	3.0	0	4.4	10	0	10	1,609	692	0	917				
India Basin Shoreline Park	11.8	6.2	3.2	2.8	0	6.0	0	0	0	1,885	0	0	1,885				
Interior Greenbelt	19.4	16.5	0	1.8	14.7	16.5	5,800	140	5,660	935	0	620	1,555				
Kite Hill	2.7	2.7	0.6	0.5	1.6	2.7	10	0	10	1,957	398	0	1,559				
Lake Merced	614.0	395.0	60.8	101.8	231.5	394.1	12,000	134	11,866	11,106	3,319	365	8,152	5.0	5.0	0	
Lakeview/Ashton Mini Park	0.5	0.5	0.1	0.2	0.2	0.5	0	0	0	651	0	0	651				
McLaren Park	312.6	165.3	34.9	68.3	61.4	164.6	19,500	809	18,691	59,185	15,681	0	43,504	61.7	8.3	53.4	Yes
Mount Davidson	40.2	40.2	8.8	11.0	20.1	39.9	11,000	1,600	9,400	15,456	2,867	0	12,589				
Palou-Phelps	2.5	2.1	0.8	0.4	0.8	2.0	40	2	38	1,049	527	496	1,018				
Pine Lake	30.3	8.4	1.0	3.8	3.6	8.4	1,000	0	1,000	3,157	608	13	2,562	3.3	0	3.3	No
Rock Outcrop	1.6	1.6	0.8	0.7	0	1.5	0	0	0	0	0	0	0				
Tank Hill	2.9	2.9	1.5	0.6	0.7	2.8	50	0	50	2,672	1,411	0	1,261				
Twin Peaks	34.1	31.1	12.6	14.3	3.8	30.7	88	3	85	8,741	2,303	501	6,939				
15th Avenue Steps	0.3	0.3	0	0.2	0	0.2	0	0	0	0	0	0	0				
San Francisco Subtotal	**2,312.9**	**869.5**	**159.0**	**305.1**	**401.5**	**865.6**	**63,433**	**3,448**	**59,985**	**196,562**	**53,758**	**4,105**	**146,909**	**95.2**	**19.3**	**75.9**	
Sharp Park (Pacifica)	411.0	237.2	35.0	125.1	76.5	236.6	54,000	15,000	39,000	14,741	653	1,792	15,880				
Total	**2,723.9**	**1,106.7**	**194.0**	**430.2**	**478.0**	**1,102.2**	**117,433**	**18,448**	**98,985**	**211,303**	**54,411**	**5,897**	**162,789**	**95.2**	**19.3**	**75.9**	

*The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.

**The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.

***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.

Recommended Management Actions

At Balboa, GR-1, GR-2, GR-4, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Balboa Natural Area:

- BA-1a—Contain and reduce herbaceous[16] invasive plants and prevent invasive tree species from becoming established;
- BA-1b—Revegetate using appropriate native plants in those areas where invasive plants have been removed;
- BA-1c—Augment existing populations of sensitive plant species; and
- BA-1d—Reintroduce rare plants.

III.I.2 Bayview Park (VP)

General Description

Bayview Park is in southeast San Francisco and is east of Candlestick Point State Park and Candlestick Park. Developed areas within the 43.9-acre Natural Area are limited to paved trails, which are also used as access roads. This is one of the more diverse Natural Areas with vegetation that includes grasslands, scrub, tree-dominated areas, and a large number of sensitive plant species. The vegetation provides suitable habitat for resident and migratory bird species, reptiles, mammals, and amphibians. The extensive grasslands provide habitat for butterflies and other insects, including the endangered mission blue butterfly (*Icaricia icarioides missionensis*). It also contains historic Works Progress Administration features.

Management Areas

The 8.2-acre MA-1 area is native grassland and scrub habitats that support the highest numbers of sensitive species. The 15.8-acre MA-2 area also may contain sensitive species and habitats and may act as buffers for the more sensitive areas. The 19.7-acre MA-3 area includes urban forests and invasive scrub.

[16] Herbaceous—Having the texture, color, and other characteristics of an ordinary foliage leaf; not woody.

Recommended Management Actions

At Bayview Park, GR-1 through GR-4, GR-6, GR-7, and GR-9 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended:

- VP-1a—Reduce and contain herbaceous and woody invasive plants;
- VP-1b—Remove approximately 511 of the estimated 6,000 invasive trees (primarily blue gum eucalyptus) to enhance sensitive species habitats;
- VP-1c—Protect and maintain existing native habitats;
- VP-1d—Augment existing sensitive plant populations;
- VP-1e—Reintroduce populations of sensitive plant species to help prevent extinctions of these species in San Francisco;
- VP-2a—Install coast live oak seedlings and other native plants in gaps and openings in the eucalyptus forest;
- VP-3a—Construct a small berm to create a seasonal wetland and detention basin, if capital funds are made available;
- VP-4a—Maintain and improve habitat for the pinion mouse;
- VP-5a—Augment existing silver bush lupine (*Lupinus albifrons*), summer lupine (*Lupinus formosus*), and varied lupine (*Lupinus* sp.) populations;
- VP-6a—Install signs and temporary barriers along the roadway to discourage off-road motorcycle riding;
- VP-7a—Construct a pedestrian trail connecting to the historic Works Progress Administration trail;
- VP-7b—Develop a new entryway on the southern side of the park (note that this new entryway may not be feasible given the steepness of the slopes);
- VP-8a—Remove the berm on the downhill side of Key Avenue and regrade the entire roadway so that the uphill side is higher than the downhill side, if funds are made available (note that portions of this management action have been completed);
- VP-8b—Remove material in major downslope gullies and replace it with brush that is highly compacted;
- VP-8c—Build a small berm south of Key Avenue at the base of the main soil slip;

- VP-9a—Create a detailed and complete erosion control plan before beginning work on the large gully near the summit; work would include the following:
  - Installing a minimum of two check-dams within the upper portion of the gully,
  - Creating soil berms and troughs between these two structures,
  - Removing soil from the upper edges of the gully to create a 1:1 slope,
  - Installing a staked brush pile or brush box immediately below the upper edge of the gully,
  - Installing one or two staked brush bundles in the vegetated swale leading into the gully from the direction of the radio tower,
  - Installing rice straw bales along all edges of the gully, and
  - Hand broadcasting the entire area with the appropriate native grass seed once construction is complete and before the fall rains; and
- VP-10a—Restrict access to sensitive mission blue butterfly habitat if these habitat areas continue to be damaged.

III.I.3 Bernal Hill (BH)

General Description

Bernal Hill is in the Bernal Heights neighborhood in central San Francisco. A microwave radio transmission station, not owned by the SFRPD, is in a fenced enclosure at the hill's summit. Other than a paved access road, the 24.3-acre Natural Area is primarily grassland. A designated DPA is on and above Bernal Heights Boulevard, which circumnavigates the Natural Area.

Management Areas

The 7.6-acre MA-1 area includes the slopes of Bernal Hill where native grasslands and sensitive species are found. The 5.8-acre MA-2 area serves as a buffer between the MA-1 area and urban forest. The 10.7-acre MA-3 area is that portion of the Natural Area that does not support sensitive species or native grasslands.

Recommended Management Actions

At Bernal Hill, GR-1 through GR-4 and GR-7 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Bernal Hill Natural Area:

- BH-1a—Reduce and contain herbaceous and woody invasive plants;
- BH-1b—Revegetate using appropriate native plants where invasive plants have been removed;
- BH-1c—Focus sensitive plant species management and conservation on existing habitat areas;
- BH-1d—Maintain the urban forest-grassland mosaic in currently forested areas below the road;
- BH-2a—Encourage people and dogs to stay on designated trails and discourage them from climbing the steep slopes and causing erosion on the north side of the Natural Area; and
- BH-3a—Retain on- and off-leash dog use of the entire Natural Area and limit off-leash activities to the relatively flat areas to avoid sensitive plant species, reducing the off-leash DPA from 21 to 15 acres.

III.I.4 Billy Goat Hill (BG)

General Description

The 3.5-acre Billy Goat Hill Natural Area is in the Diamond Heights area, east of Glen Canyon Park. The Natural Area is composed mainly of grasslands. Billy Goat Hill provides important habitat for native plants and populations of sensitive plant species, grassland habitat, and suitable habitat for a variety of bird species and special-status butterfly species.

Management Areas

The MAs have been delineated based on the presence of rich native grasslands. The 0.6-acre MA-1 area supports the richest array of species, as well as more intact habitat than the 1.1-acre MA-2 area, which surrounds the MA-1 and buffers it. The MA-2 area is itself surrounded on three sides by the 1.6-acre MA-3 area, which includes tree and grassland communities.

Recommended Management Actions

At Billy Goat Hill, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Billy Goat Hill Natural Area:

- BG-1a—Reduce and contain woody and herbaceous invasive plants;

- BG-1b—Revegetate using appropriate native plants, enhance and diversify existing grasslands as appropriate, augment the existing rare or uncommon grassland plant species, slowly replace the nonnative grassland with a grassland dominated by native species, maintain and enhance the native scrub community, and plant native grassland and scrub species into the appropriate areas using diversity, cover, and density targets generated from reference sites around San Francisco;
- BG-1c—Maintain a periphery of tall trees and diversify areas at the grassland interface with wildlife-enhancing species, and design, maintain, and enhance a grassland-scrub-tree mosaic; and
- BG-2a—Create and protect a complex mosaic of grassland and scrub with a variety of plant species that will provide shelter, food, and nesting areas for local wildlife.

III.I.5 Brooks Park and Lakeview/Ashton Mini Park (BP)

General Description

Brooks Park and Lakeview/Ashton Mini Park (also informally known as Orizaba Rocks) are in southwestern San Francisco in the Merced Heights and Ingleside Heights neighborhoods. Brooks Park, which fronts on Shields Street between Victoria and Vernon Streets, is a 3.5-acre park, two acres of which are part of the Natural Area. The 0.5-acre Lakeview/Ashton Mini Park Natural Area is a rocky outcrop at the dead ends of Ashton and Orizaba Avenues and Lakeview and Shields Streets. Both of these Natural Areas contain grasslands.

Management Areas

The Brooks Park and Lakeview/Ashton Mini Park Natural Areas are dominated by grasslands, and the relative quality of the grasslands define the MA-1, MA-2, and MA-3 areas. The 0.9-acre MA-1 areas encompass two grasslands at Brooks Park and one area at Lakeview/Ashton Mini Park. The 1.1-acre MA-2 areas are the grasslands surrounding the MA-1 areas and serve as buffers between the MA-1 and the MA-3 areas. The 0.5-acre MA-3 areas are on the periphery in both parks and represent the least sensitive grassland areas.

Recommended Management Actions

At Brooks Park and Lakeview/Ashton Mini Park, GR-1 through GR-4, GR-7, and GR-10 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Brooks Park and Lakeview/Ashton Mini Park Natural Areas:

- BP-1a—Contain and reduce herbaceous and woody invasive plants;
- BP-1b—At Brooks Park, remove three cypress trees and prevent establishment of invasive trees in all areas;
- BP-1c—Revegetate with appropriate native plants using diversity, cover, and density targets generated from reference sites within and around San Francisco; and
- BP-1d—Consider augmenting sensitive species at Lakeview/Ashton Mini Park and introducing sensitive species within suitable locations at Brooks Park.

III.I.6 Buena Vista Park (BV)

General Description

The 36.1-acre Buena Vista Park is in central San Francisco, just north of Corona Heights, and is bounded in part by Haight Street on the north; Buena Vista Avenue East and Buena Vista Avenue West loop around the park and form the eastern, southern, and western boundaries. The 6.1-acre Buena Vista Park Natural Area is on the northern side of the park and supports one of the most extensive coast live oak forests within San Francisco. The remainder of the park is covered almost exclusively by mixed exotic forest. There is a designated DPA in the northwest corner of Buena Vista Park in the oak woodland.

Management Areas

The 6.1-acre MA-2 area includes coast live oak woodlands in the northern portion of the park. There are no MA-1 or MA-3 areas.

Recommended Management Actions

At Buena Vista Park, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, GR-11, GR-13, and GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Buena Vista Park Natural Area:

- BV-1a—Reduce woody and herbaceous invasive plants and understory[17] plants and prevent invasive trees from becoming established;
- BV-1b—Remove approximately 10 eucalyptus and acacia trees out of 140 invasive trees, revegetate areas with appropriate dune scrub and oak trees to promote creation of a multi-

[17] Understory—The shrubs and plants growing beneath the main canopy of a forest or stand of trees.

aged stand, and use diversity, cover, and density targets generated from reference sites around San Francisco to develop planting plans;

- BV-1c—Consider reintroducing rare or uncommon plant species;
- BV-2a—Create complex multistoried habitat by removing invasive species in the understory and planting species that provide food and nesting resources and increase structural diversity by planting native vegetation that is different in height at maturity than vegetation in the existing habitats;
- BV-2b—Install a permanent water source within or next to the Natural Area in an area that would not be easily accessible to off-leash dogs or subject to undesirable human use and ensure that artificial water sources can be drained periodically to remove bullfrogs;
- BV-3a—Augment winter and late-fall fruiting shrubs; and
- BV-4a—Consider implementing protective measures or relocating the DPA outside of oak woodlands if necessary to protect nesting bird habitat.

III.I.7 Corona Heights (CH)

General Description

Corona Heights is in the central portion of San Francisco and is bounded roughly by Flint Street, Roosevelt Way, and 16th Street. The Corona Heights Playground and the Randall Museum are within the southern portion of the park. Of the park's 12.6 acres, the Natural Area covers approximately 9.6 acres and is composed of grasslands, with scrub and tree-dominated areas around its edges. A fenced DPA is next to the northwest portion of the Natural Area.

Management Areas

The 2.9-acre MA-1 areas include three areas with sensitive species and habitats. The 2.5-acre MA-2 areas are buffers around the MA-1 areas. The 4.2-acre MA-3 areas include urban forest and grasslands around the Natural Area perimeter.

Recommended Management Actions

At Corona Heights, GR-1 through GR-4, GR-7, GR-9 through GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Corona Heights Natural Area:

- CH-1a—Contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- CH-1b—Augment existing populations of sensitive plant species through seeding or planting;
- CH-1c—Reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco;
- CH-1d—Maintain diverse native grassland in areas where invasive plants have been removed. Maintain and enhance oak woodlands;
- CH-1e—Remove 15 Monterey pines (*Pinus radiata*) (note that a portion of these trees on the north side of Corona Heights were removed in August 2010 because they were determined to be hazardous);
- CH-2a—Create complex multistoried habitat that provides food sources and nesting, roosting, and escape habitat for a variety of species; and
- CH-2b—Increase the extent of oak woodland habitat to create habitat for wildlife, particularly birds.

III.I.8 Dorothy Erskine (DP)

General Description

Dorothy Erskine Park is near the southern end of Glen Canyon Park at the intersection of Baden Street and Martha Avenue in central San Francisco. The 1.5-acre Natural Area is mostly forested. Most remnant plant areas and important wildlife habitat are associated with the grassland and mixed exotic forests on the steep north-facing slopes, which are inaccessible due to the presence of a safety fence at the top of the slope. There is one main trail and access route through the Natural Area.

Management Areas

The 0.2-acre MA-1 areas contain remnant grassland and wildflower habitats. The 0.3-acre MA-2 areas include remnant scrub habitat and serve as buffers to the MA-1 areas. The 1.0-acre MA-3 areas are composed of urban forests.

Recommended Management Actions

At Dorothy Erskine, GR-1, GR-2, GR-4, GR-7, GR-9, GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Dorothy Erskine Natural Area:

- DP-1a—Reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- DP-1b—Remove approximately 14 of the estimated 100 eucalyptus trees;
- DP-1c—Revegetate with appropriate native plants those areas where invasive plants have been removed to maintain and enhance the native grassland and scrub communities;
- DP-1d—Reintroduce silk tassel bush (*Garrya elliptica*) to prevent the countywide extinction of this sensitive plant species; and
- DP-2a—Survey the site for red-tailed hawk nests before tree removal. If an occupied nest is found, conduct tree removal activities no closer than 150 feet from the nest.

III.I.9 Duncan-Castro (DC)

General Description

Duncan-Castro is in the central portion of San Francisco and is northeast of the intersection of Castro and Duncan Streets. The 0.5-acre Natural Area is predominantly grassland, with an ornamental planting area along Duncan Street.

Management Areas

The 0.3-acre MA-1 area includes rock outcrops, red fescue prairie, and portions of the annual grassland with sensitive plant species populations. The 0.1-acre MA-2 area has less diverse grasslands and rock outcrops on the south and west sides of the Natural Area. The 0.1-acre MA-3 area includes ornamental vegetation and forest along the eastern edge of the Natural Area.

Recommended Management Actions

At Duncan-Castro, GR-1 through GR-4, GR-7, GR-9, GR-10, GR-13, and GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Duncan-Castro Natural Area:

- DC-1a—Contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;

- DC-1b—Maintain and diversify grasslands and maintain and enhance tree cover in the northeast part of the Natural Area;
- DC-1c—Enhance the native scrub community; and
- DC-2a—Determine whether two pipelines crossing the Natural Area are still in service or abandoned, then bury, reroute, or remove them, as appropriate.

III.I.10 Edgehill Mountain (EM)

General Description

Edgehill Mountain is northwest across Portola Drive from Mount Davidson in central San Francisco. The 2.3-acre, forested Natural Area is bordered by Kensington and Edgehill Ways. The area is accessed from Shangrila Way and Knockash Hill. Edgehill Mountain is a blue gum eucalyptus (*Eucalyptus globulus*) forest that supports small populations of sensitive plants and provides habitat for sensitive bird species.

Management Areas

The 0.9-acre MA-2 areas are at the center of the Natural Area and include coastal scrub and prairie grassland habitats. The 1.4-acre MA-3 areas include the remaining urban forests. There are no MA-1 areas.

Recommended Management Actions

At Edgehill Mountain, GR-1, GR-2, GR-4, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Edgehill Mountain Natural Area:

- EM-1a—Reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- EM-1b—Replace dead and dying trees with native species typical of coastal bluff scrub and oak woodland habitats;
- EM-1c—Revegetate with appropriate native plant species in those areas where invasive plants have been removed to maintain and enhance existing scrub and grassland habitats;
- EM-1d—Augment existing sensitive plants to prevent extinction of rare or uncommon plant species; and

- EM-2a—Develop two new entrances and trails through the Natural Area, one entering at Kensington Way and one entering at Edgehill Way.

III.I.11 Fairmount Park (FP)

General Description

Fairmount Park is southeast of Billy Goat Hill in central San Francisco. The 0.7-acre Natural Area is mostly forested and is at the intersection of Fairmount and San Miguel Streets.

Management Areas

The 0.7-acre MA-3 area is an urban forest. There are no MA-1 or MA-2 areas.

Recommended Management Actions

At Fairmount Park, GR-1, GR-3, GR-4, GR-7, GR-11, GR-12, GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Fairmount Park Natural Area:

- FP-1a—Contain and reduce herbaceous and woody invasive plants and
- FP-1b—Focus tree regeneration on the north and south sides, leaving fewer trees on the east side where views are to be preserved and helping to screen existing homes from view.

III.I.12 Glen Canyon Park and O'Shaughnessy Hollow (GC/OH)

General Description

Glen Canyon Park and O'Shaughnessy Hollow are south of Twin Peaks, between the Diamond Heights and Miraloma neighborhoods, in an area formally referred to as the San Miguel Hills. The approximately 70-acre Glen Canyon Park has 60 acres designated as a Natural Area. O'Shaughnessy Hollow is a 3.8-acre Natural Area. O'Shaughnessy Boulevard separates the two Natural Areas, with Glen Canyon Park to the east and O'Shaughnessy Hollow to the west. Recreation facilities in Glen Canyon Park include the Silver Tree Day Camp, a community recreation center, ball fields, playgrounds, and formal and informal trails. There are no developed areas within O'Shaughnessy Hollow.

Management Areas

The 8.1-acre MA-1 areas contain high concentrations of native plants within the grasslands or sensitive species at Glen Canyon Park. The O'Shaughnessy Hollow MA-1 areas include sensitive

plant species habitat. The 33-acre MA-2 areas include the scrub-covered western slopes and the riparian[18] corridor in Glen Canyon Park, and areas are designated to provide buffers around the grassland MA-1 areas. The O'Shaughnessy Hollow MA-2 areas support a mix of native-dominated scrub and grassland habitats. MA-3 areas (22.4 acres) include portions of Glen Canyon Park covered with urban forest, the invasive annual grassland in the extreme northern corner, and a corridor along the gravel access road.

Recommended Management Actions

At Glen Canyon Park and O'Shaughnessy Hollow, GR-1 through GR-7, GR-8c, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Glen Canyon Park and O'Shaughnessy Hollow Natural Areas:

- GC/OH-1a—Reduce woody and herbaceous invasive plants and understory plants and prevent invasive trees from becoming established;
- GC/OH-1b—Revegetate with appropriate native plants to approximate the diversity, cover, and density of adjacent habitat;
- GC/OH-1c—Augment existing rare or uncommon species to maintain these species and enhance their chances of survival;
- GC/OH-1d—Consider reintroduction of sensitive species;
- GC/OH-1e—Remove approximately 120 of the estimated 6,000 invasive blue gum eucalyptus (*Eucalpytus globulus*) trees in Glen Canyon Park to maintain and enhance native habitats;
- GC/OH-2a—Thin sections of the overstory within the riparian corridor and reduce invasive plants in the understory;
- GC/OH-2b—Prevent willows from encroaching on open water and create new and stable pool habitats;
- GC/OH-3a—Protect sensitive habitats and prevent erosion by closing social trails to the northwestern rock outcrop in Glen Canyon Park, discontinuing rock climbing, and closing social trails in O'Shaughnessy Hollow;

[18] Riparian—Land next to a natural watercourse such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank.

- GC/OH-4a—Avoid removing trees with red-tailed hawk or great horned owl nests and prohibit tree removal within 150 feet of occupied nests;
- GC/OH-4b—Protect and preserve open grassland habitat through vegetation management and control of invasive species;
- GC/OH-5a—Remove invasive species bordering native coastal scrub;
- GC/OH-5b—Plant native vegetation of differing heights to increase structural diversity of coastal scrub habitats;
- GC/OH-5c—Manage open pools as in GC/OH-2a-b and GC/OH-7e and make these pools inaccessible to the public;
- GC/OH-6a—Consider the requirements of amphibians when creating open pools under GC/OH-2;
- GC/OH-7a—Document the presence or absence of forktail damselfly in Glen Canyon Park;
- GC/OH-7b—Reintroduce forktail damselfly in Glen Canyon Park if it is not observed in the next five years;
- GC/OH-7c—Remove and trim vegetation along the asphalt channel to create appropriate habitat for the forktail damselfly, if it is observed or reintroduced;
- GC/OH-7d—Remove willows along the asphalt channel to reduce shading of water, if the forktail damselfly is observed or reintroduced;
- GC/OH-7e—Control vegetation within the asphalt channel to create open water and emergent vegetation, if the forktail damselfly is observed or reintroduced;
- GC/OH-7f—Consider requirements of the forktail damselfly when creating new pools in Islais Creek;
- GC/OH-8a—Annually evaluate the populations of sensitive butterflies within the park;
- GC/OH-8b—Install larval host plants and nectar sources as part of revegetation;
- GC/OH-9a—Monitor the dog impact on wetlands and Islais Creek channel and consider appropriate restrictions (including fencing) to keep dogs out of the creek channel and wetlands;

- GC/OH-9b—Install boardwalks in wet marshy locations along the Islais Creek loop trail to prevent damage to resources and increased sedimentation[19] in the creek;
- GC/OH9c—Trim willows along formal trails to allow ease of access, thereby limiting the perceived need to create new trails;
- GC/OH-10a—Fill gullies in the access road with gravel to help minimize the input of sediment from the gravel access road, outslope the road the next time it is graded or resurfaced to allow uniform flow of runoff from the hillside across the road to the creek and to eliminate ponding and reduce gullying in the road, evaluate and replace the culverts as necessary, and consider paving the access road;
- GC/OH-10b—Close and revegetate social trails that are next to or crossing the creek, in accordance with GR-11, and install bridges or stabilize stream banks with well-designed steps that lead to stepping-stones to cross the creek for any creek crossings that would remain in use;
- GC/OH-10c—Maintain the sediment dam and consider installing new sediment traps on the lower reach of the creek; and
- GC/OH-10d—Consider a long-term solution for the unstable and eroding bank of Islais Creek immediately below Silver Tree Day Camp.

III.I.13 Golden Gate Heights Park, Grandview Park, Hawk Hill, and Rock Outcrop (GGRH)

General Description

The Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill all belong to a remnant ridgetop sand dune system in the western portion of San Francisco, in the mid-Sunset or Sunset Heights area. Because these sites have similar characteristics and management issues, they have been combined into this single section. The 4-acre Grandview Park is at 15th Avenue and Moraga Street. Just south of Grandview Park is the 1.6-acre Rock Outcrop, between 14th and Funston Avenues. Continuing south, Golden Gate Heights Park, which contains a 0.8-acre Natural Area, is between Funston, 12th, and 14th Avenues. Of the four parks, the 4.5-acre Hawk Hill at the intersection of Rivera Street and Funston Avenue is the farthest south. These parks are surrounded by dense urban development.

[19] Sedimentation—The deposition of material suspended in a stream system, whether in suspension (suspended load) or on the bottom (bedload).

Management Areas

The 3.3-acre MA-1 areas include sensitive species, rich dune habitats, and grasslands. Three areas on Grandview, two areas on Rock Outcrop, one area at Golden Gate Heights, and one area at Hawk Hill have been designated as MA-1. The 6.6-acre MA-2 areas contain less-sensitive but important habitat, and they usually surround the MA-1 areas, providing buffers to the more sensitive habitats within MA-1 areas. The 0.8-acre MA-3 areas designated at Grandview and Golden Gate Heights contain areas of invasive tree species.

Recommended Management Actions

At the Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill, GR-1 through GR-4, GR-7, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for these sites:

- GGRH-1a—Contain and reduce herbaceous and woody invasive plants, removing them in such a way that avoids erosion, and then plant native species;
- GGRH-1b—Augment existing sensitive plants to maintain these species and enhance their chances of survival;
- GGRH-1c—Reintroduce populations of sensitive plant species to help prevent countywide extinctions of these species;
- GGRH-1d—Prevent invasive trees from becoming established and remove trees only at Grandview Park, where approximately five trees will be removed from the upper slope;
- GGRH-1e—Reduce invasive vegetation, plant native species to approximate the diversity, cover, and density of adjacent habitat or reference plots in similar habitats at other parks and target habitat types as follows:
    - At Grandview, maintain and enhance dune scrub, a dune scrub mosaic, and cypress tree-scrub mosaic,
    - At Rock Outcrop, maintain and enhance the dune scrub-rock outcrop plant communities,
    - At Golden Gate Heights, maintain and enhance dune scrub, maintain a diversified understory and plant forest gaps with wildlife friendly species within the urban forest, consider removing the asphalt pad at the entryway and installing a native plant demonstration garden, and

  - At Hawk Hill, maintain and enhance the dune scrub communities with scattered open sand for annual plant recruitment;

- GGRH-1f—Remove vegetation and replant with native species in small noncontiguous patches where soil erosion could occur;
- GGRH-2a—Limit access to the 917 linear feet of designated trails to protect sensitive habitat and consider installing fencing at Hawk Hill if necessary;
- GGRH-2b—Consider using the dune-step system as a biotechnical control measure to help control soil movement and allow for revegetation that would better withstand foot traffic on the steep dune slopes;
- GGRH-3a—Route users away from eroding areas and sensitive habitats to the 1,313 linear feet of designated trails and install temporary or permanent fencing at Grandview Park if necessary;
- GGRH-3b—Install soil retaining boxes on the downhill side of the landings to help minimize erosion at Grandview Park; and
- GGRH-4a—Develop a new approximately 188-foot trail at the edge of the forest to replace the trail that is causing erosion and close the 390-linear-foot social trail through the dunes (Golden Gate Heights).

III.I.14 Golden Gate Park Oak Woodlands (OW)

General Description

The 26.2-acre Oak Woodlands Natural Area is in the northeast corner of the 1,021-acre Golden Gate Park, between Fulton Street and Lincoln Way. In addition to the large oak woodland bounded by Stanyan Street, Fulton Street, and 6th Avenue, the Natural Areas in Golden Gate Park include Whiskey Hill, Strawberry Hill, and Lily Pond. The individual areas that compose this Natural Area represent the few places where native trees persist in the Natural Areas Program system. Two DPAs are within or next to the Natural Area, one where North Willard Street intersects with Fulton Street (Golden Gate Park Northeast DPA) and one next to Whiskey Hill (Golden Gate Park Southeast DPA).

Management Areas

The 0.7-acre MA-1 areas contain sensitive plant species. The 25.5-acre MA-2 areas are oak woodlands. There are no MA-3 areas.

Recommended Management Actions

At Oak Woodlands, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Oak Woodlands Natural Area:

- OW-1a—Contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- OW-1b—Reduce invasive vegetation within the oak woodlands to increase and diversify the native understory;
- OW-1c—Augment and reintroduce native plant species;
- OW-1d—Remove approximately 82 of the approximately 900 invasive blue gum eucalyptus (*Eucalyptus globulus*) trees;
- OW-2a—Redesign the organic material dump site and install traffic barricades at the edge of the slope to reduce damage to downslope oak trees;
- OW-3a—Remove invasive understory vegetation and replace it with native species typical of an oak woodland understory; and
- OW-4a—Monitor use and impacts of Golden Gate Park Northeast DPA and install signs and protective devices to delineate the boundaries of both DPAs.

III.I.15 India Basin Shoreline Park (IB)

General Description

India Basin Shoreline Park is in southeast San Francisco next to Hunters Point Boulevard at the shore of San Francisco Bay. Comprising 6.2 of the park's 11.8 acres, the Natural Area is the only one that borders San Francisco Bay. It contains a segment of the Bay Trail, shoreline access for fishing and water-dependent recreation, tidal salt marsh wetlands, and suitable habitat for shore birds and foraging raptors. The park supports a large and multispecies collection of waterfowl from fall through spring and birds protected under the Migratory Bird Treaty Act. It also contains the endangered plant California seablite (*Suaeda californica*).

Management Areas

The 3.2-acre MA-1 area consists of salt marsh wetland. The 2.8-acre MA-2 areas include a buffer between restored wetlands and upland habitat, annual grasslands, scrub, and oak habitat areas under development. There are no MA-3 areas.

Recommended Management Actions

At India Basin Shoreline Park, GR-1 through GR-4, GR-7, and GR-13 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the India Basin Shoreline Park Natural Area:

- IB-1a—Monitor the salt marsh for smooth cordgrass (*Spartina alterniflora*) and other invasive species and reduce and contain infestations of upland invasive species;
- IB-1b—Remove invasive species from wetland and upland areas and maintain and enhance upland areas as a grassland-coastal scrub mosaic;
- IB-1c—Augment populations of alkali heath (*Frankenia salina*), marsh gumplant (*Grindelia stricta* var. *angustifolia*), and California seablite (*Sueada californica*) by direct seeding or planting;
- IB-2a—Maintain and enhance existing grassland-scrub mosaic;
- IB-2b—Install low-growing plants to create a partially vegetated screen between the trail and the buffer area;
- IB-3a—Increase vegetation density in the area of the trail to reduce erosion on the face of the levee; and
- IB-4a—Restrict access to sensitive salt marsh habitat if damage to these areas occurs, including installing low trailside fencing.

III.I.16 Interior Greenbelt (IG)

General Description

Interior Greenbelt is on Mount Sutro, south of Golden Gate Park and north of Twin Peaks in central San Francisco. Of the two parcels that make up the 16.5-acre Natural Area, the northern parcel (which abuts the University of California San Francisco property) is accessed at the end of Edgewood Street and at the corner of Stanyan Street and Belgrave Avenue. The southern parcel is south across Clarendon Street from the northern parcel and is accessed at the ends of Mt. Spring and Saint Germain Streets. Both parcels are urban forests.

Management Areas

The 1.8-acre MA-2 areas are in the northern parcel and support sensitive plants. The 14.7-acre MA-3 areas include the urban forests outside the MA-2 areas. There are no MA-1 areas.

Recommended Management Actions

At Interior Greenbelt, GR-1, GR-2, GR-4, GR-7, GR-9, GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Interior Greenbelt Natural Area:

- IG-1a—Reduce and contain herbaceous invasive plants and prevent invasive trees from becoming established;
- IG-1b—Remove approximately 140 of the estimated 5,800 blue gum eucalyptus trees (*Eucalyptus globulus*);
- IG-1c—Revegetate using appropriate native plants in those areas where invasive plants have been removed to maintain and enhance the existing scrub mosaic communities;
- IG-1d—Augment existing populations of sensitive plants;
- IG-1e—Reintroduce rare plants to reduce the potential for local extinction of sensitive species in San Francisco;
- IG-2a—Develop a new trail linking existing secondary trails with trails on the University of California property (note that this work is underway and is expected to be completed in June 2011); and
- IG-2b—Formalize existing social trails where appropriate and eliminate where not.

III.I.17 Kite Hill (KH)

General Description

Kite Hill is a grassy knoll in the central portion of San Francisco, near the intersection of 19th and Yukon Streets. Most of the 2.7-acre Natural Area is grassland, with an ornamental garden north of the corner of 19th and Yukon Streets.

Management Areas

The 0.6-acre MA-1 area has native scrub series, rock outcrops, and annual grasslands with high native species diversity. The 0.5-acre MA-2 area buffers the MA-1 area and includes native landscaping along the Yukon Street frontage. The 1.6-acre MA-3 area has grasslands in the eastern portion of the Natural Area.

Recommended Management Actions

At Kite Hill, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Kite Hill Natural Area:

- KH-1a—Contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- KH-1b—Maintain and diversify grasslands, with the initial focus on areas where native species are dominant;
- KH-1c—Install showy native vegetation near the road and access points;
- KH-1d—Reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco;
- KH-1e—Maintain and enhance the grassland-scrub oak woodland ecotone[20] to increase habitat diversity and value to wildlife; and
- KH-2a—Revegetate a large area of exposed soil surrounding a small group of apple trees by hand-broadcasting the appropriate seed mixture and by applying mulch to the area. Install signs explaining the benefits of this revegetation.

III.I.18 Lake Merced (LM)

General Description

Lake Merced is in the southwest portion of San Francisco and is roughly bordered by John Muir Drive, Skyline Boulevard, and Lake Merced Boulevard. The San Francisco Public Utilities Commission (SFPUC) owns Lake Merced, and the SFRPD maintains the recreational uses under the terms of a memorandum of understanding between the two departments. Recreation at the lake includes boating, fishing, golfing, jogging, bicycling, skeet shooting, and picnicking. Lake Merced is made up of four connected sub-lakes: North, East, South, and Impound. A designated DPA on the north side of East Lake is in an area informally known as the Mesa. The Natural Area covers approximately 395 of the lake's 614 acres and generally encompasses the lake, the bordering freshwater marsh wetland, and upland vegetation.

[20] Ecotone—A transitional zone between two vegetation communities that contains the characteristic species of each community.

Management Areas

The 60.8-acre MA-1 areas include double-crested cormorant rookeries,[21] a portion of the Mesa that supports sensitive plant species, Impound Lake and its associated wetlands, and tule marsh around East, North, and South Lakes. The 101.8-acre MA-2 areas include the water of East Lake, which supports western pond turtles, and the habitat between the marshes and the Natural Area boundary. The 231.5-acre MA-3 areas include urban forests and North and South Lakes.

Recommended Management Actions

At Lake Merced, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Lake Merced Natural Area:

- LM-1a—Contain and reduce herbaceous and woody invasive plants and plant native species;
- LM-1b—Remove approximately 134 of the estimated 12,000 invasive blue gum eucalyptus (*Eucalyptus globulus*) trees, a little more than one percent of the total inventory, to maintain and enhance native habitats;
- LM-1c—Prevent the establishment of invasive tree species to maintain and enhance coastal wetland scrub;[22]
- LM-1d—Maintain and enhance sensitive habitats;
- LM-2a—Augment existing sensitive plants to maintain these species and enhance their chances of survival;
- LM-2b—Reintroduce populations of rare plant species to help prevent countywide extinctions of these species;
- LM-3a—Remove trees in such a way as to avoid removing those used by raptors, cormorants, and herons and remove no trees within 150 feet of occupied nests;
- LM-3b—Consider closing social trails near cormorant nesting colonies, hawk nests, and heron nesting areas if trail usage appears to disrupt nesting. Install signs at rental boat launch locations asking boaters to remain at least 30 feet from the edge of the marsh between February 1 and August 31;

[21] Rookery—Colony or aggregation of animals of the same species.
[22] Scrub—low trees or shrubs collectively.

- LM-3c—Remove invasive understory vegetation when bird nests are not active;
- LM-3d—Locate and map raptor nests during inactive periods;
- LM-4a—Maintain and enhance important bird nesting and foraging habitat to include removal of invasive species and natural recruitment of preferred species;
- LM-5a—Create more open grassland habitat through vegetation management and control of invasive species;
- LM-5b—Remove iceplant to create openings where native grasslands and grassland/scrub mosaics could be established;
- LM-6a—Remove invasive vegetation and enhance native scrub and grassland species in upland sandy soils next to East Lake to allow for western pond turtle nesting. Create piles of logs or rocks to increase and improve basking habitat;
- LM-6b—Protect the western pond turtle by periodically trapping and removing nonnative turtle species;
- LM-6c—Restrict public access to the East Lake water and shoreline from April 1 to August 31 to avoid disturbing breeding turtles;
- LM-7a—Relocate the DPA to a different area to avoid disturbing breeding birds in the current location;

  (Note: The SFRPD determined following completion of the final draft SNRAMP that, due to ongoing disturbance of breeding birds, this DPA should be closed, rather than monitored. This DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011). Due to the San Francisco moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed. Restoration of the site would continue, following removal of the DPA.)
- LM-8a—Implement GR-14;
- LM-8b—Consider participating in the development of an environmental education center;

  (Note: Constructing and operating an environmental education center is no longer proposed as part of the SNRAMP. The SNRAMP will be updated to reflect this change. Should those activities be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)

- LM-8c—Maintain existing interpretive signs at key locations;
- LM-9a—Treat small-scale erosion gullies with such measures as gully plugs, brush boxes, energy dissipaters, and water bars and plant these areas with native vegetation to prevent soil erosion;
- LM-9b—Coordinate with the San Francisco Department of Public Works and other agencies about programs to address large-scale erosion gullies;
- LM-10a—Create an educational program for golf course staff; and
- LM-10b—Install informational and interpretive signs next to Lake Merced, along the periphery of Harding Park Golf Course, indicating that the area is sensitive wildlife habitat and install temporary barriers along sensitive areas during large golf tournaments.

III.I.19 McLaren Park (MP)

General Description

McLaren Park covers 312.6 acres near the southeast corner of San Francisco and is bisected by Mansell Street. Sunnydale and Visitacion Avenues cross the southern half of the park, while John F. Shelley Drive crosses the northern half. Recreational facilities within the park include over 11 miles of trails, tennis courts, ball fields, a golf course, picnic areas, and an amphitheater. Three designated DPAs are within the park, two within and one next to the Natural Area. The Natural Area covers 165.3 acres and is made up of grassland, scrub, and tree-dominated vegetation series.

Management Areas

The 34.9-acre MA-1 areas include sensitive riparian habitat, grassland habitat, marsh habitat, and an area of diverse grasslands supporting sensitive plant species. The 68.3-acre MA-2 areas may also contain sensitive species[23] and habitats and act as buffers between the MA-1 areas and the adjacent urban forest. These areas are being restored, and trees and shrubs are being removed, and native species are being planted. The 61.4-acre MA-3 areas include urban forests, grasslands, and forest-grassland mosaics.

[23] Sensitive species—Species that are listed on the California Native Plant Society plant list or *Inventory of Rare and Endangered Vascular Plants*.

Recommended Management Actions

At McLaren Park, GR-1 through GR-4, GR-6, GR-7, and GR-9 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the McLaren Park Natural Area:

- MP-1a—Reduce and contain herbaceous and woody invasive plants;
- MP-1b—Remove approximately 809 of the estimated 19,500 invasive blue gum eucalyptus (*Eucalpytus globulus*) trees to enhance sensitive species habitats;
- MP-1c—Revegetate, using appropriate native plants in those areas where invasive plants have been removed;
- MP-1d—Augment existing sensitive plants to prevent the extinction of rare or uncommon grassland plants in McLaren Park;
- MP-1e—Reintroduce rare plant species to help prevent local extinction of sensitive species in San Francisco;
- MP-2a—Increase the patch size of willow and coastal scrub by removing invasive species that border these areas and allowing natural recruitment into the newly opened areas;
- MP-2b—Increase the structural diversity of habitats by planting native vegetation that is different in height from the existing plants;
- MP-2c—Restrict foot traffic in the Gray Fox Creek area;
- MP-3a—Remove fruiting plants only in the very early spring before nesting starts but after wintering birds have left;
- MP-4a—Install spring boxes or small artificial pool habitats associated with springs and seeps to enhance amphibian habitat;
- MP-5a—Continue to control emergent vegetation in Yosemite Marsh to prevent cattails from completely clogging the open water areas;
- MP-5b—Continue to allow the development of an unmowed grass buffer along the channel between Yosemite Marsh and the recreation area;
- MP-5c—Routinely monitor the San Francisco forktail damselfly population;
- MP-5d—Create an environmental education program for all SFRPD personnel that work at McLaren Park;

- MP-5e—Protect the San Francisco forktail damselfly at Yosemite Marsh by not adding any fish to the pond;
- MP-6a—Conduct an annual evaluation of the mission blue butterfly population;
- MP-6b—Install larval host plants and nectar sources as part of revegetation efforts;
- MP-7a—Install signs and temporary barriers along the roadway to protect sensitive areas from off-road vehicles;
- MP-8a—Restrict access to sensitive habitat areas if damage continues;
- MP-9a—Eliminate dog access to a portion of Gray Fox Creek and convert the area around the creek to an on-leash area, resulting in the loss of 8.3 acres of DPA; and
- MP-9b—Monitor native grassland and wildflower areas within the remaining off-leash area of the Shelley Loop and Geneva Avenue DPAs.

III.I.20 Mount Davidson (MD)

General Description

Mount Davidson is in south-central San Francisco just south of Portola Drive and partly next to Juanita Avenue, Dalewood Way, and Molimo Drive in the Miraloma neighborhood. Forests dominate the landscape, covering three-quarters of the 40.2-acre Natural Area. Developed facilities are minimal. Mount Davidson is a highly visible focal point within San Francisco and supports a diverse array of habitats, plants, and animals.

Management Areas

The 8.8-acre MA-1 areas include two areas on the east-facing slope where the native Franciscan coastal scrub (huckleberry and reed grass) and grasslands are found and another area in the understory of the eucalyptus forest where populations of Pacific reed grass persist. The 11-acre MA-2 areas may also contain sensitive species, and its habitats serve as buffers between the extensive urban forests and the MA-1 areas. At Mount Davidson, the 20.1-acre MA-3 area is composed entirely of urban forest.

Recommended Management Actions

At Mount Davidson, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Mount Davidson Natural Area:

- MD-1a—Reduce woody and herbaceous invasive plants, prevent invasive tree species from establishing, and reduce understory plants;
- MD-1b—Remove approximately 1,600 invasive blue gum eucalyptus trees of the estimated 11,000 invasive trees to maintain and enhance native habitats;
- MD-1c—Revegetate using appropriate native plants, enhance and diversify existing grasslands and coastal scrub habitats, and plant the understory and forest gaps, in accordance with GR-15;
- MD-1d—Augment existing rare or uncommon species to maintain these species and enhance their chances of survival;
- MD-1e—Reintroduce populations of rare plant species to help prevent countywide extinctions of these species;
- MD-2a—Remove invasive species bordering native scrub, and connect isolated patches of shrubs with plantings and brush piles;
- MD-2b—Plant native species of differing heights to increase structural diversity;
- MD-3a—Remove fruiting invasive plants after breeding season and after native replacements mature to fruiting stage; and
- MD-4a—Consider establishing a permanent water source for birds and other native animals and provide breeding habitat for amphibians.

III.I.21 Palou-Phelps (PP)

General Description

Palou-Phelps Park covers 2.5 acres near the intersection of Palou and Phelps Streets in southeastern San Francisco. The park has a playground area at the northern entry. The 2.1-acre Natural Area has a vegetated slope made up primarily of grasslands.

Management Areas

The 0.8-acre MA-1 area is rich grassland above the playground that includes purple needlegrass (*Nassella pulchra*) prairie. The 0.4-acre MA-2 area supports natural resources and serves as a buffer for the MA-1 area. The MA-3 0.8-acre area contains invasive scrub series and trees in the eastern portion of the Natural Area.

Recommended Management Actions

At Palou-Phelps, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Palou-Phelps Natural Area:

- PP-1a—Reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- PP-1b—Revegetate with appropriate native plants those areas where invasive vegetation has been removed;
- PP-1c—Reintroduce sensitive plants;
- PP-1d—Maintain the existing mosaic of urban forest and grassland; and
- PP-2a—Close an unsafe social trail segment leading southeast from the playground and investigate the best possible route to reach the southern portion of the Natural Area.

III.I.22 Pine Lake (PL)

General Description

The 8.4-acre Pine Lake Natural Area is within the 30.3-acre Pine Lake Park. The Natural Area is bounded in part by Wawona Way on the north and Crestlake Drive on the west and south sides. The eastern edge of Pine Lake abuts the Stern Grove Park Recreation Area. Surrounded on three sides by an urban forest, Pine Lake (or Laguna Puerca), with a water surface area of approximately 1.7 acres, is one of the few natural lakes in San Francisco. Most of Pine Lake's undeveloped areas are covered with nonnative blue gum eucalyptus (*Eucalyptus globulus*) forest. A designated DPA exists in the meadow to the east of the Natural Area.

Management Areas

The one-acre MA-1 area at Pine Lake is associated with the wetland habitat in the lake. The 3.8-acre MA-2 area includes the bulk of the open water, willow habitat, and buffer area around the MA-1 area. The 3.6-acre MA-3 areas are those that are less sensitive and not a priority for direct management; they include the urban forest on the slopes that surround Pine Lake.

Recommended Management Actions

At Pine Lake, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Pine Lake Natural Area:

- PL-1a—Reduce populations of invasive plants, including understory plants, periodically remove water primrose to preserve the open water of Pine Lake, prevent invasive trees from becoming established, and prune invasive trees to create light windows to encourage plant growth in the understory;
- PL-1b—Revegetate with appropriate native plants that are consistent with the diversity, cover, and density of reference plots in similar habitats around San Francisco, enhance and diversify existing wetlands and willow riparian areas, and develop and maintain a continuous riparian corridor to Pine Lake at the base of the slope on the south side of the Natural Area to increase available habitat for birds;
- PL-2a—Locate and map raptor nests during inactive periods, avoid removing trees used by raptors, and prohibit tree removal activities within 150 feet of occupied nests;
- PL-3a—Remove invasive species to increase the patch size of willows and coastal scrub and create larger habitat units by encouraging willows to form a continuous riparian corridor to the lake;
- PL-3b—Install native plants of different height from existing habitats to increase structural diversity;
- PL-3c—Install native hydrophytic vegetation that provides cover and foraging habitat for resident and migratory waterfowl along the degraded shoreline of Pine Lake;
- PL-4a—Determine the presence, population, and reproduction status of western pond turtles at Pine Lake;
- PL-4b—Relocate any western pond turtles to the higher-quality habitat at Lake Merced;
- PL-5a—Consider reintroducing Pacific chorus frogs into Pine Lake;
- PL-5b—Consult with the California Department of Fish and Game before introducing any species;
- PL-6a—Reopen the concrete trail on the western end of the Natural Area if it allows safe public access, otherwise close the concrete trail and develop a nearby alternate route; remove old concrete and revegetate the site;
- PL-6b—Maintain and improve 2,144 linear feet of primary trails throughout the Natural Area and reroute or close degraded areas and social trails;

- PL-7a—In accordance with the Sigmund Stern Grove and Pine Lake Park Improvement Plan, provide one dedicated access point to Pine Lake (one at the beach at the east end and one overlooking the lake at the west end) and reduce uncontrolled shoreline access;
- PL-7b—Restrict dog access to the lake; and
- PL-7c—Post signs informing public of rules at the lake prohibiting dog access in the lake.

III.I.23 Sharp Park (SP)

General Description

The 411-acre Sharp Park is in the town of Pacifica in San Mateo County. The park borders the Pacific Ocean and is bisected by Highway 1. The Sharp Park Golf Course and Laguna Salada are on the western side of Highway 1. An archery range and extensive canyon are on the eastern side. Sharp Park Road cuts through the northern edge of Sharp Park, east of Highway 1. Sanchez Creek originates in the upper canyon of Sharp Park and approximately bisects the park in an east-west direction. Sharp Park is one of the largest SFRPD parks and is surrounded by significant open spaces. Mori Point, recently acquired by the GGNRA, borders the southwestern edge, and the Sweeney Ridge GGNRA borders the park on the southeastern and eastern edges. The northern side of Sharp Park is bordered by undeveloped areas within the cities of Pacifica and San Bruno.

The Natural Areas account for 237.2 acres within Sharp Park and encompass the upper canyon areas, portions of Sanchez Creek, and the Laguna Salada wetlands and associated vegetation. The vegetation of Sharp Park is dominated by invasive forest and a golf course, but the park also contains significant areas of wetlands and scrub vegetation.

Management Areas

The Sharp Park management areas include the wetlands associated with Laguna Salada and Horse Stable Pond, grassland and scrub areas, and the urban forests of the canyon. The 35-acre MA-1 areas include three areas in the upper canyon and three in the Laguna Salada area. The 125.1-acre MA-2 areas surround each MA-1 in the upper canyon, may also contain sensitive species and habitats, and provide buffers between the extensive urban forests and the MA-1 areas. Many of the MA-2 areas in the upper canyon also support diverse assemblages of scrub and riparian vegetation that provide important structural diversity. The 76.5-acre MA-3 areas at Sharp Park include most of the areas that are dominated by invasive trees but that are lacking the understory complexity found in the MA-2 areas.

Recommended Management Actions

At Sharp Park, GR-1, GR-2, GR-4, and GR-6 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Sharp Park Natural Area:

- SP-1a—Reduce woody and herbaceous invasive plants, prevent invasive tree species from being established, and reduce invasive understory plants;
- SP-1b—Remove approximately 15,000 invasive blue gum eucalyptus of the estimated 54,000 invasive trees to maintain and enhance native habitats;
- SP-1c—Revegetate using appropriate native plants, enhance and diversify existing wetlands, creek grasslands, and coastal scrub habitats to approximate the diversity, cover, and density of reference sites around San Francisco, and plant the understory and forest gaps in accordance with GR-15;
- SP-1d—Augment existing rare or uncommon grassland species to maintain these species and enhance their chances of survival;
- SP-1e—Consider reintroducing sensitive species;
- SP-2a—Implement a control program for feral pigs;
- SP-3a—Preserve natural or biodegradable elements (branches, trees, and logs) during vegetation management and remove other materials;
- SP-4a—Implement improvements to protect and enhance the habitat for the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following (this action is addressed as part of the Sharp Park restoration project in Section III.F.2):
    - Create upland mounds for foraging, resting, and escape cover for the California red-legged frog and the San Francisco garter snake;
    - Dredge excess sediments and accumulated organic matter, including stands of encroaching tules, to maintain open water and fringe habitat in the wetlands complex and use appropriate dredged material on site to create or enhance upland habitat or to increase the elevation of certain golf course fairways;
    - Continue monitoring for California red-legged frogs and San Francisco garter snakes; and
    - Install and maintain signs and barriers to prevent disturbance of sensitive habitat in Horse Stable Pond and Laguna Salada by dogs or other possible nuisances.

- SP-4b—Construct upland mounds in the area directly south and southeast of Laguna Salada and plant with native grasses and herbs to provide snake and frog basking sites, and to provide nesting habitat for riparian birds (this action is addressed as part of the Sharp Park restoration project in Section III.F.2);
- SP-4c—Continue to maintain water levels in Horse Stable Pond so that red-legged frog egg masses remain hydrated;
- SP-4d—Remove any bullfrogs, an invasive species, that are found in Laguna Salada or Horse Stable Pond;
- SP-6a—Develop a plan for safe public access for San Francisco archers to the upper canyon and nearby GGNRA lands;
- SP-7a—Make 33.3 acres of Arrowhead Pond, Laguna Salada, and Horse Stable Pond off limits to dogs to prevent access to sensitive habitats; if this is not effective, use fencing to close social trails in these areas;
- SP-8a—For the purpose of protecting these species, educate golf course staff about the importance of identifying California red-legged frogs, San Francisco garter snakes, and forktail damselflies and their habitats;
- SP-9b—Establish a vegetation management plan for the canal connecting Laguna Salada and Horse Stable Pond that would allow channel maintenance without affecting the forktail damselfly, California red-legged frog, or San Francisco garter snake (this action is addressed as part of the Sharp Park restoration project in Section III.F.2).
- SP-9c—Work with golf course maintenance staff to incorporate native plants within bank stabilization efforts along Sanchez Creek where it flows through the golf course;
- SP-10a—Backfill trenches on the north side of Sharp Park Road with nearby loose soil, replant with appropriate native vegetation;
- SP-11a—Develop and implement a comprehensive plan to control the erosion in the extensive area of eroded badlands in the isolated northern portion of the park bounded by the loop in Sharp Park Road; and
- SP-12a—Work with other divisions of the SFRPD as necessary to facilitate cleanup and remediation of the former rifle range.

(Note: Because these cleanup and remediation activities are part of a separate process led by the SFRPD Capital Division, are complete, and have been evaluated under a separate CEQA review, they are not addressed as part of the SNRAMP in this EIR)

SFRPD would continue to use pumps to manage water levels in Horse Stable Pond to conserve the California red-legged frog by conducting post-rainfall inspections of the pond for California red-legged frog egg masses and making any pumping changes necessary to prevent stranding and other impacts to egg masses, if found to be present.

This EIR addresses the project-level impacts from both Laguna Salada routine maintenance and the Laguna Salada restoration activities at Sharp Park as part of the Sharp Park restoration analysis; routine maintenance within other parts of the park are addressed at the project-level; other programmatic projects at Sharp Park are evaluated programmatically.

III.I.24 Tank Hill (TK)

General Description

Tank Hill is in central San Francisco on Twin Peaks Boulevard near Golden Gate Park. The Natural Area is a 2.9-acre grassy knoll rich in local plant species. The property is publicly accessible via a wooden stairway from Twin Peaks Boulevard and a retained-earth stairway at the end of Belgrave Street.

Management Areas

The 1.5-acre MA-1 areas are grassland and rock outcrops that support sensitive species. The 0.6-acre MA-2 areas buffer the MA-1 areas. The 0.7-acre MA-3 areas include tree-dominated habitats and steep slopes in the southern portion of the Natural Area.

Recommended Management Actions

At Tank Hill, GR-1, GR-2, GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Tank Hill Natural Area:

- TK-1a—Contain and reduce herbaceous and woody invasive plants;
- TK-1b—Augment populations of sensitive plant species;
- TK-1c—Reintroduce sensitive plant species;

- TK-1d—Revegetate areas where invasive plants have been removed with appropriate native species;
- TK-1e—Prevent establishment of invasive tree species; and
- TK-2a—Following control of invasive species, install native scrub and oaks.

III.I.25 Twin Peaks (TP)

General Description

The 31.1-acre Twin Peaks Natural Areas are north of Mount Davidson and south of Buena Vista Park and Corona Heights. To the north of Twin Peaks are Sutro Tower, a San Francisco Fire Department reservoir, and a parking lot for one of the most popular vista points in San Francisco (popularly known as Christmas Tree Point). The Fire Department property, Christmas Tree Point, and other open space to the north contain Natural Areas, which, when combined with SFRPD property, make a much larger and more viable habitat area. The Natural Areas at Twin Peaks essentially encompass the entire area, except for the roads, viewpoints, and the reservoir.

Twin Peaks has a north-south orientation and is divided into several discontinuous sections by Twin Peaks Boulevard, which winds along its slopes. Twin Peaks' west-facing slopes receive substantial fog and strong winds, while the east-facing slopes receive more sun and warmth. The vegetation is primarily a mix of intergrading patches of grassland and scrub. Twin Peaks offers spectacular views of the surrounding Bay Area and is a world-famous tourist attraction. Twin Peaks receives a high level of recreational use and contains a segment of the Bay Ridge Trail.

Management Areas

Four management areas have been designated at Twin Peaks. The 12.6-acre MA-1 areas include rich native grasslands and sensitive species habitat, including mission blue butterfly habitat. Much of the 14.3-acre MA-2 areas are coastal scrub areas. There are two 3.8-acre MA-3 areas, most of which are along the boundary of the Twin Peaks Natural Area, next to the surrounding residential neighborhoods.

Recommended Management Actions

At Twin Peaks, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Twin Peaks Natural Area:

- TP-1a—Contain and reduce woody and herbaceous invasive plants;

- TP-1b—Augment existing rare or uncommon plant species to help ensure the continued presence of these species, and consider reintroducing sensitive species;
- TP-1c—Maintain and enhance existing grassland habitats using diversity, cover, and density targets generated from reference sites around San Francisco, plant native grassland and scrub species, and maintain toyon, oak, and coastal scrub in the tree-dominated areas on the park's edges;
- TP-1d—Prevent invasive tree species from becoming established and remove three pine trees out of 88 existing invasive trees;
- TP-2a—Continue to monitor the mission blue butterfly population;
- TP-2b—Augment host plant populations whenever possible;
- TP-3a—Maintain existing fences to route park users to safe and designated trails and develop safe pedestrian access along Twin Peaks Boulevard, including developing approximately 500 feet of new trails, if they are required. Explore options with the San Francisco Municipal Transit Agency to convert a portion of Twin Peaks Boulevard to a multi-use trail;
- TP-3b—Install signs at all formal access points to show that trails are for foot use only, monitor the use of trails within the area, and install appropriate fencing to prevent wheeled-vehicle access to sensitive habitats if necessary;
- TP-3c—Install signs at known habitat areas of the mission blue butterfly indicating on-trail and on-leash access only and consider lining the trail with fences; and
- TP-4a—Consider restricting access to or fencing 5.9 acres of mission blue butterfly habitat next to or surrounding the trails.

III.I.26 15th Avenue Steps (FI)

General Description

The 0.3-acre 15th Avenue Steps Natural Area is in the Golden Gate Heights area of San Francisco and is the extension of 15th Avenue, between Kirkham and Lawton Streets. Access is via a set of concrete stairs bisecting the Natural Area, which supports native oak trees and habitat for a variety of resident and migratory bird species.

Management Areas

The 0.2-acre MA-2 area includes coast live oak trees and California blackberry scrub on both sides of the concrete stairs. There are no MA-1 and MA-3 areas.

Recommended Management Actions

At 15th Avenue Steps, GR-1, GR-2, GR-4, GR-7, GR-9, GR-11, and GR-12 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the 15th Avenue Steps Natural Area:

- FI-1a—Allow for recruitment of native plants, enhance existing habitats, contain and reduce herbaceous and woody species, remove invasive plants and replace with appropriate dune species; and
- FI-1b—Maintain and enhance oak woodland and coastal scrub communities.

III.I.27 Everson/Digby (ED)

General Description

The Everson/Digby property was recently determined to be a Natural Area and was not addressed in the SNRAMP. The 1.2-acre Everson/Digby Natural Area is undeveloped open space between Everson Street and Digby Street in the Diamond Heights area of San Francisco, east of Glen Canyon Park. The vegetation of is composed primarily of grasslands with shrubs and trees along its lower (northern) boundary. This Natural Area provides important habitat for native plants, grassland habitat, regionally significant San Francisco city views, and suitable habitat for a variety of bird species. A paved sidewalk runs along Digby Street at the upper (southern) boundary of the Natural Area.

Management Areas

The management areas at the Everson/Digby Natural Area have been delineated based on the presence of diverse native grasslands. The 0.9-acre MA-1 area supports a rich array of species including California poppy (*Eschscholzia californica*), purple needle grass (*Nassella pulchra*), and California melica (*Melica californica*), and is more intact habitat than the 0.1-acre MA-2 area that borders Digby Street. The 0.2-acre MA-3 areas include tree and shrub communities.

Recommended Management Actions

At Everson/Digby, GR-1, GR-3, GR-4, GR-7, GR-9, GR-10, GR-11, GR-12, and GR-13 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Everson/Digby Natural Area:

- ED-1a—Reduce and contain herbaceous and woody invasive species, including radish, fennel, and annual grasses in all management areas. Prevent the establishment of invasive trees in grasslands;
- ED-1b—Revegetate areas where invasive species have been removed using appropriate native plants. Enhance and diversify existing grasslands. Augment the existing uncommon grassland plant species such as silver lupine (*Lupinus albifrons* var. *collinus*) in MA-1a. Within MA-2a, gradually replace the existing nonnative grassland with a native grassland including California poppy (*Eschscholzia californica*), purple needle grass (*Nassella pulchra*), and California melica (*Melica californica*). Using diversity, cover, and density targets generated from reference sites within and around San Francisco, plant native grassland species in the appropriate areas; and
- ED-1c—Contain or reduce acacia (*Acacia dealbata*), broom (*Genista monspessulana*), cotoneaster (*Cotoneaster* sp.), and fennel (*Foeniculum vulgare*) in MA-3a areas and diversify the grassland interface with wildlife-enhancing species and design.

IV. PLANS AND POLICIES

This section identifies and discusses applicable regional and local land use plans and policies relevant to the proposed project. The focus of this section is the San Francisco land use plans and policies. San Francisco land use plans and policies are primarily applicable to projects within the jurisdictional boundaries of San Francisco, although in some cases they may apply to projects outside San Francisco. This information is relevant to the evaluation of impacts of the proposed project with respect to specific significance criteria under CEQA that require analysis of the compatibility of a proposed project with certain aspects of local land use plans and policies.

The Natural Areas are scattered throughout the central and southern portions of the San Francisco and constitute four percent of the total city area. Sharp Park is in the city of Pacifica. Most Natural Areas are owned and managed by the SFRPD; the Balboa Natural Area is owned by San Francisco and is managed by the NPS, while the SFPUC owns, and SFRPD manages, the Lake Merced Natural Area.

The SFRPD is guided by the San Francisco City Charter along with other city plans and policies. These plans include the *San Francisco General Plan*, which sets forth the comprehensive, long-term land use policy for the San Francisco, and the *San Francisco Sustainability Plan*, which addresses the long-term sustainability of the city. In addition the SFRPD has created the Natural Areas Program to support and develop a community-based habitat restoration program. The plans and policies applicable to the proposed project, as well as other relevant plans and policies, are discussed herein.

This chapter discusses the project's inconsistencies, if any, with applicable plans and policies that may result in physical environmental effects. If no inconsistencies are found, the discussion lists the plans that were reviewed and states that no inconsistencies were identified.

Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA, in that the intent of CEQA is to determine physical effects associated with a project. Many of the plans of the City and County of San Francisco and the other relevant jurisdictions contain policies that address multiple goals pertaining to different resource areas. To the extent that physical environmental impacts of a proposed project may result from conflicts with one of the goals related to a specific resource topic, such impacts are analyzed in this EIR in that respective topical section, such as Section V.G, Biological Resources, and Section V.K, Air Quality.

IV.A APPLICABLE PLANS AND POLICIES

IV.A.1 San Francisco General Plan

One of the basic goals of the *San Francisco General Plan* is "coordination of the growth and development of the City with the growth and development of adjoining cities and counties and of the San Francisco Bay Region." The general plan consists of ten issue-oriented plan elements—Air Quality, Arts, Commerce and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design. The plan elements relevant to the proposed project are briefly described below. There are also 16 Area Plans for San Francisco that address development within each of those geographic areas. The Area Plans near the Natural Areas include Bayview Hunters Point and Western Shoreline.

Air Quality Element

This element promotes the goal of clean air planning through objectives and policies aimed at adherence to air quality regulations, focusing development near transit services, and advocating alternatives to the private automobile.

Environmental Protection Element

This element addresses the impact of urbanization on the natural environment. The element promotes the protection of plant and animal life and freshwater sources and speaks to the responsibility of San Francisco to provide a permanent, clean water supply to meet present and future needs and to maintain an adequate water distribution system.

Recreation and Open Space Element

This element promotes the goal of preserving and protecting open spaces. Policy 2.13 of the General Plan requires the City to preserve and protect the Significant Natural Resource Areas. Policy 13 includes natural resource areas and naturalistic areas as potential protection and preservation areas. The policy identifies the following criteria used to determine a Significant Natural Resource Area: (1) sites that are undeveloped, relatively undisturbed remnants of San Francisco's original landscape that either support diverse and significant indigenous plant and wildlife habitats or contain rare geologic formations or riparian zones; (2) sites that contain rare, threatened, or endangered species or areas likely to support these species; and (3) areas that are adjacent to other protected natural resource areas. The policy further stipulates that management plans be developed for each of the Natural Areas. Specifically, the policy describes the need to:

- Identify Natural Areas and inventory them;
- Identify the presence of natural resources;
- Describe practices such as exotic plant species removal; and
- Identify policies governing access and recreational uses to ensure that natural resource values are not diminished by public use.

Urban Design Element

This element concerns the physical character and order of the City and the relationship between people and their environment. It provides a general plan, responding to issues relating to City pattern, conservation, major new development, and neighborhood environment.

Western Shoreline Area Plan

The policies of the San Francisco Local Coastal Program were incorporated into the general plan as part of this area plan. Applicable area plan policies include the following:

- Objective 5: Preserve the recreational and natural habitat of Lake Merced.
  - Policy 5.1: Preserve in a safe, attractive and usable condition the recreational facilities, passive activities, playgrounds and vistas of the Lake Merced area for the enjoyment of citizens and visitors to the city.
  - Policy 5.2: Maintain a recreational pathway around the lake designed for multiple use.
  - Policy 5.3: Allow only those activities in the Lake Merced area which will not threaten the quality of the water as a standby reservoir for emergency use.
  - Policy 5.4: As it becomes obsolete, replace the police pistol range on the southerly side of South Lake with recreational facilities.

As described above, the *San Francisco General Plan* addresses such elements as air quality, community safety (including protection from geologic and seismic hazards), and environmental protection (including protection of water resources and biological resources and addressing recreation and open space).

The project proposes to restore and manage the Natural Areas. Although the project could result in negative impacts to natural systems in the short term, mitigation measures would minimize those potential impacts, and management actions are intended to result in net long-term benefits to natural systems. Implementation of the project would identify natural resources and maintain and

preserve native plant and animal communities and local biodiversity. No inconsistencies with the *San Francisco General Plan* were identified.

IV.A.2 San Francisco Priority Policies

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the City Planning Code to establish eight Priority Policies. These policies, and the sections of the Initial Study checklist addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Question 1c, Land Use and Land Use Planning); (3) preservation and enhancement of affordable housing (Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Questions 5a,b, and f, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Question 1C, Land Use and Land Use Planning); (6) maximization of earthquake preparedness (Questions 13a-d, Geology and Soils); (7) landmark and historic building preservation (Question 4a, Cultural and Paleontological Resources); and (8) protection of open space (Questions 8a and b, Wind and Shadow, and Questions 9a and c, Recreation). Prior to issuing a permit for any project which requires an Initial Study under CEQA, prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *San Francisco General Plan*, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. As noted above, the consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in Chapter V, Environmental Setting and Impacts, Chapter VI, Other CEQA Issues, and the project's Initial Study (Appendix A), providing information for use in the case report for the proposed project. The case report and approval motions for the proposed project would contain the Planning Department's comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

No inconsistencies with the Priority Policies were identified.

IV.A.3 Sustainability Plan for San Francisco

The *Sustainability Plan for San Francisco* (CCSF 1996b) was endorsed by the San Francisco Board of Supervisors in 1997. Although the Board has not committed the City to perform the actions addressed in the plan, the plan serves as a blueprint for sustainability, with many of its individual proposals requiring further development and public comment should they be proposed for implementation. The underlying goals of the plan are to maintain the physical resources and

systems that support life in San Francisco and to create a social structure that will allow such maintenance. It is divided into 15 topic areas, 10 that address specific environmental issues (Air Quality; Biodiversity; Energy, Climate Change and Ozone Depletion; Food and Agriculture; Hazardous Materials; Human Health; Parks, Open Spaces and Streetscapes; Solid Waste; Transportation; and Water and Wastewater), and five that are broader in scope and cover many issues (Economy and Economic Development; Environmental Justice; Municipal Expenditures; Public Information and Education; and Risk Management). Each topic area in the plan has a set of indicators that are to be used over time to determine whether San Francisco is moving in a sustainable direction in that particular area. The Biodiversity section, which includes 39 specific actions, addresses the goals of increased ecological understanding, protection, and restoration of remnant natural ecosystems; increased habitat value in developed and naturalistic areas; and collection, organization, and development of historic information on habitat and biodiversity.

The *Sustainability Plan for San Francisco* was developed to address San Francisco's long-term environmental sustainability, and it adopted many of the goals and objectives of the 1995 Significant Natural Resource Areas Management Plan. As such, no inconsistencies with the *Sustainability Plan for San Francisco* were identified.

IV.A.4 Natural Areas Program

The mission of the Natural Areas Program is two-fold: to restore and enhance remnant Natural Areas and to develop and support community-based stewardship of these areas (CCSF 2008c). Recognizing the functions and value of these Natural Areas and the need to protect and restore them, SFRPD agreed to support and develop a community-based habitat restoration program, today known as the Natural Areas Program. No inconsistencies with the Natural Areas Program were identified.

IV.A.5 San Francisco Dog Policy

The SFRPD is the steward of wide-ranging unique landscapes and makes decisions on land management practices. The SFRPD's Dog Policy (SFRPD 2002) reflects the SFRPD Strategic Plan, input from community stakeholder groups, San Francisco Municipal Codes, the 1998 Dog Task Force recommendations, and the best and most relevant efforts of established dog park designs and policies. The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off-leash in 19 designated areas. Existing and proposed sites will need to be evaluated in the context of this policy. Dogs are not allowed in some areas, as noted in Section 3.1 (Location) of the policy. The policy supports continued and increased education about how to be a responsible park user with a pet.

The SFRPD's Dog Policy excludes dogs (on- and off-leash) from sensitive habitat areas, such as sensitive wildlife areas (e.g., breeding habitat for birds), sensitive remnant native plant communities (e.g., wetlands), sensitive plant populations (e.g., locally rare wildflower species), and high erosion prone areas, and excludes them temporarily from restoration areas. This policy attempts to reconcile conflicting priorities between dog walkers and other recreational uses. As such, no inconsistencies with the SFRPD's Dog Policy were identified.

IV.A.6 San Francisco Bay Basin (Region 2) Water Quality Control Plan

Water for recreation and habitat is associated with the Natural Areas. The San Francisco Bay Basin (Region 2) Water Quality Control Plan contains water quality regulations adopted by the San Francisco Bay Regional Water Quality Control Board. It has been approved by the State Water Resources Control Board, the Office of Administrative Law, and US Environmental Protection Agency (EPA) (SFBRWQCB 2007). It also contains statewide regulations adopted by the State Water Resources Control Board and other state agencies that refer to activities regulated by the board. No inconsistencies with the San Francisco Bay Basin (Region 2) Water Quality Control Plan were identified.

IV.A.7 San Francisco Bay Plan

The San Francisco Bay Plan guides the protection and development of the bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline (San Francisco Bay Conservation and Development Commission 2008). A major plan proposal is to develop waterfront parks and recreation facilities. New shoreline parks, beaches, marinas, fishing piers, scenic drives, and hiking or bicycling pathways should be provided in many areas. The bay and its shoreline offer particularly important opportunities for recreational development in urban areas where large concentrations of people live close to the water but are shut off from it. Highest priority should be given to recreational development in these areas as an important means of helping to immediately relieve urban tensions. No inconsistencies with the San Francisco Bay Plan were identified.

IV.A.8 Climate Action Plan for San Francisco

The Climate Action Plan for San Francisco (San Francisco Department of the Environment and San Francisco Public Utilities Commission 2004):

- Provides background information on the causes of climate change and projections of its impacts on California and San Francisco from recent scientific reports;
- Presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction target;

- Describes recommended emissions reduction actions in the key target sectors - transportation, energy efficiency, renewable energy, and solid waste management – to meet the 2012 goal; and
- Presents next steps required over the near term to implement the plan.

No inconsistencies with the Climate Action Plan were identified.

IV.A.9 Urban Forestry Ordinance

The San Francisco Urban Forestry Ordinance defines landmark trees, significant trees, street trees, and hazard trees. It also outlines protections for landmark trees, significant trees, and street trees. No landmark trees are proposed for removal under the SNRAMP. Should tree removal include significant trees or street trees, the permits required under this ordinance would be obtained before removal. No inconsistencies with this ordinance were identified.

IV.A.10 Pacifica Local Coastal Land Use Plan

Pacifica's Local Coastal Land Use Plan (City of Pacifica 1980b) serves as the land use plan for the City of Pacifica's coastal zone and was written in accordance with the policies of the California Coastal Act of 1976. A portion of the Sharp Park coastal zone west of Highway 1 and outside the Laguna Salada wetland complex is under the jurisdiction of Pacifica's Local Coastal Land Use Plan. The Local Coastal Land Use Plan was developed by the City of Pacifica with extensive participation by local residents. It was adopted in 1980, and is undergoing an update, expected to be completed in 2012. The Local Coastal Land Use Plan includes 33 Coastal Act policies, most of which are applicable to particular General Plan elements. The policies cover such topics as access, facilities, recreation, habitat protection, scenic and visual qualities, and cultural resources. No inconsistencies with the Pacifica Local Coastal Land Use Plan were identified.

IV.A.11 Bay Area 2010 Clean Air Plan

The Bay Area Air Quality Management District, in cooperation with the Metropolitan Transportation Commission, the Association of Bay Area Governments, and the Bay Conservation and Development Commission, prepared the Bay Area 2010 Clean Air Plan (BAAQMD 2010a). This plan is required because the Bay Area is designated as nonattainment for the state ozone and particulate matter standards and includes all feasible measures to reduce emissions of ozone precursors and to reduce transport of those precursors to neighboring air basins. The Clean Air Plan outlines a plan to improve Bay Area air quality and to protect public health. The three-part strategy includes reducing emissions and decreasing ambient concentrations of harmful pollutants; safeguarding public health by reducing exposure to air pollutants that pose the greatest health

risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and reducing greenhouse gas (GHG) emissions to protect the climate. The 2010 Clean Air Plan control strategy includes 55 control measures that address stationary sources, mobile sources, transportation control, land use and local impacts, and energy and climate. No inconsistencies with the Bay Area 2010 Clean Air Plan were identified. Compliance with the 2010 Clean Air Plan is further addressed in Section V.K, Air Quality.

IV.A.12 California Coastal Act

The California Coastal Act applies to projects that result in the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes occurring in the coastal zone. The act limits these activities to certain types of projects (restoration projects, for example, are included among the permitted projects) and stipulates criteria under which development is permitted. Chapter 3 of the act details the coastal resources planning and management policies (Sections 30200 to 30265.5). The act also permanently established the California Coastal Commission (CCC).

The portion of the Sharp Park Natural Area extending 1,000 feet inland from the levee is within the coastal zone and falls within the jurisdiction of the CCC; proposed SNRAMP activities within the coastal zone may require a coastal development permit. The Balboa Natural Area also is within the coastal zone and the jurisdiction of the CCC; however, none of the proposed SNRAMP activities at this Natural Area would require a coastal development permit. The India Basin Shoreline Park is within the coastal zone and under the jurisdiction of the Bay Conservation and Development Commission; however, none of the proposed SNRAMP activities at this Natural Area would require a coastal development permit.

The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the act are the statutory standards that apply to planning and regulatory decisions made by the commission and by local governments, pursuant to the act. Implementation of the act's policies is accomplished primarily through the preparation of local coastal programs that include land use plans. To ensure that coastal resources are effectively protected in light of changing circumstances, such as new information and changing development pressures and impacts, the CCC is required to review each certified local coastal program at least once every five years.

For the resources evaluated in Chapter V of this EIR, the applicable California Coastal Act policies are presented below, and the project's consistency with those policies is evaluated. No inconsistencies with the California Coastal Act were identified.

Aesthetics

The California Coastal Act policy applicable to aesthetics is the following:

- Protecting scenic and visual qualities of coastal areas (Section 30251).

Sharp Park borders the Pacific Ocean. Restoration activities would alter and restore scenic resources (e.g., land, water, vegetation, animals, structures, and other features). Promoting the natural integrity of the area would ultimately reestablish the local native scenic resources typical of the Natural Area. This would not diminish general scenic views and would still be compatible with the local setting. The overall visual landscape of the coastline would not be degraded. Restoration at Sharp Park would not be inconsistent with the California Coastal Act.

Cultural and Paleontological Resources

The California Coastal Act policy applicable to cultural and paleontological resources is the following:

- Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required (Section 30244).

To mitigate the adverse impacts of the Sharp Park restoration project on archaeological and paleontological resources, this EIR identifies Mitigation Measures M-CP-10 and M-CP-17; thus, the project is not inconsistent with the policies of the California Coastal Act.

Recreation

The California Coastal Act policies applicable to recreation resources for this project are the following:

- Providing and maintaining maximum access and recreation opportunities for all the people (Section 30210);
- Protecting the availability of water-oriented recreation activities not provided at inland water areas (Section 30220);

- Protecting oceanfront land suitable for recreational use unless anticipated demand for that use is already provided for in the area (Section 30221); and
- Encouraging boating activities on coastal waters (Section 30224).

The proposed management actions at India Basin Shoreline Park include activities to manage the health of the vegetation. Implementation of these actions is not anticipated to impede shoreline access for fishing and water-dependent recreation, such as boating, at this Natural Area because access points would remain open and recreational activities would continue during management action implementation. Other policies relevant to recreation would not be impacted by proposed activities at this Natural Area.

The Sharp Park restoration project involves modifying and restoring the Laguna Salad wetland complex. To achieve this, approximately 19 acres of the Sharp Park Golf Course would be modified. Although modification of the Sharp Park Golf Course may deter some people from using it, the golf course would still be open to the public, continuing to maximize recreation activities in the Natural Area. Additionally, the golf course and the Laguna Salada area do not currently provide access to the shoreline, so access would be unaffected by the restoration activities at Sharp Park. Access to the shoreline is available via Mori Point, immediately south of Sharp Park. Other California Coastal Act policies relevant to recreation would not be impacted by the restoration at Sharp Park.

Based on the above, the project is not inconsistent with the policies of the California Coastal Act.

Biological Resources

The California Coastal Act policies applicable to biological resources are the following:

- Maintaining, enhancing, and restoring marine resources (Section 30230);
- Maintaining and restoring biological productivity and quality of coastal waters and water bodies to benefit marine organisms and protection of human health (Section 30231);
- Limiting and controlling the diking, filling, and dredging of coastal waters and water bodies (Section 30233); and
- Protecting environmentally sensitive habitat areas from significant disruption of habitat values (Section 30240).

The Sharp Park restoration project involves modifying the Laguna Salada wetland complex. It does not involve activities that would affect marine resources. Modifications to Laguna Salada, including

any filling and dredging of water bodies under this project would be done for restoration purposes and to improve the quality of habitat used by the state and/or federally protected San Francisco garter snake, California red-legged frog, and western pond turtle populations. While the project would cause temporary disruptions to habitat during the seasonal restoration activities, those activities would ultimately increase the value of habitat for the protected San Francisco garter snake and California red-legged frog populations, and thus the project is not inconsistent with the objectives of the California Coastal Act.

Hydrology and Water Quality

The California Coastal Act policies applicable to hydrology and water quality are the following:

- Maintaining and restoring biological productivity and quality of coastal waters and water bodies to benefit marine organisms and protection of human health (Section 30231);
- Protecting against spills of petroleum products and other hazardous substances (Section 30232); and
- Limiting and controlling the diking, filling, and dredging of coastal waters and water bodies (Section 30233).

The Sharp Park restoration project involves modifying the Laguna Salada wetland complex. Both the project and the mitigation measures identified in this section would maintain and improve both the short-term and long-term quality of waters that are hydraulically connected to the ocean. The project includes mitigation measures to avoid and minimize the effects of petroleum spills. The dredging of water bodies under this project would be done for restoration purposes and to improve the quality of habitat used by local San Francisco garter snake, California red-legged frog, and western pond turtle populations. As such, this project is not inconsistent with the California Coastal Act policies listed above.

Hazards and Hazardous Materials

The California Coastal Act policies applicable to hazards and hazardous materials are the following:

- Protecting against the spillage of crude oil, gas, petroleum products, or hazardous substances (Section 30232); and
- Minimizing risks from new development to life and property in areas of high fire hazard (Section 30253).

To reduce impacts from the accidental release of hazardous materials, the SFRPD shall prepare an emergency response plan for the Sharp Park restoration, as detailed in Mitigation Measure M-HZ-13. Developing and implementing the plan will ensure the proper storage and use of hazardous materials, proper response to accidental releases, and worker training, all of which will minimize contamination from hazardous materials.

As Sharp Park and a few Natural Areas within San Francisco are classified as moderate to high fire hazard zones, tree and invasive weed removal as part of the programmatic projects would reduce the potential fire hazards within these areas. Further, tree removal would be carefully coordinated, fire suppression equipment would be located on-site, and no prescribed burning is planned within the Natural Areas. Motorized equipment used during restoration would increase the risk of fire. Workers involved in the restoration activities would carry fire extinguishers in their trucks and would use appropriate fire prevention and suppression measures during restoration.

Restoration at Sharp Park would not be inconsistent with the California Coastal Act.

IV.B PACIFICA PLANS AND POLICIES

While the SFRPD and the SNRAMP are not subject to City of Pacifica plans and policies, they are presented in this section for informational purposes.

IV.B.1 Pacifica General Plan

The City of Pacifica General Plan (City of Pacifica 1980a) reviewed planning options for the city and includes nine mandatory elements—land use, circulation, scenic highways, housing, noise, conservation, open space, seismic safety, and safety—and three additional elements—community facilities, historic preservation, and community design. The Policy Plan contains the recommendations of each element, while the Land Use Plan represents the conclusion of the interaction among these element studies. The Land Use Element was revised in 1987, the Open Space and Recreation Element was revised in 1984, and the Seismic Safety and Safety Element was updated in 1983. The comprehensive General Plan update is not expected to be complete until 2012. No inconsistencies with the Pacifica General Plan were identified.

IV.B.2 Pacifica Logging Ordinance

City of Pacifica Ordinance 636-C.S. defines logging as removing, destroying, or harvesting 20 or more trees in one year from a parcel or from contiguous parcels under the same ownership. It defines a tree as any tree six inches in diameter as measured 12 inches from the ground. This ordinance prohibits logging operations unless one of the following conditions is met:

- Said operations are in conjunction with a city permit(s) requiring planning commission and/or city council approval, at which time said operations shall be evaluated and approved or denied at a duly noticed public hearing by the commission and /or council, concurrently with the other permit(s).
- Said operations are necessary immediately for the safety of life or property, as determined by the director of public works or his/her designee.
- Said operations occur on city-owned property and are necessary immediately to maintain public health and safety.

Because the SFRPD and the SNRAMP are not subject to City of Pacifica plans and policies, no city permits would be required for tree removal at Sharp Park.

IV.B.3 Pacifica Heritage Tree Preservation Code

Pacifica Municipal Code Title 4, Chapter 12, Preservation of Heritage Trees, defines a heritage tree as 1) a tree within the City of Pacifica, exclusive of eucalyptus, which has a trunk with a circumference of 50 inches (approximately 16 inches in diameter) or more, measured at 24 inches above the natural grade; or 2) a tree or grove of trees, including eucalyptus, designated by resolution of the city council to be of special historical, environmental, or aesthetic value. The code states that no person shall cut down, destroy, remove, or move a heritage tree, or engage in new construction within the dripline of a heritage tree growing on private property or city-owned property, without a permit. Because the SFRPD and the SNRAMP are not subject to City of Pacifica plans and policies, no city permits would be required for tree removal at Sharp Park.

IV.C SAN MATEO COUNTY PLANS AND POLICIES

While the SFRPD and the SNRAMP are not subject to San Mateo County plans and policies, they are presented in this section for informational purposes.

The Significant Tree Ordinance of San Mateo County requires a permit for cutting down, removing, poisoning, or otherwise killing or destroying or causing to be removed any significant tree or community of trees on any private property. The ordinance defines a significant tree as any live woody plant rising above the ground with a single stem or trunk of a circumference of 38 inches or more measured at four and a half feet vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes. In certain zoning districts, the definition includes all trees in excess of 19 inches in circumference. It defines a community of trees as a group

of trees of any size that are ecologically or aesthetically related to each other such that loss of several of them would cause a significant ecological, aesthetic, or environmental impact in the immediate area.

V. ENVIRONMENTAL SETTING AND IMPACTS

V.A INTRODUCTION

Based on the Initial Study published on April 22, 2009, the San Francisco Planning Department determined that an EIR was required. The preparers of the Initial Study determined that the project effects on the following resources would either be less than significant or that there is no potential occurrence of impacts that were not addressed in the Initial Study analysis, and thus they would require no further analysis: population and housing, transportation and circulation, noise, utilities and service systems, public services, geology and soils, and mineral and energy resources. CEQA does not require further assessment of the environmental effects that would be less than significant; therefore, these resources are not discussed in the EIR (see Appendix A for the Initial Study). The proposed project's effects on land use and land use planning, wind and shadow, hazards and hazardous materials, and agricultural resources also were determined to be less than significant in the Initial Study. These topics are included in the EIR to assist the reader, to provide details about the proposed project, or to respond to scoping comments.

Sections V.B through V.K of this EIR contains a discussion of the potential environmental impacts of implementing the SNRAMP, including the existing site conditions, type and magnitude of project-level and cumulative environmental impacts, feasible mitigation measures that would reduce or avoid identified significant adverse environmental impacts, and feasible improvement measures that would further reduce the magnitude of less than significant impacts. Except as supplemented in Sections V.B through V.K, the existing site condition information from the SNRAMP is incorporated by reference.

V.A.1 Comments Received on the Notice of Preparation

During the 30-day public review period for the NOP, which began on April 22, 2009, and ended on May 26, 2009, comment letters were received from public agencies and individuals, as discussed in Chapter II of this EIR. Additional comments were also received during the May 12 and May 14, 2009 scoping meetings. The NOP, the NOP comment letters, and scoping meeting transcript are included in Appendix A (Notice of Preparation, Initial Study, and Scoping Report) of this EIR and were considered in the EIR analyses.

V.A.2 Scope of the EIR

The following environmental resources are discussed in detail in this EIR:

- Land use and land use planning (Section V.B);
- Aesthetics (Section V.C);

- Cultural and paleontological resources (Section V.D);
- Wind and shadow (Section V.E);
- Recreation (Section V.F);
- Biological resources (Section V.G);
- Hydrology and water quality (Section V.H);
- Hazards and hazardous materials (Section V.I);
- Agriculture and forest resources (Section V.J); and
- Air quality (Section V.K).

All impacts determined to be less than significant are briefly discussed in Chapter VI of this EIR.

V.A.3 Format of the Environmental Analysis

Each environmental topic in Sections V.B through V.K of this EIR presents a program-level and project-level analysis of the Significant Natural Resource Area Management Plan's direct and indirect environmental impacts on the environment. Each section includes a description of the environmental setting and impacts. The impacts discussion includes the significance criteria, project-level impacts and proposed mitigation and improvement measures, and cumulative impacts.

This EIR uses the following terms to describe the level of significance of identified impacts:

- Significant Impact—A significant effect is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment … [but] may be considered in determining whether the physical change is significant." As defined in this EIR, a significant impact exceeds the defined significance criteria and would result in significant and unavoidable impacts, either with or without feasible mitigation.
    - Significant and Unavoidable Impact (SU)—This is an impact that exceeds the defined significance criteria and cannot be reduced through compliance with local, state, and federal laws and regulations or by implementation of all feasible mitigation measures.

  - Significant and Unavoidable Impact with Mitigation (SU/M)—This is an impact that exceeds the defined significance criteria; it can be reduced through compliance with local, state, and federal laws and regulations or by implementation of all feasible mitigation measures, but it cannot be reduced to a less than significant level.

- Less Than Significant Impact with Mitigation (LTS/M)—This is an impact that could exceed the defined significance criteria, but it can be eliminated or reduced to a less than significant level through implementation of the identified mitigation measures.
- Less Than Significant Impact (LTS)—This is an impact that does not exceed the defined significance criteria or that would be eliminated or reduced to a less than significant level through compliance with local, state, and federal laws and regulations.
- No Impact (NI)—No adverse changes to or impacts on the environment are expected.

V.A.4 Cumulative Impact Analysis

CEQA requires that EIRs discuss a project's potential contribution to cumulative impacts, in addition to project-specific impacts. Section 15130(a)(1) of the CEQA Guidelines states that a "cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." Other projects include past, present, and reasonably foreseeable future projects.

Section 15130(b)(1) of the CEQA Guidelines states that the approach to the cumulative impact analysis may be based on either of the following approaches or on a combination thereof:

- A list of past, present, and probable future projects producing related or cumulative impacts or
- A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or areawide conditions.

For the purposes of this EIR, the analysis of the potential for the project's incremental effects to be cumulatively considerable is based on a list of related projects identified by San Francisco and neighboring jurisdictions. This list includes those San Francisco Planning Department projects within a quarter mile of a Natural Area that are active or that were closed on or after January 1, 2009. The list also includes General Plan area plans within a quarter mile of each Natural Area. The analysis is also based on reasonably anticipated buildout of the *San Francisco General Plan* or other planning documents, depending on the specific impact being analyzed.

The geographic scope of the cumulative impact analyses and the specific related projects that are included in the analyses may also vary, depending on the specific environmental issue being analyzed. The cumulative context for each cumulative impact analysis is designated in each technical section of this EIR.

CEQA requires that an EIR include a discussion of cumulative impacts to determine whether they are significant. If a cumulative impact is significant, the project's incremental effects must be analyzed to determine if their contribution to the cumulative impact is considerable. In accordance with Section 15065(a)(3) of the CEQA Guidelines, this determination is based on an assessment of the project's incremental effects viewed in combination with the effects of past, present, and foreseeable future related projects. The existence of a current significant cumulative impact does not necessarily mean that the project's contribution to that impact must be significant. Instead, a project's contribution to a significant cumulative impact is significant only if it is cumulatively considerable.

CEQA recognizes that the analysis of cumulative impacts need not be as detailed as the analysis of project-level impacts but instead should "be guided by the standards of practicality and reasonableness" (Section 15130[b] of the CEQA guidelines). The discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone.

This EIR presents a cumulative impact analysis only when the project's incremental effect would result in a cumulative impact that is less than significant, less than significant with mitigation, significant and unavoidable, or significant and unavoidable with mitigation.

V.B LAND USE AND LAND USE PLANNING

For informational purposes, this topic is included in the EIR to assist the reader and to respond to scoping comments. This section describes the plans and policies that guide use of the lands within the Natural Areas and evaluates the potential for environmental impacts from the proposed management activities. None of the management activities propose to change the general land use within the Natural Areas; therefore, this analysis focuses on consistency with applicable plans and policies and compatibility with surrounding land uses.

Comments related to land use and land use planning received during the NOP scoping process included concerns about:

- Project consistency with Pacifica regulations and plans, specifically the Local Coastal Land Use Plan;
- New policies in the Pacifica General Plan update that could impact the SNRAMP; and
- Effects on land use from restricting recreational access to the Natural Areas.

V.B.1 Regulatory Setting

In California, land use is regulated through local plans and policies, including those described below that are associated with the proposed project.

San Francisco General Plan

In San Francisco, the overall planning framework is set by the San Francisco General Plan, which consists of ten plan elements. General plans are intended to identify features that are unique to each region and to identify policies that preserve and reinforce unique values of the community. Each element identifies objectives and is supported by policy statements and explanations. In addition, eleven neighborhoods have area plans that recognize unique characteristics and strengths of the neighborhoods and introduce objectives and policy statements at the neighborhood level. The concepts of the General Plan are implemented through the zoning code and administrative review processes.

An important value of San Franciscans is represented by Objective 7 of the Environmental Protection Element (CCSF 2004): "Assure that the land resources in San Francisco are used in ways that both respect and preserve the natural values of the land and serve the best interests of all of the city's citizens."

Another policy statement is Objective 1 of the Environmental Protection Element: "Achieve a proper balance among the conservation, utilization, and development of San Francisco's natural resources."

The Recreation and Open Space Element (CCSF 2007a) guides policies over hiking and bicycle trails and advocates developing additional trails along San Francisco Bay (the Bay Trail), on ridgelines, and along the coast and linking these trails with those in adjacent counties. It defines various classes of open space, including city-serving (for example, Golden Gate Park and McLaren Park), district-serving (larger than 10 acres), neighborhood-serving (less than 10 acres and more than 4 acres), and subneighborhood-serving (generally an acre or less).

Objective 2 of the Recreation and Open Space Element states "Develop and maintain a diversified and balanced citywide system of high quality public open space." It is supported by Policy 2.8: "Develop a recreational trail system that links city parks and public open space, ridge lines and hilltops, the Bay and ocean, and neighborhoods, and ties into the regional hiking trail system." The plan identifies several city parks where future segments of these trails should be developed. The Bay Trail is a resource for pedestrians and bicyclists and passes through the India Basin Natural Area. Of the San Francisco Natural Areas, trails would increase at Edgehill Mountain and Interior Greenbelt. Trails would be created at an additional seven San Francisco Natural Areas, and many informal social trails would be closed.

Policy 2.9, "Maintain and expand the urban forest," acknowledges the role of urban forests in enhancing the quality of life in San Francisco. The text clarifies the need for replacing mature trees and promotes the need for a "major reforestation effort" in the larger city parks. It calls for a systematic inventory of the urban forest, tree replanting, and plant material diversification.

Policy 2.13 is to "Preserve and protect significant natural resource areas." It specifically addresses the natural resource area management plan and calls for preserving native plant habitats, inventorying natural areas, and protecting natural areas "to ensure that the natural resource values are not diminished or impacted by public use."

Under Policy 3.5, this element calls for extending the reforestation program within Golden Gate Park "throughout the park to ensure vigorous forest tree growth . . . ." Regarding Bayview Park, this section calls for better pedestrian access, which is echoed in the proposed project.

Policy 4.3, "Renovate and renew the City's parks and recreational facilities," acknowledges the need for ongoing assessment and renewal of San Francisco's open space resources.

The San Francisco Recreation and Park Commission has adopted additional policies pertaining to certain parks, such as the master plans for Buena Vista Park, Glen Canyon Park, Golden Gate Park, McLaren Park, and Pine Lake Park.

There is currently a Draft Update of the Recreation and Open Space Element out for review and is expected to be adopted in late 2011. The Draft Update references the SNRAMP as a Related Plan and Agency Program. Many of the policies from the existing Recreation and Open Space Element are included in the Draft Update, including Policy 2.8, regarding developing and enhancing the City's recreational trail system.

The Golden Gate Park Master Plan

The Golden Gate Park Master Plan (SFRPD 1998) identifies three policies that are relevant to the proposed removal of invasive trees. Policy A addresses naturalistic parkland as follows: "Naturalistic parkland comprises the largest land category in Golden Gate Park, and must be preserved to protect the pastoral character of the park and to ensure the retention of park open space. Naturalistic parkland is the predominant landscape of the park and gives the park its visual character."

The second objective of the plan mandates protecting and renewing the park landscape. Policy B places priority on preserving and renewing the park's forestry. It calls for "Removal of hazardous, diseased and dying trees; replacement with appropriate tree species." Another goal is to "Maintain the designated indigenous oak preserves for their natural and historical values as the only remaining indigenous woodlands in the park, and preserve existing oak trees in other areas." Policy E focuses on forested indigenous oak preserves and calls for them to be carefully managed to promote their preservation.

California Coastal Act

The California Coastal Act of 1976 contains policies for the coastal zone regarding development and conservation activities. The portion of the Sharp Park Natural Area extending 1,000 feet inland from the levee is within the coastal zone and falls within the jurisdiction of the CCC; proposed SNRAMP activities within the coastal zone may require a coastal development permit. The Balboa Natural Area also is within the coastal zone and the jurisdiction of the CCC; however, none of the proposed SNRAMP activities at this Natural Area would require a coastal development permit. The India Basin Shoreline Park is within the coastal zone and the jurisdiction of the Bay Conservation and Development Commission; however, none of the proposed SNRAMP activities at this Natural Area

would require a coastal development permit. Section 30001.5 of the California Coastal Act sets forth the five following goals:

> (a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.
>
> (b) Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.
>
> (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.
>
> (d) Assure priority for coastal-dependent and coastal-related development over other development on the coast.
>
> (e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

These policies are used to determine the "adequacy of local coastal plans" and the "permissibility of proposed developments." Public agencies implementing activities occurring outside of the coastal zone that could have an impact on resources within the coastal zone shall also "consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved."

City of Pacifica Local Coastal Land Use Plan

The Local Coastal Land Use Plan (City of Pacifica 1980b) is the land use plan for the City of Pacifica's coastal zone and was written in accordance with the policies of the California Coastal Act of 1976. The current Local Coastal Land Use Plan was adopted in 1980, and the City of Pacifica is undergoing a General Plan Update process, which also includes an update to the Local Coastal Land Use Plan. The final version of the Local Coastal Land Use Plan is expected in 2011. In July 2010, the City of Pacifica made available a Pacifica General Plan Existing Conditions and Key Issues report for public comment. That report included key issues to be addressed in the updated plans. Key Issue 8 acknowledges that the current 1980 Local Coastal Plan will need to be updated because some Coastal Act policies have changed.

Pacifica's Coastal Zone extends from the eastern edge of Highway 1 to the Pacific Ocean and contains six coastal neighborhoods. Coastal zone neighborhood designations and descriptions used in the Local Coastal Land Use Plan were developed in conjunction with the City's General Plan. A

portion of the Sharp Park coastal zone west of Highway 1 and outside the Laguna Salada wetland complex is included within the Sharp Park Municipal Golf Course/West Fairway Park/Mori Point/Rockaway Beach neighborhood; the remainder of the Sharp Park coastal zone is within the jurisdiction of the CCC. This neighborhood area is described as the largest undeveloped area in the Coastal Zone, with Laguna Salada providing an important habitat area for the San Francisco garter snake. Protection of the highly sensitive San Francisco garter snake habitat is listed as one of the primary issues of concern associated with the neighborhood.

The Local Coastal Land Use Plan includes 33 Coastal Act policies. Policy Number 18 establishes protection for "environmentally sensitive habitat area" from "any significant disruption of habitat values," and states "only uses dependent on such resources shall be allowed within such areas." Additionally, "development in areas adjacent to environmentally sensitive habitat areas…shall be sited and designed to prevent impacts which would significantly degrade such areas," and the continuance of habitat areas is the goal for development adjacent to habitat areas.

Policy Number 24 calls for the "scenic and visual qualities" of coastal areas to be "considered and protected as a resource of public importance." Therefore, any permitted development should be considerate of ocean and scenic coastal areas, natural landforms, the character of surrounding areas, and where feasible, should "restore and enhance visual quality in visually degraded areas."

In the Plan Conclusions Section of the Local Coastal Land Use Plan, the San Francisco garter snake habitat is also referenced under the rare and endangered species: habitat protection topical area section. Sharp Park Lagoon and Marsh is identified as one of two wetland areas that should be under a management plan. According to this section, primary habitats are defined as "necessary for the survival and propagation of the garter snake," and "primary secondary or support areas to the identified primary habitat areas shall be defined by investigating biologists." In terms of any proposed development, "a secondary habitat buffer should ensure that the "San Francisco garter snake and other sensitive plant or animal species will not be affected." Secondary habitat area or buffer area uses are limited to "pedestrian access paths, fences necessary to protect the habitat from intrusion by people and domestic animals and other similar uses which either have beneficial effects or at least no significant adverse effects on the primary habitat as determined by the reporting biologist."

Pacifica General Plan

While Pacifica's General Plan is not applicable to Sharp Park activities, this section is an informational discussion of that plan.

The City of Pacifica is undergoing a General Plan Update process. The final version of the General Plan is expected in 2011. In July 2010, the City of Pacifica made available a Pacifica General Plan Existing Conditions and Key Issues report for public comment. The report doesn't include any polices and summarizes the existing 1980 General Plan in addition to providing updated data on existing conditions. The report lists key issues to be "discussed with City staff, decision makers, and community members, and ultimately addressed through policies in the updated General Plan." The most relevant in relation to the SNRAMP are Key Issues 6 and 8. Key Issue 6 is "Adding Open Space," which recognizes that open space is mainly under the auspices of Golden Gate National Recreation Area, the County and State parks systems, and the City and County of San Francisco and therefore open space additions must be considered in terms of "local and regional benefit and environmental protection." Key Issue 8 acknowledges that the current 1980 Local Coastal Plan will need to be updated because some Coastal Act policies have changed.

The City of Pacifica General Plan (City of Pacifica 1980a) includes nine mandatory elements—land use, circulation, scenic highways, housing, noise, conservation, open space, seismic safety, and safety—and three additional elements—community facilities, historic preservation, and community design. The Land Use Element was revised in 1987, the Open Space Element was revised in 1984, and the Seismic Safety and Safety Element was updated in 1983. The Land Use Element includes a policy dictating continued cooperation "with other public agencies and utilities in applying compatible uses for their lands, right-of-ways, and easements." In addition to the general land use guidelines, specific neighborhoods are also discussed. The element calls for the portion of East Sharp Park just north of Sharp Park to be designated with a land use of open space residential and highlights the importance of managing future use of the area because of its "potential impact on the City and County of San Francisco's Sharp Park and on the views from Sharp Park Road." Additionally, the Land Use Element includes the coastal zone neighborhood land use descriptions and maps used in the Local Coastal Land Use Plan and specifically the Sharp Park Municipal Golf Course/West Fairway Park/Mori Point/Rockaway Beach neighborhood discussed previously. As noted above, a small portion of the Sharp Park coastal zone is within the jurisdiction of Pacifica; the remainder is within the jurisdiction of the CCC.

The Scenic Highways Element includes provisions for developing, establishing, and protecting scenic highways. Pacifica's Scenic Highways Element has two goals. The first is "preserving, maintaining, and enhancing the visual qualities of the City's scenic corridors," and the second is "making the residents of the City more aware of the City's scenic resources." This emphasis on scenic vistas is supported by the goals of the SNRAMP. The Scenic Highway Element provides for eligible roadways to be selected on the following grounds: designating on the Select Street System

Map or in the General Plan scenic quality and ability to connect areas of recreational or historic interest, providing continuous flow of traffic, and including bicycle/pedestrian routes wherever possible.

The first three policies of the Conservation Element focus on the conservation of trees, indigenous rare and endangered species, and significant neighborhood trees. "Native forestation" and "appropriate trees and vegetation" are also encouraged. The Conservation Element also identifies Laguna Salada as the only wetland area in Pacifica and as habitat for the San Francisco garter snake; for this reason, Laguna Salada is identified for protection because of its unique status habitat for the San Francisco garter snake.

The purpose of the Open Space Element is to address open space in a comprehensive fashion and to encourage recognition of open space as a limited and valuable resource. Pacifica defines open space as "any area which provides recreation, significant visual assets for the City, or is vital for the preservation of irreplaceable natural resources," and retaining open space for the purpose of preserving natural resources is a priority. Compatible land uses are described as "those which preserve natural resources (including animal habitat), provide for the managed production of resources, provide for outdoor recreation, and provide for the public's health and safety (including areas which require special management or regulation because of inherent hazardous conditions, such as earthquake faults, unstable soils, steep slopes and similar limiting qualities)." Open space should also be balanced in relation to development, public safety, and the scale and character of neighborhood areas.

Additionally, the Open Space Element includes guidance to "protect visual amenities," and Action Program 3 of the Open Space Element states "Views of open space are as important as access to open space."

The Seismic Safety and Safety Element identifies portions of Sharp Park Golf Course as being subject to flooding but to a lesser extent than San Pedro Creek. This element also identifies the City as having emergency plans established to manage the needs following an emergency.

The Historic Preservation Element identified four historic sites within Sharp Park—Laguna Salada and Marsh, Sharp Park Golf Course and Clubhouse, Trees in Sharp Park, and Fairway Park World War II Alien Detention Camp. In accordance with its requirements, the element is implemented by a historic ordinance, which also establishes a Pacifica Historic Sites Advisory Committee tasked with reviewing proposed changes to sites and structures. A map in the Historic Preservation Element

shows the general location of the Trees in Sharp Park as toward the east end of the Natural Area. Based on conversations with the Pacifica Planning and Public Works Departments, there no other references or ordinances that identify or pertain to the historic trees in Sharp Park.

The Community Design Element relates Pacifica's distinctive conditions to the general and expected patterns of growth. One of the policies included in the element is to "protect the City's irreplaceable scenic and visual amenities."

The Community Design Element also establishes guidelines and principles for more specific planning actions. For hillside developments, the guidelines are intended to minimize a development's impact on the terrain and to ensure the safety of residents. Guideline Number 1 is "Preserve 'visually significant' slopes and ridgelines, maintain natural open space between areas of development, [and] set aside and preserve natural features." Guideline Number 6 is "Landscape developed areas to blend with the natural landscape and require minimum maintenance and water." Guideline Number 7 is "Minimize the disruption of existing plant life," and Guideline Number 8 is "Phase grading and construction to coincide with periods of dry weather."

V.B.2 Environmental Setting

The 32 Natural Areas exist in parks or portions of parks. In some cases, Natural Areas abut private property in urban uses, as described in Chapter III, Project Description. Most are used as recreational open spaces by residents and visitors. Thirty-one of the Natural Areas are within San Francisco, and the Sharp Park Natural Area is in Pacifica. Sharp Park is owned and operated by the SFRPD. Each of the 32 Natural Areas is described in Chapter III and throughout this EIR.

V.B.3 Impacts

Significance Thresholds

A proposed project would have a significant land use and land use planning impact if it were to result in the following:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Have a substantial impact on the existing character of the vicinity.

Impacts Addressed in the Initial Study

The Initial Study and NOP did not address the significance of the SNRAMP's potential to affect land use and land use planning. Therefore, this EIR evaluates the impacts of the SNRAMP's management actions for each of the 32 Natural Areas as they relate to land use and land use planning. Land use and land use planning impacts are identified based upon the CEQA significance criteria set forth on page 176.

Significant Natural Resource Areas Management Plan Impacts

Community Division

Programmatic Impacts

Impact LU-1: Implementation of programmatic projects under the SNRAMP would not physically divide an existing community. (Less than Significant)

The implementation of programmatic projects (large-scale tree removal, large-scale erosion control projects, trail development or rerouting, or other projects involving an increased recreational use of an area) would occur within the boundaries of defined Natural Areas. Most Natural Areas are currently used as recreational open spaces by residents and visitors. The SNRAMP would not alter the existing land use pattern of the project sites and vicinity. The SNRAMP activities would not introduce new land uses and would take place within existing Natural Areas; therefore, the SNRAMP would not physically divide any established community and the impact would be ***less than significant***.

Project-level Impacts (Routine Maintenance)

Impact LU-2: Implementation of routine maintenance activities under the SNRAMP would not physically divide an existing community. (Less than Significant)

The implementation of routine maintenance activities (removing invasive plants, installing plants, removing trees, maintaining trails, and maintaining catchment basins and sediment) within Natural Areas would not alter the existing land use of the project sites and vicinity. Routine maintenance under the SNRAMP would not result in activities or features that would physically divide existing communities surrounding the Natural Areas; therefore, the impact would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact LU-3: Implementation of the Sharp Park restoration activities under the SNRAMP would not physically divide an existing community. (Less than Significant)

Sharp Park restoration activities as outlined in Chapter III would result in the conversion of portions of the Sharp Park Golf Course to wetland and upland habitat for the San Francisco garter snake and California red-legged frog. However, the restoration activities do not include construction of any features that would divide Sharp Park and the existing community. Restoration activities at Sharp Park under the SNRAMP would not physically divide an existing community, and the impact would be ***less than significant***.

Land Use Plan or Policy Conflict

Programmatic Impacts

Impact LU-4: Implementation of programmatic projects under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact. (Less than Significant)

Applicable plans for the project site and vicinity are discussed in Section V.B.1 and include the San Francisco General Plan, the Golden Gate Park Master Plan, California Coastal Act, and the Pacifica Local Coastal Land Use Plan; the Pacifica General Plan is not applicable but is discussed in this EIR for informational purposes. The San Francisco General Plan represents many different goals and the ones most relevant to land use under the SNRAMP are those for open space, trails, parks, and recreational facilities. The SNRAMP would generally be consistent with the San Francisco General Plan as outlined in Section V.B.1, including Policy 2.13, to "preserve and protect significant natural resource areas." In particular, the SNRAMP proposes trail improvements that are consistent with the Recreation and Open Space Element's trail objectives. Trails would increase at Edgehill Mountain and Interior Greenbelt, and trails would be created at an additional seven San Francisco Natural Areas. While the overall length of trails would be reduced across the 32 Natural Areas, those being removed are problematic because they are social trails, redundant, or near sensitive species or habitat. The programmatic projects would not change the land use of the Natural Areas, and there are no obvious conflicts with the San Francisco General Plan. These projects would not restrict recreational access to or within the Natural Areas.

The Golden Gate Park Master Plan contains policies related to preservation, and the SNRAMP does not pose any significant conflicts with the Golden Gate Park Master Plan. The San Francisco

Sustainability Plan establishes targets or standards with a focus on improving the City's physical environment in specific areas, and the SNRAMP does not represent any obvious conflicts.

In Setting V.B.1, the California Coastal Act and the Pacifica Local Coastal Land Use Plan and the Pacifica General Plan were discussed. Most Sharp Park tree removal would occur in the upper canyon. As stated in the SNRAMP, the upper canyon is outside the coastal zone and therefore a coastal development permit is not required. The California Coastal Act governs activities within and affecting the coastal zone, and SNRAMP actions are consistent with California Coastal Act policies protecting and maintaining the coastal zone environment and balancing recreation and conservation. The Pacifica Local Coastal Land Use Plan is concerned with the protection of environmentally sensitive habitats and scenic and visual qualities of coastal areas; the SNRAMP programmatic projects at Sharp Park are expected to improve sensitive habitats and would not alter the coastal area.

The City of Pacifica General Plan's Conservation Element's emphasizes "native forestation" and "appropriate trees and vegetation" and the SNRAMP objectives of removing nonnative trees and replacing them with other native vegetation are consistent with the Conservation Element. The Conservation Element also identifies San Francisco garter snake habitat for protection, and the SNRAMP recommends that access to the San Francisco garter snake habitat at Sharp Park be restricted. The goals of the SNRAMP are compatible with the Open Space Element's guidance to "protect visual amenities" and statement that "views of open space are as important as access to open space." The SNRAMP's erosion control goals are consistent with the Community Design Element's emphasis on preserving natural features and natural open space, such as visually significant slopes and ridgelines. Finally, the Historic Preservation Element identifies four historic sites within Sharp Park, but there is no further information to suggest a conflict with SNRAMP actions.

The implementation of programmatic projects would not conflict with any applicable plans and policies; therefore, the impact would be ***less than significant***.

Project-level Impacts (Routine Maintenance)

Impact LU-5: Implementation of routine maintenance activities under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact. (Less than Significant)

As discussed above, the SNRAMP activities do not conflict with applicable land use plans. Routine maintenance would not change the land use of the Natural Areas, and there are no obvious conflicts with the San Francisco General Plan; it would not restrict recreational access to or within the Natural Areas. Regarding the Pacifica Local Coastal Land Use Plan, routine maintenance activities would not alter the Sharp Park coastal area. The routine maintenance activities under the SNRAMP aim to preserve and maintain Natural Areas and do not alter the Natural Areas in a way that would conflict with applicable plans and policies; therefore, the impact would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact LU-6: Implementation of the Sharp Park restoration activities under the SNRAMP would not conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact. (Less than Significant)

Applicable plans include the San Francisco General Plan, California Coastal Act and the Pacifica Local Coastal Land Use Plan. The restoration project would not restrict recreational access to or within Sharp Park. The Sharp Park restoration activities would be consistent with the San Francisco General Plan, which is outlined in Section V.B.1. In particular, restoring the wetland complex would help achieve Policy 2.13, to "preserve and protect significant natural resource areas." This project would not change the land use of the Natural Area, and there are no obvious conflicts with the San Francisco General Plan.

The California Coastal Act and Pacifica Local Coastal Land Use Plan are concerned with the protection of environmentally sensitive habitats and scenic and visual qualities of coastal areas. The restoration activities would enhance environmentally sensitive habitats and maintain coastal visual qualities. This area is within the coastal zone; therefore, a coastal development permit is required.

While not applicable to the management activities at Sharp Park, the Pacifica General Plan is discussed for informational purposes. The restoration activities would be consistent with the Conservation Element of the Pacifica General Plan because the proposed restoration involves removal of only a few individual, nonnative trees and enhancement of habitat for rare and endangered species.

Similar to the actions taken at the other 31 Natural Areas, the Sharp Park restoration activities would not result in changes to land use and would not conflict with plans, policies, or regulations of a jurisdictional agency; therefore, the impact would be ***less than significant***. The potential impacts of restoration on the historic Sharp Park Golf Course and Clubhouse are discussed in Section V.D, Cultural and Paleontological Resources.

Existing Character

Programmatic Impacts

Impact LU-7: Implementation of programmatic projects under the SNRAMP would not have a substantial impact upon the existing character of the vicinity. (Less than Significant)

The programmatic projects planned under the SNRAMP (large-scale tree removal, large-scale erosion control projects, trail development or rerouting, or other projects involving an increased recreational use of an area) would introduce restoration activities at Natural Areas. The programmatic projects include changes to vegetation and trails at 32 Natural Areas. At some parks, the change in tree coverage would be minimal (two percent of trees), while in others it would be more noticeable (20 percent of trees). In Natural Areas where large numbers of trees would be removed, the removal would be gradual and would return the vegetation to a state more consistent with the area's original character. Overall, 18,448 invasive trees would be removed, representing 16 percent of the invasive trees in the Natural Areas. At Natural Areas other than Sharp Park, 3,448 invasive trees (approximately 5 percent of the invasive trees in those Natural Areas) would be replaced one-to-one with native trees. There are no projects that would result in a change in land use. Given that there are no proposed changes to the land use and the tree removal and replacement is limited, there would be no substantial impact upon the existing character of the vicinity. Additional information regarding visual impacts and recreation impacts of the proposed project are discussed in V.C, Aesthetics, and V.F, Recreation.

Sharp Park is one of the largest SFRPD parks and is primarily surrounded by open space. The Pacific Ocean represents the western boundary. The Mori Point GGNRA property borders the southwestern edge, and the Sweeney Ridge GGNRA property borders the park on the southeastern and eastern edges. Undeveloped areas within the cities of Pacifica and San Bruno constitute the northern boundary. At Sharp Park, approximately 15,000 invasive trees would be removed and replaced with other native vegetation and approximately 39,000 invasive trees would remain. The proposed tree removal would occur primarily in remote areas of the Natural Area and would not be noticeable enough to alter the character of the Natural Area or of the vicinity. The impact of tree

removal as seen from points outside of Sharp Park is discussed further in V.C, Aesthetics, and recreation impacts associated with the SNRAMP are discussed in V.F, Recreation. Given the similarity of land uses in the vicinity and no proposed changes to the land use, there would be no substantial impact upon the existing character of the vicinity.

The proposed programmatic projects under the SNRAMP would not result in a substantial change in the existing character of the vicinity for each Natural Area; therefore, the impact would be ***less than significant***.

Project-level Impacts (Routine Maintenance)

Impact LU-8: Implementation of routine maintenance activities under the SNRAMP would not have a substantial impact upon the existing character of the vicinity. (Less than Significant)

Routine maintenance activities (removing invasive plants, installing plants, removing trees, maintaining trails, and maintaining catchment basins and sediment) would maintain the existing land uses of the Natural Areas and their presence within the surrounding communities. In the context of maintenance projects already occurring in the Natural Areas as a result of the 1995 plan and the scale of the proposed activities, the project would not result in a substantial change in the character of the vicinity. There are no proposed changes to land use as part of the routine maintenance activities under the SNRAMP; therefore, there would be no substantial impact upon the existing character of the vicinity, and the impact would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact LU-9: Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial impact upon the existing character of the vicinity. (Less than Significant)

Sharp Park is one of the largest SFRPD parks and is primarily surrounded by open space. While the proposed restoration activities would modify the wetland complex, those changes would not alter the overall character of the Natural Area or of the vicinity. Given the similarity of land uses in the vicinity and no proposed changes to the land use as part of the Sharp Park restoration, there would be no substantial impact upon the existing character of the vicinity, and the impact would be ***less than significant***.

Cumulative Impacts

Impact LU-10: The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact related to land use and land use planning. (Less than Significant)

As discussed above, the project would conform to the adopted goals, policies, and plans for the San Francisco and Pacifica. The proposed project would result in the implementation of management plans for actions within the Natural Areas. Surrounding land uses would not be affected. The proposed project would not result in changes to the Natural Areas that would divide an existing community, conflict with plans and policies established for protecting the environment, nor would the SNRAMP result in substantial impacts on land use character; therefore, the project would not contribute to a cumulative impact on land use and land use planning.

V.C AESTHETICS

This section is a description of the aesthetics of the Natural Areas and an evaluation of the potential for environmental impacts from the proposed management activities. While the natural features of each Natural Area have aesthetic value, this analysis focuses on those Natural Areas with the greatest potential for significant impacts on their aesthetic appeal.

Comments related to aesthetics received during the NOP scoping process included concerns about the following:

- The effects of Mount Davidson tree removal on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion;
- Use of a scientific evaluation of aesthetics to address the effects of tree removal, such as on Mount Davidson;
- The impacts on views from the surrounding residences as a result of the three Sharp Park Golf Course scenarios;
- Adverse aesthetic impacts from poor maintenance of the Natural Areas.

V.C.1 Regulatory Setting

San Francisco General Plan

Map 1 in the Urban Design Element in the San Francisco General Plan identifies important vista points to be protected (CCSF 2005a). The Urban Design Element in the San Francisco General Plan also contains a map of Outstanding and Unique Areas, further described under Section V.C.2.

The San Francisco General Plan does not identify protected scenic vistas in the Recreation and Open Space Element or the Transportation Element (CCSF 2007a, 2005b), nor does the City of Pacifica General Plan identify protected scenic vistas in the Scenic Highways Element, the Conservation Element, the Open Space Element, or the Community Design Element (City of Pacifica 1980a). Also, there is no designated state or county scenic highway[1] near the proposed project (California Department of Transportation 2008). Highway 1 is an eligible State Scenic Highway.

[1] Scenic highway—a highway from which a high quality scenic natural landscape can be seen by travelers and with little intrusion by development.

The following principles for city pattern relating to parks are found in the Urban Design Element of the San Francisco General Plan (CCSF 2005a):

- "Where large parks occur at tops of hills, low-rise buildings surrounding them will preserve views from the park and maintain visibility of the park from other areas of the city. Comment: Areas around Mount Davidson and Twin Peaks have a pattern of low development. The hilltops are therefore citywide focal points of natural landscape, functioning much as Telegraph Hill's summit does in the North Beach area."
- "Landscaped pathways can visually and functionally link larger open spaces to neighborhoods. Comment: The roadside planting of Park Presidio and Sunset Boulevard, and the landscape connections between Mount Sutro, Twin Peaks, Laguna Honda and Glen Canyon are examples of a system that links parks and other open spaces to one another. Such linkages, creating strong defining features, can be extended to other parts of the city."

The General Plan notes the importance to residents and visitors of general scenic vistas, such as those involving ridgelines and beaches.

California Coastal Act

The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. Those policies applicable to aesthetics are discussed in Section IV.A.12.

V.C.2 Environmental Setting

Scenic Vistas

A scenic vista is a visually appealing view of the distant broad landscape. Map 1 in the Urban Design Element in the San Francisco General Plan identifies important vista points to be protected (CCSF 2005a). These specific vista points are throughout the City and include Natural Areas, such as Mount Davidson and Buena Vista Park. Also, almost all of the Natural Areas include trails, most of which provide general scenic views, such as those along the coast. Sharp Park borders the Pacific Ocean and is described in greater detail below under the Scenic Resources and Visual Character or Quality discussion.

The Golden Gate Park design is essentially a sequence of changing vistas. Some vistas provide long distance views, while others provide shorter views of spaces that bend out of sight, suggesting continuation and enticing the visitor. With few exceptions, the vistas are internal and contained by a dense perimeter planting to shield the surrounding city from view. Some vistas have been lost as plantings have matured. According to the Golden Gate Park Master Plan, where appropriate, historic vistas should be restored, such as the panoramic views from the top of Strawberry Hill (SFRPD 1998).

Scenic Resources and Visual Character or Quality

Scenic resources[2] are the visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features). The Urban Design Element of the San Francisco General Plan also contains a map of Outstanding and Unique Areas (CCSF 2005a) that includes Telegraph Hill, Russian Hill, Pacific Heights, Buena Vista and Upper Market, and Dolores Heights. Parks are part of the special components that make these areas outstanding and unique. The Buena Vista and Upper Market area includes or is next to Buena Vista Park, Corona Heights, and Tank Hill Natural Areas.

The visual character or quality of the Natural Areas is characterized as being undeveloped, being used for various designated purposes, and being surrounded by an urban environment. The Natural Area settings are described in detail in the SNRAMP (SFRPD 2006).

Described below are the Natural Areas with the greatest potential for aesthetics impacts due to the amount of tree removal that is proposed:

- *Sharp Park* borders the Pacific Ocean and is bisected by Highway 1. Laguna Salada and most of the Sharp Park Golf Course are on the western side of Highway 1; an archery range, the golf course, and extensive canyon are on the eastern side. Sanchez Creek originates in the upper canyon of Sharp Park and approximately bisects the park in an east-west direction. This park is surrounded by significant open spaces, including Mori Point and Sweeney Ridge. The Natural Areas account for approximately 237 acres within Sharp Park and encompass the upper canyon areas, portions of Sanchez Creek, and the Laguna Salada wetlands and associated vegetation. The vegetation of Sharp Park is dominated by invasive forest and a golf course, but also contains significant areas of wetlands and scrub vegetation (SFRPD 2006).

[2] Scenic resource—the visible physical features on a landscape

- *Mount Davidson*, the highest point in San Francisco, is in south-central San Francisco. Elevations range from approximately 600 to 900 feet above sea level. Developed facilities are minimal and include trails, access roads, a bus turnaround, Works Progress Administration (WPA) stairs and retaining walls, a water tank, and the cement cross (owned by the Council of Armenian-American organizations of Northern California and not part of the Natural Area). Forests dominate the landscape at Mount Davidson, covering three-quarters of the Natural Area (SFRPD 2006). As a highly visible focal point within the City that supports a diverse array of habitats, plants, and animals, Mount Davidson has high natural resource and recreational values for the citizens of San Francisco, include City views, high levels of recreational trail use, and extensive urban forest (SFRPD 2006).
- *McLaren Park* is near the southeast corner of San Francisco. Elevations in McLaren Park range from approximately 100 and 125 feet above mean sea level in the southern and northern corners of the park to just over 525 feet above mean sea level along Mansell Street. Recreation facilities within McLaren Park include over 11 miles of trails, tennis courts, ball fields, a golf course, picnic areas, overlooks, and an amphitheater. The Natural Area at McLaren Park is composed of grassland, scrub, and tree-dominated vegetation series. As one of the largest Natural Areas in the City, McLaren Park has high natural resource and recreation values for San Franciscans, including trails, scenic views, and extensive grasslands (SFRPD 2006).
- *Bayview Park* is in southeast San Francisco, east of Candlestick Point State Park and Candlestick Park. Developed areas within the Natural Area are limited to paved trails. The 43.9-acre Natural Area at Bayview Park encompasses the entire hill, except for the radio transmitters and private land on the northern and southern boundaries. Bayview Park is one of the more diverse Natural Areas, with vegetation that includes grasslands, shrub, and tree-dominated areas and a large number of sensitive plant species (SFRPD 2006).

  As a highly visible focal point within the City that supports a diverse array of habitats, Bayview Park has high natural resource and recreational values for the citizens of San Francisco that include recreation trails; historic WPA features; 360-degree views, including views of the City, San Francisco Bay, San Bruno Mountain, and downtown San Francisco; and extensive grasslands (SFRPD 2006).

As described in Section III.E.1, the design and aesthetic goals for the Natural Areas are as follows:

- Where possible, to develop aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions, especially where adjacent parklands and traditionally landscaped areas abut Natural Areas;
- To maintain and develop viewpoints and viewsheds to enhance park experiences; and
- Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments.

Policy 1.5 in the Urban Design Element in the San Francisco General Plan emphasizes the special nature of each district through distinctive landscaping and other features (CCSF 2005a). This involves preserving what landscaping is there and installing or encouraging new landscaping.

V.C.3 Impacts

Significance Thresholds

A proposed project would have a significant aesthetics impact if it were to result in the following:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including trees, rock outcroppings, and other features of the built or natural environment, that contribute to a scenic public setting; or
- Substantially degrade the visual character or quality of the site and its surroundings.

Impacts Addressed in the Initial Study

In the Initial Study (Appendix A), no impacts related to the following criterion were identified:

- Create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.

As a result, this CEQA significance criterion is not evaluated further in this EIR.

Significant Natural Resource Areas Management Plan Impacts

A visual quality analysis is somewhat subjective and considers the project in relation to the surrounding visual character, heights and building types of surrounding uses, its potential to obstruct public scenic views and its potential to create light and glare. (The proposed project does not include outdoor or indoor lighting or other components that would create new sources of light

or glare.) A proposed project would have an effect on the visual landscape if it were to cause a substantial demonstrable adverse change. With respect to scenic resources involving changes to vegetation, long-term impacts would involve the permanent loss of vegetation or the relatively long time needed for newly planted trees to reach the size of the trees they replaced; short-term impacts involve the relatively short time needed for replacement vegetation to mature.

The intensity of the impact depends, in part, on viewers and their sensitivity to changes to scenic resources at a Natural Area. Residents, for example, normally are sensitive to changes in their surroundings, as are recreational users of Natural Areas. However, roadway travelers might not be as sensitive because changes to the environment are in view for only a short time, and travelers are generally en route to other destinations.

Scenic Vistas

Programmatic Impacts

Impact AE-1: Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on a scenic vista. (Less than Significant)

The proposed project does not include permanent human-made structures that would obstruct general scenic vistas, such as those involving ridgelines or vistas of San Francisco from Natural Area trails, described above under the Scenic Vistas discussion of Section V.C.2. The proposed project would not permanently restrict access to general scenic vistas. Although the removal of invasive trees would be noticeable, the trees would be replaced with either native trees or other native vegetation, such as native scrub or grassland species. As described in Section III.E.5 (page 92), the SFRPD would select the locations of replacement trees in the San Francisco Natural Areas to preserve views from important points. Because no general scenic vistas would be substantially altered or access to those vistas restricted, the project would have ***less than significant*** impacts on general scenic vistas.

Specific important viewpoints (identified above under the Scenic Vistas discussion of Section V.C.2), from which vistas are available, would also be affected by the project. These points are throughout the City and include Natural Areas, such as Mount Davidson. Approximately 95 percent of the trees proposed for removal in the SNRAMP are on Mount Davidson and in Sharp Park, McLaren Park, and Bayview Park. Although the removal of invasive trees would be noticeable, the trees in the San Francisco Natural Areas would be replaced with either native trees or other native vegetation, such as native scrub or grassland species, while ensuring that the views from important points are

preserved, as detailed in Section III.E.5 (page 92). While the one-to-one tree replacement ratio would not increase the total number of trees present, specific vistas would likely be altered by planted trees because site-specific conditions are unlikely to allow the new native trees to be planted in the exact same locations as the removed invasive trees. However, in some locations, trees would be replaced by native scrub or grassland species, which would open up views that are currently blocked by trees. No specific scenic vistas would be substantially altered through implementation of the SNRAMP; therefore, the programmatic projects would have ***less than significant*** impacts on scenic vistas.

Project-level Impacts (Routine Maintenance)

Impact AE-2: Implementation of routine maintenance under the SNRAMP would not have a substantial adverse effect on a scenic vista. (No Impact)

Routine maintenance activities involving invasive weed and tree removal, plantings, and maintenance of trails, catchment basins, and sediment dams are described in Section III.F.2. The scale of the routine maintenance would not be sufficient to substantially alter scenic vistas. Also, these activities already occur within the Natural Areas; therefore, there would be ***no impact*** on scenic vistas by routine maintenance.

Project-level Impacts (Sharp Park Restoration)

Impact AE-3: Implementation of Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on a scenic vista. (Less than Significant)

The main components of the restoration are as follows, from Section III.F.2 (page 99):

- Dredging to remove sediment and decaying vegetation in Laguna Salada, Horse Stable Pond, and the channel that connects the two water bodies;
- Recontouring the shoreline to create shallow water habitat;
- Creating a habitat corridor between Horse Stable Pond and Laguna Salada;
- Creating an upland peninsula in the middle of the lagoon to provide snakes and frogs with refuge from feral cats and other predators; and
- Constructing upland mounds on the east side of the lagoon and between Laguna Salada and Horse Stable Pond.

The proposed project does not include permanent human-made structures that would obstruct general scenic vistas, such as those involving ridgelines. The proposed project would not permanently restrict access to Sharp Park vistas. Although the removal of invasive vegetation would be noticeable, the vegetation would be replaced, while ensuring that the views from important points are preserved. No vistas would be substantially altered; therefore, the Sharp Park restoration would have ***less than significant*** impacts on scenic vistas.

Scenic Resources

Scenic resources are the visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features). Changes to specific scenic resources of concern, such as vegetation, are described below.

Programmatic Impacts

Impact AE-4: Implementation of programmatic projects under the SNRAMP would not substantially damage scenic resources. (Less than Significant)

The proposed project would alter scenic resources within the Natural Areas. This would involve, for example, contouring the topography of an area differently and removing certain invasive vegetation to enhance habitat and establish native vegetation. Changes in vegetation include removing and replanting shrubs, bushes, and grasses and removing and replanting trees.

Impacts on scenic resources involving shrubs, bushes, and grasses would be noticeable and include diminished shrub, bush, and grass cover and altered composition and structure of this vegetation. Any adverse impacts on scenic resources involving removal of shrub, bush, and grasses would diminish as replanted vegetation matures.

Impacts on scenic resources involving trees would be noticeable and include diminished trees and altered composition and structure of this vegetation. Figures 4, 5, and 6 show the existing conditions and simulations of tree removal for Sharp Park and Mount Davidson, which have the highest number of trees planned for removal; in these figures, the red circles indicate the areas where noticeable tree removal is expected to occur. These figures simulate the anticipated results of tree removal from publicly accessible locations. The assumption is that the SFRPD intends to spread overall tree removal across the forested portion of a Natural Area and would not concentrate it in a particular location. Approximately 95 percent of all of the trees removed under the SNRAMP

Figure 4: Sharp Park at Archery Site



Existing Conditions



Simulated Conditions

Figure 5: Mount Davidson at Twin Peaks Blvd at Panorama Drive

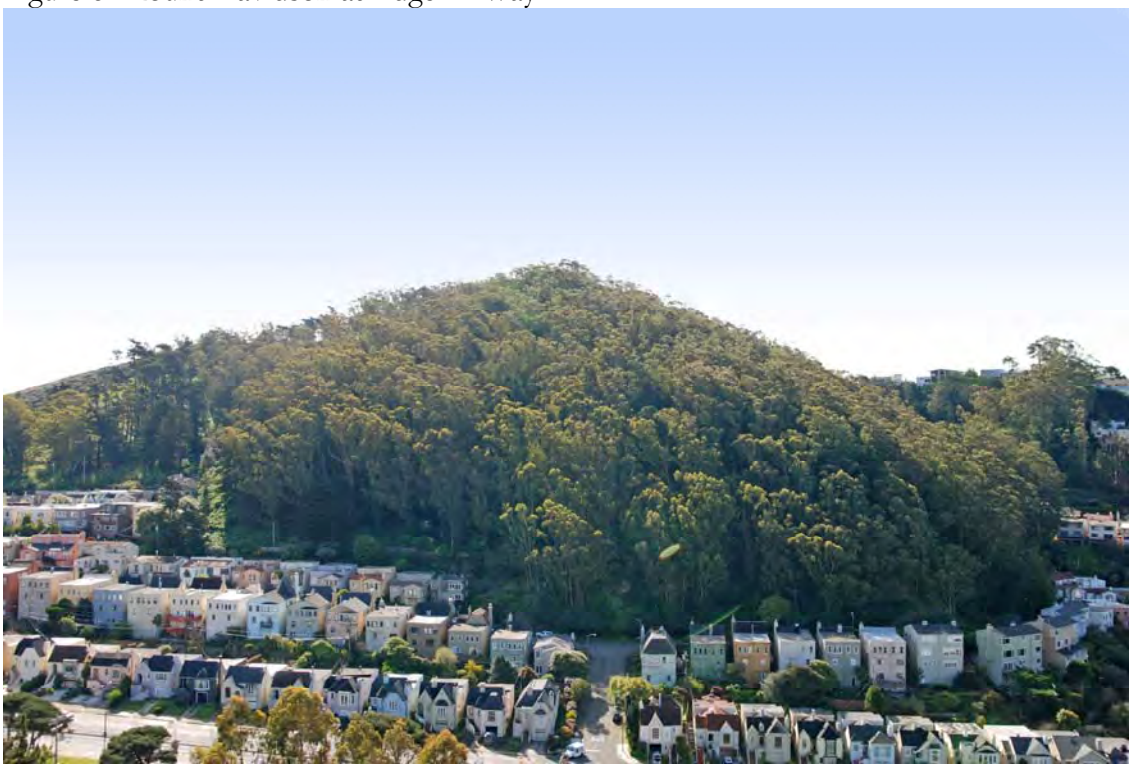


Existing Conditions



Simulated Conditions

Figure 6: Mount Davidson at Edgehill Way



Existing Conditions



Simulated Conditions

are on Mount Davidson and in Sharp Park, McLaren Park, and Bayview Park. Removing clusters of 20 or more trees on over half an acre would still leave the surrounding forest and its aesthetic value intact. Also, no Landmark Trees would be removed or altered. Furthermore, the large-scale removal of trees would occur over time and not simultaneously in a particular portion of a Natural Area, thereby making the loss of trees less perceptible. As shown in the visual simulations, most of the impacts would not be visible from distant viewpoints but would require a viewer to be close to the tree removal areas. From close-range locations, the overall vegetated character of the areas would be retained. The impacts would be long-term because of the relatively long time needed for newly planted trees to reach the size of the trees they replace. However, as shown in Figures 4, 5, and 6, in long-range views, tree removal would be unnoticeable.

Although scenic resources would be altered, over time, revegetation and the progression of natural processes would gradually reduce the magnitude of these impacts. Except for MA-3 forests, where both native and nonnative species would be used, all removed vegetation would be replaced with native vegetation that is more appropriate for the area's precipitation pattern, water availability, animal populations, and local ecosystems, thereby allowing the new vegetation to thrive more successfully than the invasive vegetation. It would also establish necessary habitat used by native fauna, which are associated with wildlife viewing. Promoting the natural integrity of the areas would ultimately reestablish the native scenic resources typical of the local Natural Area.

Because of the relatively short maturation time, there would be ***less than significant*** impacts involving shrub, bush, and grass cover by programmatic projects. Although some individuals may feel that any tree removal is an adverse effect, aesthetics are subjective, and the proposed project is not expected to result in a demonstrable adverse change; therefore, the impacts of tree removal by programmatic projects would be ***less than significant*** and would diminish as trees mature. Also, because the vegetation is better suited to local conditions, it is expected to require less maintenance and, therefore, less intrusion on the natural landscape by maintenance personnel and equipment. There would be fewer of the long-term improvements described above for MA-3 forests because replanting would not involve just native species, but also nonnative species.

Project-Level Impacts (Routine Maintenance)

Impact AE-5: Implementation of routine maintenance under the SNRAMP would not substantially damage scenic resources. (No Impact)

Routine maintenance activities involving invasive weed and tree removal, plantings, and maintenance of trails, catchment basins, and sediment dams are described in Section III.F.2. The

scale and nature of the routine maintenance would not be sufficient to substantially damage individual scenic resources. Also, these activities already occur within the Natural Areas; therefore, there would be ***no impact*** on scenic resources by routine maintenance.

Project-Level Impacts (Sharp Park Restoration)

Impact AE-6: Implementation of Sharp Park restoration under the SNRAMP would not substantially damage scenic resources. (Less than Significant)

The proposed project would alter scenic resources, for example, by recontouring some of the golf course holes and portions of the wetland complex and by converting vegetated areas to open water habitat. Changes in vegetation include removing certain invasive vegetation to enhance habitat and establish native vegetation. Changes to scenic resources involving vegetation would be noticeable and include diminished vegetation cover and altered composition and structure. These adverse impacts on scenic resources would diminish as the planted vegetation matures. Establishing more locally-native vegetation as a result of the Sharp Park restoration would improve scenic resources by emphasizing mature native vegetation more consistent with the local native landscape desired by the Natural Areas Program. Also, because the vegetation is better suited to local conditions, it is expected to require less maintenance and, therefore, less intrusion on the natural landscape by maintenance personnel and equipment. As a result, there would be ***less than significant*** impacts on scenic resources from Sharp Park restoration.

Visual Character or Quality

The impact criterion pertaining to scenic resources above discussed changes to specific scenic resources (such as vegetation). This criterion focuses on the broader visual character or quality of the Natural Areas. As defined above, the visual character or quality of the Natural Areas is characterized as being undeveloped, being used for various designated purposes (such as recreation), and being surrounded by an urban environment. After implementation of projects under the SNRAMP, the overall visual setting of the Natural Areas would still be characterized as undeveloped, used for various designated purposes, and surrounded by an urban environment. However, during construction, the visual setting of the Natural Areas would be altered by the presence of construction equipment. Construction-related impacts are short term, temporary and would not result in long term adverse impacts to the visual character of the Natural Areas.

Programmatic Impacts

Impact AE-7: Implementation of programmatic projects under the SNRAMP would not substantially degrade the visual character or quality of the Natural Areas and their surroundings. (Less than Significant)

The proposed project would be required to comply with the policies in the Urban Design Element of the San Francisco General Plan. During implementation of the proposed project, equipment such as trucks and bulldozers would be visible in and around the Natural Areas. The presence of the equipment and project activities would detract from the overall setting of the areas; while these impacts are normally negligible in urban settings, the scenic nature of the Natural Areas makes them an issue of concern for the proposed project. Heavy equipment use would be required in such areas as Sharp Park and may be used at Mount Davidson, McLaren Park, and Bayview Park, where vegetation would be removed on a large scale. Less visible equipment would also be part of project activities and would include, for example, community-based volunteer groups weeding and restoring the areas using hand tools. There would be short-term impacts on the overall setting of the Natural Areas due to the presence of equipment and equipment use would be limited in duration. Although the equipment and project activities would detract from the overall setting of the areas, the equipment and these types of activities are not considered out of place or new to these Natural Areas because the areas currently require maintenance and are surrounded by developed lands (urban areas). In all parks, including Natural Areas, equipment is used for maintenance, and the proposed activities would not be substantially different from the types of activities that are normally required to make repairs or improvements. The proposed project, however, would likely have more equipment than typical maintenance equipment and activities. There would be ***less than significant*** adverse impacts on the visual character or quality of the Natural Areas by programmatic projects because these impacts would be limited to the duration of construction and would involve equipment and activities similar to typical maintenance equipment and activities that already occur.

Project-Level Impacts (Routine Maintenance)

Impact AE-8: Implementation of routine maintenance under the SNRAMP would not substantially degrade the existing visual character or quality of the Natural Areas and their surroundings. (No Impact)

Routine maintenance activities involving invasive weed and tree removal, plantings, and maintenance of trails, catchment basins, and sediment dams are described in Section III.F.2. The scale of the routine maintenance would not be sufficient to substantially degrade the visual

character or quality of the Natural Areas. Also, these activities already occur within the Natural Areas; therefore, there would be ***no impact*** on the visual character and quality of the Natural Areas.

Project-Level Impacts (Sharp Park Restoration)

Impact AE-9: Implementation of Sharp Park restoration under the SNRAMP would not substantially degrade the existing visual character or quality of the Natural Areas. (Less than Significant)

During implementation of the proposed project, equipment such as trucks and bulldozers would be visible. The presence of the equipment and project personnel would detract from the overall setting of the area. Less visible equipment would also be part of project activities and include, for example, community-based volunteer groups weeding and restoring the areas using hand tools. Impacts on the overall setting of the Natural Areas would be temporary because the presence of equipment and project personnel would be limited in duration. Therefore, similar to the analysis of programmatic projects, there would be ***less than significant*** adverse impacts on the visual character or quality of the area from Sharp Park restoration project.

Cumulative Impacts

Impact AE-10: The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact on aesthetics. (Less than Significant)

Cumulative impacts on visual resources would occur during construction and operation of cumulative projects over the course of the SNRAMP's 20-year implementation. The geographic context for the analysis of visual resources is limited to the area surrounding the Natural Areas. As a result, cumulative projects relevant to this analysis typically involve construction activities, such as the Hunters Point Shipyard/Candlestick Park Redevelopment project.

Cumulative development projects in the vicinity of Natural Areas involve construction activities and would involve equipment such as trucks and bulldozers, which would be visible. The presence of construction equipment and activities from cumulative projects would detract from the visual resources associated with Natural Areas. Although equipment and project personnel would detract from the visual resources, they are not considered out of place or new to these Natural Areas or to the surrounding urban environment. Depending on the amount, type, and timing of construction of cumulative projects, cumulative impacts on visual resources could range from short term to long

term. Given the size and nature of the cumulative projects, any adverse cumulative impacts on aesthetic resources would be less than significant.

Operation and maintenance activities of the cumulative projects could involve vegetation changes. Vegetation would likely be removed to accommodate cumulative project needs. The removal of vegetation under cumulative projects would diminish visual resources by decreasing the amount of natural vegetation. Initially, impacts on visual resources, such as diminished vegetation and its altered composition and structure, would be noticeable. However, the contribution from other cumulative projects to enhancing or diminishing the visual character or quality of the areas would depend on their permanent removal or addition of vegetation to the landscape. For example, depending on the cumulative project, trees may need to be planted or replaced, which would reduce cumulative adverse impacts; other types of vegetation, such as shrubs, bushes, and grass, may not require replacement. Also, larger SFPUC cumulative projects may require planting/revegetation plans; consequently, assuming cumulative projects did not reduce the overall amount of vegetation, cumulative adverse impacts involving vegetation would be short term and long term but not significant.

With the uncertain timing of the SNRAMP, it may or may not be implemented in a timeframe that contributes to the impacts of the other cumulative projects. The proposed project is designed to eventually improve the visual character and quality of the areas by establishing vegetation that is more consistent with the native character desired by the Natural Areas Program. As a result, initial project activities would result in adverse impacts similar to the cumulative projects. These include, for example, equipment and activities detracting from the visual resources, as well as diminished vegetation and its altered composition and structure. However, as vegetation matures, the proposed project's contribution to cumulative adverse impacts on visual resources would lessen. Over time, promoting the natural integrity of the Natural Areas would ultimately reestablish the native scenic resources typical of the local Natural Area, resulting in a ***less than significant*** contribution to cumulative impacts.

V.D CULTURAL AND PALEONTOLOGICAL RESOURCES

This section describes the cultural and paleontological resources of the Natural Areas and the potential for the proposed project to impact those resources. To support this analysis, an archaeological sensitivity assessment of the Natural Areas (King 2010), a historical resources evaluation (HRE) of Sharp Park Golf Course (Mates 2011), and historic resource evaluation responses (HRERs) for Sharp Park and Mount Davidson (CCSF 2011a, 2011b) were completed. The HRE and HRERs are included in Appendix C. The archaeological sensitivity assessment is a legally confidential document.

Comments related to cultural and paleontological resources received during the NOP scoping process included concerns about the following:

- Recognizing the Sharp Park Golf Course as a significant historic architectural resource;
- Consideration of the history of the Sharp Park Golf Course, which was designed by Allister MacKenzie, with the club house designed by Willis Polk's design firm; and
- Mount Davidson park and monument as important historic entities that should be recorded and documented for listing on the California Register of Historical Resources; keeping any historical trails created and enhanced as part of the WPA projects maintained and open.

V.D.1 Regulatory Setting

Under CEQA, cultural resources[1] listed on, or determined to be eligible for listing on, the California Register of Historical Resources (CRHR) or a local register are those that must be given consideration in the CEQA process. The CRHR is in the California Code of Regulations, Title 14, Chapter 11.5. According to this code, properties listed on or formally determined to be eligible for listing on the National Register of Historic Properties (NRHP) are automatically eligible for listing on the CRHR. A resource is generally considered to be historically significant under CEQA if it meets the criteria for listing on the CRHR.

The CRHR criteria closely parallel those of the NRHP, and historic significance is judged by applying both sets of criteria. The NRHP criteria are identified as Criterion A through Criterion D and the CRHR criteria as Criterion 1 through Criterion 4. The NRHP guidelines state that a historic resource's "quality of significance in American history, architecture, archeology, engineering and

[1] Cultural resource—A generic term that may be used to refer to architectural resources, archaeological resources, traditional cultural properties, or sacred sites regardless of NRHP or CRHR evaluation.

culture" is determined by meeting at least one of four main criteria. Properties may be significant at the local, state, or national level:

Criterion A: Association with events or trends significant in the broad patterns of our history;

Criterion B: Association with the lives of significant individuals;

Criterion C: A property that embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, or that possesses high artistic values;

Criterion D: Has yielded, or is likely to yield, information important to history or prehistory.

In general, Criterion D is used to evaluate historic sites and archaeological resources.

Under the CRHR criteria, each resource must be determined to be significant at the local, state, or national level under one of the four criteria paraphrased below:

Criterion 1: Resources associated with important events that have made a significant contribution to the broad patterns of our history;

Criterion 2: Resources associated with the lives of persons important to our past;

Criterion 3: Resources that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master;

Criterion 4: Resources that have yielded, or may be likely to yield, information important in prehistory or history.[2]

A resource is considered eligible for inclusion on the CRHR, and therefore a potential historical resource under CEQA, if it is at least 45 years of age. To be eligible for listing to the CRHR under Criteria 1, 2, or 3, an archaeological resource must contain artifact assemblages, features, or stratigraphic relationships associated with important events or important persons, or be exemplary of a type, period, or method of construction. To be eligible under Criterion 4, a resource need only show the potential to yield important information.

[2] California Public Resources Code, Sections 4850 through 4858; California Office of Historic Preservation, "Instructions for Nominating Historical Resources to the California Register of Historical Resources," August 1997.

CEQA requires that the effects of a project on an archaeological resource be taken into consideration. CEQA recognizes archaeological resources as being potential instances of a "unique archaeological resource" or of a "historical resource." However, it must first be determined if the archaeological resource is a historical resource, that is, if the archaeological resource meets the criteria for listing on the CRHR. An archaeological resource that qualifies as a historical resource under CEQA generally qualifies for listing under Criterion 4 of the CRHR. An archaeological resource may qualify for listing under Criterion 4 when it can be demonstrated that it could significantly contribute to questions of scientific/historical importance. The research value of an archaeological resource can be evaluated only within the context of the prehistoric/historical background of the site of the resource and within the context of prior archaeological research related to the property type.

Artifacts, objects, or sites that do not meet the above criteria are not considered unique archaeological resources. Impacts on archaeological resources that are not unique and those that do not qualify for listing on the CRHR or a local register receive no further consideration under CEQA.

Paleontological resources include fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period. Collecting localities and the geologic formations containing those localities are also considered paleontological resources. They represent a limited, nonrenewable, and impact-sensitive scientific and educational resource.

Impacts on Native American burials are considered under California Public Resources Code 15064.5(d)(1). The SFRPD's treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity would comply with applicable state laws.

Historical architectural resources under CEQA are buildings, structures, or objects, including historic landscapes. The National Park Service's *Preservation Brief 36* defines a cultural landscape as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other values." There are four general types of cultural landscapes, one of which is the historic designed landscape. National Park Service *National Register Bulletin 18*, "How to Evaluate and Nominate Designed Historic Landscapes," defines a historic designed landscape as one that "has significance as a design or work of art; was consciously designed and laid out by a master gardener, landscape architect, architect, or horticulturalist to a design principle, or an owner or other amateur using a recognized style or tradition in response or reaction to a recognized style or tradition; has a historical association with a significant person, trend, or event, etc. in landscape gardening or landscape architecture; or a significant relationship to the theory or practice of landscape architecture." *Bulletin*

18 goes on to list golf courses as an example of grounds designed or developed for outdoor recreation or sports that fall under the category of a designed historic landscape. Therefore, Sharp Park Golf Course was evaluated for its historic significance as a designed historic landscape.

The CEQA Area of Potential Effect (C-APE) is the area for which impacts on cultural resources under CEQA are analyzed for a proposed project. Different C-APEs were used to determine the potential impacts on archaeological resources and historical architectural resources that could result from the proposed project. The C-APE for archaeological resources was defined for the proposed project to include the surface and subsurface areas that would be directly affected by ground disturbance and project activities and is generally considered to be the boundary of each Natural Area. The architectural C-APE also includes the boundary of each Natural Area, but was established to also address nearby historical resources that could be indirectly affected. In general, the architectural C-APE includes historical resources from which the Natural Areas and their associated activities would be audible or visible. Examples of historical resources within the Natural Areas are historic landscapes, historic furniture (such as park benches and water fountains), and built resources (such as staircases, walls, and street lights, and any buildings or structures, such as bridges and restrooms).

California Coastal Act of 1976

The California Coastal Act applies to projects that result in the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes occurring in the coastal zone. The act limits these activities to certain types of projects (restoration projects, for example, are included among the permitted projects) and stipulates criteria under which development is permitted. The California Coastal Act also includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. Those policies applicable to cultural and paleontological resources are discussed in Section IV.A.12.

V.D.2 Environmental Setting

To determine project impacts on the various types of cultural resources, records searches were requested in June and October 2008 from the California Historical Resources Information System's Northwest Information Center (NWIC) at Sonoma State University (File Nos. 07-1792 and 08-0414). A third records search was requested in November 2009 for the newly added Everson/Digby Natural Area (File No. 09-0630). Additionally an archaeological sensitivity assessment for all of the

Natural Areas (King 2010), an HRE for the Sharp Park Golf Course (Mates 2011), and HRERs for the Sharp Park and Mount Davidson Natural Areas (CCSF 2011a, 2011b) were completed based on these records searches and additional research.

All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (Mayfield 1978). Previous overviews (general discussions of resources that did not include field surveys) and field surveys (field studies completed specifically to identify archaeological or historic architectural resources) have been conducted within nine of the 32 Natural Areas. The Balboa Natural Area has been partially addressed in two overviews (Mayer 1995; Olmsted and Olmsted 1979) and one linear field survey[3] (Chavez and Ramsey 1979). Bayview Park has been completely covered by a regional overview (Hupman and Chavez 2001) and was partially covered by a linear field survey (Hupman and Chavez 2004). Everson/Digby has been fully covered by three overviews (Espey, Huston, & Associates and Dames & Moore 1993; Milliken 1983; Rudo 1982); no field surveys have been conducted in the Natural Area. Hawk Hill has been fully covered by an archaeological field survey (CCSF 1987). India Basin Shoreline Park has been addressed by one cultural resource overview (Gualtieri and Wall 1987), one archaeological field survey (Praetzellis et al. 1994), and one linear archaeological field survey (Hupman and Chavez 1995). Lake Merced has been partially addressed in one regional cultural resource overview (Shoup and Baker 1981), three field surveys (David Chavez and Associates 1993; Heid 1964; Willer and Albee 1957), and one subsurface testing project (Chavez 1988). Palou-Phelps has been partially covered by three linear archaeological field surveys (BioSystems Analysis 1989; Nelson et al. 2002; Sawyer et al. 2000). Pine Lake Natural Area is part of the historic district of Stern Grove and Pine Lake Park and has been entirely covered by a cultural landscape report, with register evaluations that included both archaeological and architectural field surveys (Bradley and Corbett 2004). The preparers of the cultural landscape report determined that Pine Lake Park appears to be eligible as a historic district under NRHP Criterion A and CRHR Criterion 1 at the local level of significance because of its association with settling the western portion of San Francisco, the state-wide eucalyptus boom, WPA-related park and recreation construction in San Francisco during the Great Depression, the Stern Grove Festival, and with the development of recreation facilities in San Francisco. Also, Pine Lake Natural Area was partially covered by a separate archaeological field survey (EDAW and Ward and Associates 2006). Sharp Park has had nine overviews and surveys within and next to it, according to the NWIC database. The Natural Area itself has been partially covered by four archaeological field surveys (Cartier 1984; Melandry 1977; Orlins and Schwaderer 1994; Pastron 2008), two linear archaeological field surveys

[3] The term "linear field survey" is used to refer to a field survey that was limited to a corridor, such as for pipelines, utilities, and roads.

(Clark 2006; Moratto 1974), and one archaeological field survey with a historic study and register evaluation (Clark 2007). The San Francisco Planning Department provided an additional survey report, Pastron (2008), specific to the Sharp Park Rifle Range. The other 23 Natural Areas have not been covered by a field survey or a cultural resource overview specific to those areas. These Natural Areas include: 15th Avenue Steps, Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, Glen Canyon Park, Golden Gate Heights, Golden Gate Park Oak Woodlands, Grandview Park, Interior Green Belt, Kite Hill, Lakeview/Ashton Mini Park, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Rock Outcrop, Tank Hill, and Twin Peaks.

Based on the records searches, the archaeological sensitivity assessment, HRE, and HRER, nine Natural Areas contain documented archaeological or architectural cultural resources (Balboa, Bayview Park, Bernal Hill, Brooks Park, Corona Heights, Lake Merced, Mount Davidson, Sharp Park, and Tank Hill). An additional seven Natural Areas (15th Avenue Steps, Buena Vista Park, Golden Gate Park Oak Woodlands, India Basin Shoreline Park, Palou-Phelps, Pine Lake, and Twin Peaks) do not contain documented resources but have cultural resources in the vicinity of the C-APE. No archaeological or architectural resources were documented within or near the remaining 16 Natural Areas.

Architectural Resources

Based on the NWIC records search results, one historic building, the Golden Gate Park Conservatory (CA-SFR-37H [P-38-0037]), is next to the Golden Gate Park Oak Woodlands Natural Area (Oak Woodland, Lily Pond, and Whiskey Hill). Historic canal features associated with the Spring Valley Water Company's water system (CA-SFR-102H [P-38-0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is part of the Stern Grove and Pine Lake Park (P-38-4472) historic district. Natural Areas are within the following historic districts:

- *Stern Grove and Pine Lake Park.* As stated above, the historic district of Stern Grove and Pine Lake Park are eligible for listing in the NRHP and CRHR under Criteria A and 1.
- *Golden Gate Park.* Golden Gate Park Oak Woodlands Natural Area is within the Golden Gate Park historic district, which is listed on the NRHP. The Natural Areas of Lily Pond, Whiskey Hill, and Strawberry Hill are within the Golden Gate Park Historic District and all are contributing sites to the historic district (except Whiskey Hill Natural Area which is not named in the nomination form). Golden Gate Park historic district is significant under Criterion C for its landscape architecture as one of the pioneering examples of the large

urban park (Nelson 2003). Secondarily, the park has regional significance under Criterion A for social history as the first naturalistic landscape park in the western United States (Nelson 2003).

The Natural Areas that contain urban forest stands, as described in the SNRAMP in Appendix F, are Lake Merced, Glen Canyon Park, Bayview Park, McLaren Park, Mount Davidson, Interior Greenbelt, Dorothy Erskine Park, Corona Heights, and Sharp Park. None of the urban forests in these Natural Areas have been evaluated for their historic significance as potential historic resources. As such, the forest stands in these Natural Areas are treated as potentially historic urban forests or historic landscapes. Impacts on these urban forests are discussed in Section V.D.3.

Through coordination with the SFRPD and the San Francisco Planning Department's Preservation Specialists, additional cultural resources, primarily architectural, were identified that were not found through the NWIC records search (review for potential historic-period buildings or structures through the NWIC database is not comprehensive). This includes the Golden Gate Park Historic District, which incorporates Oak Woodlands Natural Area. This historic district was listed on the NRHP in October 2004 (NRIS 2008; Nelson 2004) and is therefore included on the CRHR as well. GIS data provided by the Planning Department indicate that numerous historic-aged buildings and structures are next to almost all of the Natural Areas. The Mount Davidson Cross is one of these resources; the cross is privately owned and is not part of the Mount Davidson Natural Area. The absence of this resource and other resources in the NWIC database indicates that the resource has not yet been formally documented and submitted to the California Office of Historic Preservation. Because of its historic age (45 years or older), the Mount Davidson Cross is considered a potential historical resource. To be formally determined a historical resource, the cross would need to be recorded and evaluated for eligibility for listing on the CRHR, in consultation with the San Francisco Planning Department's Preservation Specialists. Mount Davidson is also the location of WPA stairs and retaining walls (SFRPD 2006), which have been found to be eligible for listing on the CRHR under Criteria 1 and 3 (NRHP Criteria A and C) (Tetra Tech 2010).

Sharp Park appears to be the most sensitive Natural Area for cultural resources, based on the extent of documented historic activity there and the determination that Sharp Park Golf Course is a historic resource (Tetra Tech 2010). Sharp Park Natural Area is the location of a former 1930s State Relief Camp (Pastron 2008). As part of the camp's efforts to improve the local economy, San Franciscans "were paid 25 cents a day to plant trees, for example, along the valley bounded by Fairway Park and Sharp Park Road" (Hunter et al. 2002, *in* Pastron 2008). Many of these trees may still exist within the Sharp Park Natural Area. Sharp Park is also the location of the former Sharp Park Temporary

Detention Center used during World War II. The facility was one of two that held the largest number of Japanese individuals during this time. Following official closure of the detention center in 1946, a firing range was opened in 1952 but was closed in 1988 for safety concerns (Pastron 2008). One brick-and-wood structure, with a concrete porch, stairs, asphalt apron, and flagpole, as well as another similar but smaller building that once functioned as a restroom, have been identified and are associated with the detention center. Both buildings were believed to have been associated with the former rifle range. Pastron (2008) also documented a report by a member of the Pacifica Historical Society of isolated concrete stairs, possibly remnants of the State Relief Camp or the Detention Center.

In 2011, an HRE was completed by Tetra Tech, on behalf of the Planning Department, to evaluate the historical significance Sharp Park Golf Course. Sharp Park Golf Course was determined eligible for the CRHR and the NRHP under Criteria 1 and A, respectively, for its association with the growth of recreational golf in San Francisco and under Criteria 3 and C, respectively, as a historic landscape. The HRE resulted in the determination that Sharp Park Golf Course meets the criteria for listing on the NRHP for its significance under Criteria A and C and for listing on the CRHR under Criteria 1 and 3. The property's period of significance is from 1929 to 1932, which represent the construction dates for the course's original design.

Sharp Park Golf Course is significant under Criterion A/1, as a resource associated with important events that have made a significant contribution to the broad patterns of our history, because the course's construction is associated with the need within San Francisco for a third municipal golf course. The construction and development of Sharp Park Golf Course was a direct result of the overcrowding at Harding and Lincoln Park municipal courses and the City's desire to build a third course to accommodate San Francisco golfers. The construction of Sharp Park Golf Course represents a development pattern within the City of San Francisco and within the U.S. in general, in which golf was an increasingly popular sport. The years between 1910 and the late 1930s have been called the "golden age of golf" in the U.S. due to the fact that many of the great golf course architects designed courses during this period. Many of the courses, like Sharp Park Golf Course, are still in use today. The construction of Sharp Park Golf Course is directly associated with the growing popularity of recreational golf within the U.S. during the early twentieth century.

Sharp Park Golf Course is also significant under Criterion C/3, as a resource that embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master. The course is significant for its architecture and landscape architecture—a public golf course constructed between 1929 and 1932. Sharp Park Golf Course contains many distinctive elements of

its type, a golf course constructed on the oceanside, on sandy dunes, with original seaside holes that provide water hazards as part of the game. The course was designed by a well-known architect, with nuances, style, and innovation that enhanced golf courses constructed during this period in the U.S., many of which were private. The original layout of the golf course included holes featuring multiple tees, double fairways, cross bunkering, fairways in sand dunes, and several holes bordering Laguna Salada. Cypress trees dotted the setting. Although the course has been modified, it is common to modify a living landscape, although efforts to keep the fairways' general original course design were always in effect. Twelve of the original 18 holes are part of the current design, and two fairways are original but without original greens.

The golf course is also the work of a master. While there are other examples of Mackenzie's work that are more well known, Sharp Park Golf Course is an example of his idea of the perfect surroundings for a golf course—holes surrounded by sand dunes next to the seashore. Although alterations have been made to the course, during the period of significance the course retained Mackenzie's routing, surprise elements, and hole and fairway locations.

The clubhouse is a good example of an Eclectic architectural style, with Mission and Spanish elements, improved by the WPA during the Great Depression. The clubhouse was built to serve the golfers of Sharp Park Golf Course, is directly associated with the golf course, and is considered a historical character-defining feature of the golf course. It is a good representation of its architectural type and period, and its alterations have not diminished its historic integrity, as discussed below. The golf course clubhouse has consistently been used as a clubhouse for Sharp Park golfers, as was its original purpose. The presence of the golf course clubhouse helps to convey the historic character of the entire golf course.

Sharp Park Golf Course's character-defining features are the original features and design of the golf course clubhouse, the original permanent maintenance building, and the course's original layout, including the 12 remaining original holes (current holes 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17 and 18) and original landscape features. The cypress trees that line the fairways also contribute to its significance, although none of the specific shrubs or trees on the property are considered contributors. The property's noncontributing features are the practice green, the maintenance trailers, the cart paths, the four holes that were moved to the east side of Highway 1, and other alterations that occurred after the period of significance. The golf course is therefore considered a historic resource under CEQA.

Historical architectural resources not yet evaluated for CRHR or NRHP eligibility were identified through the abovementioned NWIC records searches and correspondence with San Francisco Planning Department's Preservation Specialists. No historical architectural resources listed in Article 10 or Article 11 of the San Francisco Planning Code are within the architectural C-APE (CCSF 2003a; CCSF 2003b). One San Francisco Landmark Tree, a blue elderberry, is in the Bernal Hill Natural Area at the corner of Folsom Street and Bernal Heights Boulevard. The overwhelming majority of the proposed project's architectural C-APE have not been previously surveyed for historical architectural resources. As such, the presence of historical architectural resources within most of the architectural C-APE of the proposed project is unknown.

Archaeological Resources

Given the lack of field surveys and recorded archaeological sites within the Natural Areas, an archaeological sensitivity assessment was used to better assess the potential for the proposed project to impact archaeological resources.

Table 6 summarizes the assessed sensitivity of each Natural Area for subsurface and surface archaeological resources. The assessments were primarily deductive, based on site density, survey coverage, proximity to prehistoric and historic-era natural resources, extent of disturbances, and the presence of buried landforms suitable in age for human occupation in the Bay Area (Late Pleistocene, Holocene, or historic), and depositional environments suitable for preserving

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
15th Avenue Steps	• Comparatively low site density in surrounding area; • Possible historic rock quarry and possibility for prehistoric use; • No survey coverage; • Limited natural resources; • Holocene landform; • Moderate natural and human disturbances.	Moderate
Balboa	• Comparatively high site density in surrounding area; • Redeposition of Golden Gate Park landfill may include subsurface archaeological resources associated with the Midwinter International Exposition; • Evidence of high rate of historic activity; • Partial survey coverage; • Active Holocene landform; • Extensive natural and human disturbances.	High
Bayview Park	• Comparatively high site density in surrounding area;	Moderate

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• Possible historic rock quarry and possibility for prehistoric quarrying of outcrops; • Evidence of high rate of historic activity; • Minimal survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Extensive natural and human disturbances; • Productive surrounding natural environment, including freshwater source and associated productive riparian habitats.	
Bernal Hill	• Comparatively moderate site density in surrounding area; • Possible historic rock quarry and possibility for prehistoric quarrying of outcrops; • Evidence of high rate of historic activity; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Moderate natural and human disturbances; • Productive surrounding natural environment, including freshwater source and associated riparian habitats.	Moderate
Billy Goat Hill	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Situated between three historic freshwater sources and associated productive riparian habitats.	Low
Brooks Park	• Comparatively low site density in surrounding area; • Possible historic rock quarry and possibility for prehistoric quarrying of outcrops; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Near freshwater source and associated productive riparian habitats.	Low
Buena Vista Park	• Comparatively moderate site density in surrounding area; • No survey coverage; • Minimal soil/sediment depth over Holocene landform; • Moderate natural and human disturbances; • Next to freshwater source, associated productive riparian habitats, and other productive environments.	Moderate

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
Corona Heights	• Comparatively moderate site density in surrounding area; • Possible historic rock quarry and possibility for prehistoric quarrying of outcrops; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Moderate natural and human disturbances; • Next to freshwater sources, associated productive riparian habitats, and other productive environments.	Moderate
Dorothy Erskine Park	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Near freshwater sources and associated productive riparian habitats.	Low
Duncan-Castro	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops and exposures; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Near freshwater sources and associated productive riparian habitats.	Low
Edgehill Mountain	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops and exposures; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Moderate natural and human disturbances.	Low
Everson/Digby	• Comparatively low site density in surrounding area; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Near freshwater sources and associated productive riparian habitats.	Moderate

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
Fairmount Park	• Comparatively low site density in surrounding area; • No survey coverage; • Varied soil/sediment depth over pre-Holocene landform; • Moderate natural and human disturbances; • Near freshwater sources and associated productive riparian habitats.	Low
Glen Canyon Park	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage • Thin to deep sediments and soils over pre-Holocene landform; alluvial deposition; • Minimal natural and human disturbances; • Includes and is next to freshwater sources and associated productive riparian habitats.	High
Golden Gate Heights Park	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage; • Limited natural resources; • Holocene landform; • Moderate natural and human disturbances.	Low
Golden Gate Park Oak Woodlands (Lily Pond)	• Comparatively low site density in surrounding area; • Quarried lake may be historic, and Midwinter International Exposition-related deposits are possible; • No survey coverage; • Minimal soil/sediment depth over Holocene landform; • High degree of natural and human disturbances; • Limited natural resource availability.	Low
Golden Gate Park Oak Woodlands (Oak Woodlands and Strawberry Hill)	• Comparatively low site density in surrounding area; • Midwinter International Exposition-related deposits are possible; • No survey coverage; • Minimal soil/sediment depth over Holocene landform; • High degree of natural and human disturbances; • Limited natural resource availability.	Low
Golden Gate Park Oak Woodlands (Whiskey Hill)	• Comparatively low site density in surrounding area; • Midwinter International Exposition-related deposits are possible; • No survey coverage; • Extremely deep soil/sediment depth over Holocene landform; • High degree of natural and human disturbances; • Limited natural resource availability.	Moderate
Grandview Park	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of exposures; • No survey coverage; • Limited natural resources; • Pre-Holocene landform;	Low

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• Moderate natural and human disturbances.	
Hawk Hill	• Comparatively low site density in surrounding area; • Complete survey coverage; • Limited natural resources; • Holocene landform and historic artificial fill; • Moderate natural and human disturbances.	Low
India Basin Shoreline Park	• Comparatively low site density in surrounding area; • Partial survey coverage; • Historic fill material over Holocene bay and estuarine mud; • Minimal natural and human disturbances of historic fill.	Moderate
Interior Greenbelt	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of exposures; • No survey coverage; • Pre-Holocene landform with soils varying in depth; • Minimal natural and human disturbances of historic fill; • Includes seasonal freshwater source and associated productive riparian habitats.	High
Kite Hill	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage; • Thin soils over pre-Holocene landform; • Minimal natural and human disturbances; • Within proximity to freshwater sources and associated productive riparian habitats.	Low
Lake Merced	• Comparatively high site density in Natural Area and surrounding area; • Partial survey coverage; • Holocene landforms with historic-era fill materials; • Moderate natural and human disturbances; • Includes major freshwater source and associated productive riparian/wetland habitats.	High
Lakeview/Ashton Mini Park	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • No survey coverage; • Minimal soil/sediment depth over pre-Holocene landform; • Minimal natural and human disturbances; • Near freshwater source and associated productive riparian habitats.	Low
McLaren Park	• Comparatively low site density in surrounding area; • Historic quarries are within the Natural Area and possibility for prehistoric quarrying of outcrops; • No survey coverage; • Varied soil/sediment depth over pre-Holocene landforms; • Moderate overall degree of natural and human disturbances;	High

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• Comparatively numerous freshwater sources and associated riparian habitats within park and productive resource areas available.	
Mount Davidson	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops; • Highest peak in area likely to draw human activity; • No survey coverage; • Unknown soil/sediment depth over pre-Holocene landform; • Minimal degree of natural and human disturbances; • Near freshwater source and associated productive riparian habitats.	Moderate
O'Shaughnessy Hollow	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of outcrops. • No survey coverage; • Thin to deep sediments and soils over pre-Holocene landform; • Minimal natural and human disturbances; • Next to freshwater sources and associated productive riparian habitats.	High
Palou-Phelps	• High comparative site density in surrounding area; • Minimal survey coverage; • Minimal soil/sediment depth over pre-Holocene landform and historic fill materials; • Moderate natural and human disturbances; • Productive surrounding natural environment, including freshwater source and associated riparian habitats.	High
Pine Lake	• Moderate comparative site density in surrounding area; • Partial survey coverage; • Holocene landforms with historic-era fill materials; • Minimal natural and human disturbances; • Includes freshwater source and associated productive riparian/wetland habitats; major natural resources nearby.	High
Rock Outcrop	• Comparatively low site density in surrounding area; • Possibility for prehistoric quarrying of exposures; • No survey coverage; • Limited natural resources; • Pre-Holocene landform with almost no soils; • Minimal natural and human disturbances.	Low

Table 6
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
Sharp Park	• Comparatively high site density in and around Natural Area; • Partial survey coverage; • High degree of available natural resources; • Holocene landforms with soils no deeper than one foot; • High degree of human disturbances and moderate natural disturbances.	High
Tank Hill	• Comparatively low site density in surrounding area; • Unrecorded Spring Valley Water Company water tank foundation pad is within the Natural Area; • No survey coverage; • Thin soils over pre-Holocene landform and historic-era fill materials; • Moderate natural and human disturbances; • Near freshwater sources and associated productive riparian habitats.	High
Twin Peaks	• Comparatively low site density in surrounding area; • No survey coverage; • Thin soils over pre-Holocene landforms; • Extensive natural and human disturbances; • Limited natural resource availability.	Low

Source: King 2010

archaeological resources. Note that these evaluations are meant only as a preliminary assessment of surface and subsurface sensitivity for planning purposes and do not take into consideration proposed management actions at individual Natural Areas. Ground-truthing or additional, more detailed site-specific research may provide different results.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted to determine the presence of sacred sites[4] within or near the project areas that could qualify as historical or unique archaeological resources or contain human burials. The NAHC responded on June 19, 2008, that no such resources were identified in their files; however, the NAHC did provide a list of five Ohlone/Costanoan groups and individuals traditionally affiliated with the region that may be able to identify undocumented resources. SFRPD mailed consultation letters to the suggested contacts on July 17, 2008 (Appendix C). At the time of this publication, no responses had been received.

[4] Sacred site—locality of traditional significance or importance to a Native American community.

Paleontological Resources

A paleontological records search[5] was requested through the University of California Museum of Paleontology (UCMP). The records search results indicated the presence of five vertebrate localities within two miles of Sharp Park, all to the north or east (Holroyd 2008). These include vertebrate, mammal, and bird specimens all within Pleistocene formations. There are also a number of invertebrate fossil localities recorded in San Francisco, but none in or next to the Natural Areas. No known paleontological resources are within or next to any of the Natural Areas (Holroyd 2008), but these results may indicate the lack of paleontological surveys in the area.

V.D.3 Impacts

Significance Thresholds

A proposed project would have a significant impact on cultural and paleontological resources if it were to result in the following:

- Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5 of the CEQA Guidelines, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code;
- Cause a substantial adverse change in the significance of an archaeological resource, in accordance with §15064.5 of the CEQA Guidelines;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Impacts Addressed in the Initial Study

The Initial Study and NOP did not address the significance of the SNRAMP's potential to affect cultural and paleontological resources. Therefore, this EIR evaluates the impacts of the SNRAMP's management actions for each of the 32 Natural Areas as they relate to cultural and paleontological resources. Cultural and paleontological resource impacts are identified based on the CEQA significance criteria set forth on this page.

[5] Paleontological resource—fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period.

Significant Natural Resource Areas Management Plan Impacts

The potential for and the degree of impacts on archaeological resources are based on the archaeological sensitivity of each Natural Area, weighed against the varying types of activities proposed in the SNRAMP and the severity of surface disturbance involved. As outlined in Table 7 below, nine Natural Areas have a high level of sensitivity, ten have a moderate level (including the Whiskey Hill portion of the Golden Gate Park Oak Woodlands Natural Area), and 14 have a low level of sensitivity (including the Lily Pond, Oak Woodlands, and Strawberry Hill portions of Golden Gate Park Oak Woodlands Natural Area). Table 8 outlines three categories of surface disturbance, as defined by Wildesen (1982:Table 2.1).

Table 7
Distribution of the Natural Areas Across Archaeological Sensitivity Levels

Archaeological Sensitivity	Natural Areas	
Low	1. Billy Goat Hill 2. Brooks Park 3. Dorothy Erskine Park 4. Duncan-Castro 5. Edgehill Mountain 6. Fairmount Park 7. Golden Gate Heights Park 8. Golden Gate Park Oak Woodlands (Lily Pond, Oak Woodlands, and Strawberry Hill only)	9. Grandview Park 10. Hawk Hill 11. Kite Hill 12. Lakeview/Ashton Mini Park 13. Rock Outcrop 14. Twin Peak
Moderate	1. 15th Avenue Steps 2. Bayview Park 3. Bernal Hill 4. Buena Vista Park 5. Corona Heights	6. Everson/Digby 7. Golden Gate Park Oak Woodlands (Whiskey Hill only) 8. India Basin Shoreline Park 9. Mount Davidson
High	1. Balboa 2. Glen Canyon Park 3. Interior Greenbelt 4. Lake Merced 5. McLaren Park	6. O'Shaughnessy Hollow 7. Palou-Phelps 8. Pine Lake 9. Sharp Park 10. Tank Hill

Table 8
Definitions of Surface Disturbance Categories

Category	Definition
Severe	• Removal of litter, disturbance of soil greater than 2.5 centimeters deep. • Removal of the litter, A horizon,[6] a portion of the B horizon[7]; burial of the soils surface by at least 0.25 centimeters of soil material; or severe compaction of the mineral soil. • Where A horizons are disrupted sufficiently to expose B horizons. • Surface soil removed and subsoil exposed.
Moderate	• Removal of litter, soil disturbed to less than 2.5-centimeter depth.
Slight	• No removal of litter or soil. • Litter disrupted sufficiently to expose, partly or wholly, mineral soil. • Litter removed, soil exposed; litter and soil mixed 50-50; soil on top of litter or slash. • Undisturbed litter and topsoil still in place. • Litter; no compaction.

Source: Wildesen (1982:Table 2.1)

Note: 2.5 centimeters = approximately 1 inch.

Architectural Resources

Programmatic Impacts

Impact CP-1. Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of historical architectural resources, including historic landscapes. (Less than Significant with Mitigation)

Stabilizing hillsides by constructing erosion control measures, such as gabions, has the potential to alter historic landscapes by adding modern structures in the portion of a Natural Area where the action occurs. Because none of the Natural Areas have been evaluated for their potential to be historic landscapes, these historic resources could be present within one or more Natural Area. Also, assessing the impacts to a specific potentially historic landscape is not feasible without specific

[6]A Horizon—In a soil profile, the mineral horizon that forms at the surface or below an O horizon (dark-colored surface accumulation of organic matter). Characterized by the accumulation of decomposed organic matter, mixed with solid mineral grains, but the mineral portion of the matrix is dominant. Typically darker in color than underlying horizons.

[7]B Horizon—In a soil profile, the mineral horizon that forms below an A, E (matrix characterized by loss of clay, soluble iron, soluble aluminum, organic matter, or some combination of these), or O horizon. Horizon B shows little or no evidence of the original sediment or rock structure and is primarily characterized by illuvial concentrations (dissolved or suspended soil materials in one area) of clay, iron, aluminum, humus, carbonates, gypsum, or silica.

project details. As such, construction of erosion control structures may cause a substantial adverse change in the significance of such a historical resource, resulting in a significant adverse impact. Mitigation Measure M-CP-1 calls for determining if any proposed construction would impact historic resources under CEQA on a site-by-site basis and identifying measures to avoid any significant impacts to eligible historic architectural resources. As a result of implementation of M-CP-1, impacts to historical architectural resources from programmatic projects would be ***less than significant***. Other than the tree removal discussed below, no other management actions are expected to affect architectural resources.

M-CP-1: Consultation with the San Francisco Planning Department

The SFRPD would coordinate with the San Francisco Planning Department's Preservation Specialists and would submit plans before constructing stabilizing and erosion control measures that require installation of structures, such as gabions, near any potentially eligible resources. The Planning Department would determine if any proposed construction or other activities would impact historic resources under CEQA on a site-by-site basis; if such impacts may occur, the project would be required to be redesigned to avoid significant impacts to historic architectural resources.

Impact CP-2. Invasive tree and vegetation removal and planting activities, as part of programmatic projects, would not result in a substantial adverse change in the significance of historic landscapes or urban forests. (Less than Significant)

Several of the management activities proposed in the SNRAMP could adversely affect any present historical architectural resources. In addition to those discussed above, adverse effects could also result from vegetation changes within a Natural Area that may alter potential historic landscapes. Such changes include tree removal, which is proposed for 15 of the 32 Natural Areas and affects approximately 16 percent of the invasive trees in urban forests (San Francisco Park and Recreation Department 2006). As mentioned above, the Natural Areas that contain urban forest stands are Lake Merced, Glen Canyon Park, Bayview Park, McLaren Park, Mount Davidson, Interior Greenbelt, Dorothy Erskine Park, Corona Heights, and Sharp Park. These stands have not been evaluated for their historic significance; therefore, they are treated as potentially historic urban forests or historic landscapes.

Impact AE-1 in the Aesthetics section addresses the tree removal at Mount Davidson and Sharp Park and concludes that invasive tree and vegetation removal would not be noticeable at these Natural Areas and therefore it would not materially affect their significance as historic resources. Impacts to these potential historic resources through tree removal, which is detailed in Chapter III

and in the Urban Forestry Statements in Appendix F of the SNRAMP, could be beneficial to potential historic urban forests or historic landscapes because removing trees (through thinning and group selection) while maintaining the existing forest (which would occur in MA-3) would improve the health of the forest by relieving crowding and encouraging growth (SFRPD 2006). Other Natural Areas would experience less tree removal than Sharp Park and Mount Davidson, and, as a result, would experience lower impacts.

An HRER was prepared for Mount Davidson, and it was determined that invasive tree and vegetation removal as well as planting activities will not result in any significant changes to the historic landscape at Mount Davidson (CCSF 2011a). Selective tree removal would help to restore the historic balance of tree species within the forest and preserve its historic character. The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. For the other San Francisco Natural Areas containing urban forest stands, there would be a relatively lower amount of tree removal than Mount Davidson, and, as a result, similar or lower impacts to potentially historic landscapes.

Based on the above, invasive tree and vegetation removal would not result in a substantial adverse change in the significance of historic landscapes or historic forests and this impact would be ***less than significant***.

Impact CP-3. Invasive tree and vegetation removal activities as part of programmatic projects under the SNRAMP would not result in a substantial adverse change in the significance of the Golden Gate Park Historic District contributing sites. (Less than Significant)

Actions at Golden Gate Park Oak Woodlands Natural Area may affect Strawberry Hill and Lily Pond, both contributing sites within the Golden Gate Park Historic District and part of the Natural Area (Whiskey Hill is within the historic district but does not contribute to it). The proposed project activities at these sites in the Natural Area involve removing invasive trees and enhancing oak woodlands and scrub. Although activities may continue to transform the character of the forest canopy, they would contribute to a process that has been occurring over time and as a result, the proposed project would not significantly impact the Natural Area sites as contributors to the district. Since the individual Natural Area sites would not be significantly impacted, the overall character of the Golden Gate Park Historic District also would not be significantly impacted by the proposed project activities. Also, because plants and trees are living organisms that contribute to historic designed landscapes of each site and therefore to the district as a whole, change is a normal condition that has occurred over the history of the district and therefore would not diminish the

historic integrity of the park, a historic cultural landscape. Tree removal activities within this Natural Area would restore the area to more resemble its historic condition. As such, proposed tree removal would have a ***less than significant*** impact on the Golden Gate Park Historic District contributing sites.

Project-level Impacts (Routine Maintenance)

Impact CP-4. Invasive tree and vegetation removal and planting activities under the SNRAMP would not result in a substantial adverse change in the significance of historic landscapes or urban forests. (Less than Significant)

Minor tree and vegetation removal associated with routine maintenance would improve the health of the forest by relieving crowding and encouraging growth. Tree removal, as discussed in Impact CP-2, for programmatic projects, would not result in a significant impact to any potential historic landscapes. Therefore, routine maintenance activities including tree and vegetation removal and tree planting, would have a ***less than significant*** impact on historic landscapes or urban forests within the Natural Areas.

Impact CP-5. Invasive tree and vegetation removal as part of routine maintenance under the SNRAMP would not result in a substantial adverse change in the significance of the Golden Gate Park Historic District contributing sites. (Less than Significant)

Impacts of routine maintenance activities associated with invasive tree and vegetation removal would be similar to those described under Impact CP-3; however, routine maintenance would involve smaller scale tree and vegetation removal. Tree removal activities within this Natural Area would restore the area to more resemble its historic condition. As such, routine maintenance activities such as tree removal would have a ***less than significant*** impact on the Golden Gate Park Historic District and contributing sites.

Project-Level Impacts (Sharp Park Restoration)

Impact CP-6. Implementation of the Sharp Park restoration activities that include raising holes 10, 14, 15, and 18 would not result in a substantial adverse change in the significance of the Sharp Park Golf Course, a historic resource under CEQA. (Less than Significant)

As discussed in Section V.D.2, Sharp Park Golf Course meets the criteria for listing on the NRHP and CRHR for its significance under Criteria A and C and for listing on the CRHR under Criteria 1 and 3.

At Sharp Park, excavated dredged spoils appropriate for use as golf course substrate materials would be used on-site to raise Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. Although Holes 10, 14, 15, and 18 are included in Sharp Park Golf Course's character-defining features because these holes are some of the original features and design of the clubhouse, raising Holes 10, 14, 15, and 18 would not have a significant impact on the historical character-defining features of the golf course because the holes would remain in place and alterations would be made only to elevate the holes, which would not impact the historic integrity of the fairways. The holes would retain their appearance and therefore there would be a ***less than significant*** impact on the golf course from raising holes at the Sharp Park Golf Course.

Impact CP-7. Implementing restoration activities to close Hole 12 of the Sharp Park Golf Course would result in a substantial adverse change in the significance of the golf course, a historic resource under CEQA. (Significant and Unavoidable Impact with Mitigation)

The closure of Hole 12 at Sharp Park would have significant impacts on the historic character-defining features of the golf course because it would eliminate an original hole and fairway on the west side of the course, along the ocean. Hole 12 was originally designed as a 262-yard fairway. The hole was shortened in the early 1960s and was renumbered. Although Hole 12 has been altered from its original design, its closure and conversion to a habitat corridor would be a significant impact on the golf course because Hole 12 was included as part of the golf course design since its inception. The hole had always been at the edge of the lagoon or backed against the seawall. Using the area for habitat conservation and not as part of the golf course changes the boundaries of the golf course and its historic design. Therefore, closing Hole 12 would be a significant impact to the Sharp Park Golf Course. While replacing Hole 12 elsewhere on the course could be seen as a potential mitigation measure in that it would retain the course as an 18-hole facility, replacing it in a location other than its current location still diminishes its historical integrity as a character-defining feature of the golf course and would not sufficiently reduce the impact to less than significant. Implementing Mitigation Measure M-CP-7 would reduce the magnitude of this impact, but it would not sufficiently reduce it to a less than significant level. No additional feasible mitigation measures have been identified; therefore, closing Hole 12 would result in a ***significant and unavoidable*** impact on the Sharp Park Golf Course.

M-CP-7: Documentation of the Sharp Park Golf Course

The SFRPD would document, or would retain a consultant to document, Sharp Park Golf Course before the wetland restoration activities take place. The National Park Service has published guidance for preserving cultural landscapes in Preservation Brief 36: Protecting Cultural

Landscapes, Planning, Treatment and Management of Historic Landscapes and in the more complete Secretary of the Interior's Standards for Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes. The appropriate level of documentation would be selected by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation would consist of the following:

- Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course;
- Digital photographs of Sharp Park Golf Course;
- A written history and description of Sharp Park Golf Course and its alterations.

The professional historian would prepare the documentation and submit it for review and approval by a San Francisco Planning Department Preservation Specialist. The documentation would be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.

Impact CP-8. Implementation of the Sharp Park restoration activity to construct a post and rail fence along the seawall of the golf course would not cause a substantial adverse change in the significance of the Sharp Park Golf Course, a historic resource under CEQA. (Less than Significant)

The Sharp Park restoration proposes a post and rail fence which would be installed along the seawall, to the west of the lagoon, with additional fencing around the wetland complex to discourage human and pet intrusion into the restored habitat area. This fence would alter the visual appearance of the seawall and would add a modern element to the golf course. The seawall is not an original feature of the golf course but was constructed during its period of significance and would be a modern element within the historic setting of the course. Although construction of a fence would add a modern element to the course, it would not alter a historic character-defining feature of the course. Therefore, constructing a post and rail fence would have a ***less than significant*** impact on the golf course.

Impact CP-9. Implementation of the Sharp Park restoration activity that requires modification of the Sharp Park Golf Course to create upland habitat on the east side of the lagoon and shorten or narrow Holes 10 and 13 would be a substantial adverse change in the significance of the golf course, a historic resource under CEQA. (Significant and Unavoidable Impact with Mitigation)

Modifying approximately 13 acres of the golf course to create upland habitat along the east side of the lagoon to provide San Francisco garter snake upland habitat would require slightly shortening or narrowing Holes 10 and 13. The habitat corridor would be approximately six acres, bringing the total of modified area at the golf course to about 19 acres. These changes would substantially alter historic character-defining features, Holes 10 and 13. Implementing Mitigation Measure M-CP-7 would record the golf course in its existing condition and reduce the magnitude of this impact; however, M-CP-7 would not reduce it to less than significant. No additional feasible mitigation measures have been identified; therefore, shortening and narrowing Holes 10 and 13 would result in a ***significant and unavoidable*** impact on the Sharp Park Golf Course.

Archaeological Resources

Programmatic Impacts

Impact CP-10. Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in Natural Areas of high archaeological sensitivity. (Less than Significant with Mitigation)

Several of the programmatic project activities proposed in the SNRAMP could adversely affect archaeological resources, for example, rerouting or constructing trails, using heavy equipment, installing new structures, and removing weeds. Ground-disturbing activities could disturb surface and subsurface resources that would substantially alter the significance of an archaeological resource, resulting in a significant adverse impact.

The potential for adverse impacts is congruent with the expectation of legally-significant archaeological resources[8] within a Natural Area and the extent or nature of sub-surface disturbance involved with the project. Significant impacts are most likely to occur in the Natural Areas with high archaeological sensitivity—Balboa, Glen Canyon Park, Interior Greenbelt, Lake Merced, McLaren Park, O'Shaughnessy Hollow, Palou-Phelps, Pine Lake, Sharp Park, and Tank Hill.

[8] By the expression "legally-significant archaeological resource" is meant an archaeological resource that qualifies as an "historical resource" (Public Res. Code 15064.5(c))or as a "unique archaeological resource" (Public Res, Code 21083.2)under CEQA.

Therefore, programmatic project activities could have significant impacts on legally-significant archaeological resources, principally in areas of high archaeological sensitivity. With implementation of Mitigation Measure M-CP-10 for all programmatic projects in high sensitivity Natural Areas, impacts on archaeological resources would be ***less than significant***.

M-CP-10: Archaeological Monitoring Program for Programmatic Projects in Natural Areas with High Archaeological Sensitivity, Routine Maintenance Activities at Tank Hill and Lake Merced, and the Sharp Park Restoration Project

The following archaeological monitoring program (AMP) mitigation measure is required in order to avoid any potential adverse effect to archaeological resources as defined in CEQA Guidelines Section 15064.5(a)(c), as a result of SNRAMP programmatic projects in Natural Areas of high archaeological sensitivity and routine maintenance activities at Tank Hill and Lake Merced (see Impact CP-13). In addition, based on a reasonable potential that archeological resources may be present within the C-APE of the Sharp Park restoration project, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Sharp Park restoration on archaeological resources (see Impact CP-14).

Before implementation of the SNRAMP and the Sharp Park restoration project, the SFRPD shall retain a qualified archaeological consultant from the San Francisco Planning Department's pool of qualified archaeological consultants, as provided by the Department archaeologist. The archaeological consultant will prepare one or multiple AMPs that addresses the following impacts on archaeological resources: 1) programmatic projects in Natural Areas with high archaeological sensitivity, 2) routine maintenance activities in Tank Hill and Lake Merced Natural Areas, and 3) the Sharp Park restoration project.

All plans and reports prepared by the consultant shall be submitted first and directly to the ERO for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. Any AMP and/or data recovery programs required by this measure could suspend SNRAMP activities covered under this mitigation measure for up to four weeks. At the direction of the ERO, the suspension of construction could be extended beyond four weeks only if such a suspension were the only feasible means to reduce impacts to a less than significant level on a significant archaeological resource, as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archaeological monitoring program. The AMP will minimally include the following provisions:

- The archaeological consultant, SFRPD, and ERO will meet and consult on the scope of each AMP reasonably before implementation of the SNRAMP. The ERO, in consultation with the Project Archaeologist, will determine what programmatic projects in which high-sensitivity Natural Areas and what routine maintenance activities in Tank Hill and Lake Merced Natural Areas shall be archaeologically monitored. Additionally, the ERO and Project Archaeologist will determine which activities and portions of the Sharp Park restoration project will be archeologically monitored. In most cases, any ground-disturbing activities, such as demolition, excavation, grading, utilities installation, site remediation, etc. shall require archaeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context;
- In addition, the archaeological consultant will advise all project contractors and Natural Areas Program staff to be on the alert for evidence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of discovery of an apparent archaeological resource. A standard EP ALERT sheet will be issued to participating project contractors and Natural Areas Program staff. Additionally, Natural Areas Program staff will advise all project volunteers of the potential for archaeological resources;
- The archaeological monitors will be on the project site according to a schedule agreed on by the archaeological consultant and the ERO until the ERO has, in consultation with the archaeological consultant, determined that project construction would have no effects on significant archaeological deposits;
- The archaeological monitor will record and be authorized to collect soil samples and artifactual/ecofactual material warranted for analysis; and
- If an intact archaeological deposit is encountered, all ground-disturbing activities in the vicinity of the deposit should cease. The archaeological monitor will be empowered to temporarily redirect project activities and heavy equipment until the deposit is evaluated. The archaeological consultant will immediately notify the ERO of the encountered archaeological deposit. After making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, the archaeological consultant will present the findings to the ERO.

If the ERO, in consultation with the archaeological consultant, determines that a significant archaeological resource is present and that it could be adversely affected by the project, at the discretion of the SFRPD, the situation shall be resolved by one of the following actions:

- The project shall be redesigned so as to avoid any adverse effect on the significant archaeological resource, or
- An archaeological data recovery program shall be implemented, unless the ERO were to determine that the archaeological resource is of greater interpretive value than research significance and that interpretive use of the resource were feasible.

If the ERO requires an archaeological data recovery program to mitigate for adverse effects on the significant archaeological resource, it shall be conducted in accordance with an archaeological data recovery plan (ADRP). The project archaeological consultant, SFRPD, and ERO shall meet and consult on the scope of the ADRP. The archaeological consultant shall prepare a draft ADRP and submit it to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain; that is, the ADRP would identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods were practical.

The ADRP shall include the following elements:

- *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations;
- *Cataloguing and Laboratory Analysis*. Description of selected cataloguing system and artifact analysis procedures;
- *Discard and Deaccession Policy*. Description of and rationale for field and post-field discard and deaccession policies;
- *Interpretive Program*. Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program.

- *Security Measures*. Recommended security measures to protect the archaeological resource from vandalism, looting, and unintentional damage;
- *Final Report*. Description of proposed report format and distribution of results; and
- *Curation*. Description of the procedures and recommendations for curating any recovered data having potential research value, identifying appropriate curation facilities, and summarizing the accession policies of the curation facilities.

Final Archaeological Resources Report. The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods used in the archaeological monitoring or data recovery program. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once the FARR is approved, copies shall be distributed as follows:

- One copy to the NWIC with a copy of the transmittal sent to the ERO; and
- Three copies to the EP division of the San Francisco Planning Department; EP shall also receive one unlocked, searchable PDF copy of the FARR on a CD or DVD, along with copies of any formal site recordation forms (CA DPR 523 series) and documentation for nomination to the NRHP/CRHR.

In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Impact CP-11. Implementation of programmatic projects under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in Natural Areas of moderate and low archaeological sensitivity. (Less than Significant with Mitigation)

The types of programmatic project activities described under Impact CP-10 may similarly impact archaeological resources within Natural Areas of moderate or low archaeological sensitivity. However, significant impacts on archaeological resources are less likely to occur in moderately sensitive Natural Areas: 15th Avenue Steps, Bayview Park, Bernal Hill, Buena Vista Park, Corona Heights, Everson/Digby, Golden Gate Park Oak Woodlands (Whiskey Hill area only), India Basin Shoreline Park, and Mount Davidson. Impacts are least likely to occur in Natural Areas with low

archaeological sensitivity—Billy Goat Hill, Brooks Park, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmount Park, Golden Gate Heights Park, Golden Gate Park Oak Woodlands (Lily Pond, Oak Woodlands, and Strawberry Hill only), Grandview Park, Hawk Hill, Kite Hill, Lakeview/Ashton Mini Park, Rock Outcrop, and Twin Peak Natural Areas.

As in high sensitivity Natural Areas, any disturbance of documented, undocumented, or unevaluated archaeological sites within the Natural Areas would constitute a significant impact if the resource is determined to be CRHR-eligible. Further, there are potential cultural resources within some of the moderately sensitive Natural Areas. These are resources, such as rock quarries, that have been identified elsewhere as "old" or "historic," but for which current research efforts have not been able to determine an establishment date or history. Therefore, it is unclear at this time if these resources are in fact 45 years or older. In other instances, there is increased potential for re-deposited archaeological resources, such as remnants or refuse from the Midwinter International Exposition, but a definitive determination of their presence is not possible at this time.

Therefore, programmatic project activities could have significant impacts on archaeological resources in areas of moderate to low archaeological sensitivity. With implementation of Mitigation Measure M-CP-11, which requires that an alert sheet be disseminated to all contractors, staff, and volunteers on site and addresses accidental discovery of an archaeological resource in Natural Areas, impacts on archaeological resources would be ***less than significant***.

M-CP-11: Accidental Discovery

Prior to any ground disturbing activity resulting from implementation of the SNRAMP, including Natural Areas of moderate and low archaeological sensitivity, a copy of EP's standard archaeological alert sheet will be issued to project staff. The project sponsor shall distribute the Planning Department archaeological resource "ALERT" sheet to the involved Natural Areas Program staff and volunteers, project prime contractor, any project subcontractors (including, but not limited to, demolition, excavation, grading, etc. firms), and any utilities firm involved in ground-disturbing activities. Prior to any ground-disturbing activities being undertaken, each contractor (or Natural Areas Program staff for projects without contractors) is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, including machine operators, field crew, supervisory personnel, etc. The project sponsor shall provide the ERO with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the "ALERT" sheet.

Should any indication of an archaeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or SFRPD shall immediately notify the ERO and immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archaeological resource may be present within the project site, SFRPD shall retain the services of an archaeological consultant from the pool of qualified archaeological consultants maintained by the Planning Department archaeologist. The archaeological consultant shall advise the ERO as to whether the discovery is an archaeological resource, retains sufficient integrity, and is of potential scientific, historical, or cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by SFRPD. Measures might include:

- Preservation *in situ* of the archaeological resource;
- An AMP; or
- An archaeological testing program.

If an AMP or archaeological testing program is required, it shall be consistent with the EP division guidelines for such programs and as described above under M-CP-10. The ERO may also require that SFRPD immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions.

The project archaeological consultant shall submit a FARR to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the AMP and/or ADRP. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR and associated items (i.e. site record forms) shall be distributed in the same numbers and to the same recipients outlined in M-CP-10.

Project-Level Impacts (Routine Maintenance)

Impact CP-12. Implementation of routine maintenance under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in any of the Natural Areas. (Less than Significant with Mitigation)

Routine maintenance activities at Lake Merced and Tank Hill Natural Areas are addressed under Impact CP-13. Routine maintenance at all other Natural Areas are addressed below.

Several of the routine maintenance activities proposed in the SNRAMP could adversely affect archaeological resources in the Natural Areas through ground disturbance. Specifically, these activities include removing weeds, installing plants, and performing some trail maintenance (such as installing and repairing steps or trail edging and rerouting and benching trails), resulting in slight to severe surface disturbance as defined in Table 7. Similar to programmatic projects (see Impact CP-10), the potential for impacts from these kinds of activities is congruent with the level of sensitivity and degree of disturbance. Leaving the stumps of removed trees in place would not affect archaeological resources. As discussed in Section III.E.5, tree stump grinding, when necessary, would be contained to the stump itself and would not affect the surrounding areas where archaeological materials may exist.

Although routine maintenance, particularly plant installation and trail maintenance, may include severe levels of surface disturbance, they are typically smaller in scale than programmatic project activities. Therefore, significant impacts from routine maintenance could occur but would be limited in extent.

Therefore, routine maintenance could have significant impacts on archaeological resources. Potential impacts to archeological resources could be reduced to ***less than significant*** with implementation of M-CP-11, which addresses potential effects to unanticipated archaeological resources, and implementation of M-CP-12, which would require archaeological sensitivity training.

M-CP-12: Annual Archaeological Sensitivity Training for SFRPD Staff Involved with Routine Maintenance Activities in all Natural Areas

SFRPD staff working within the Natural Areas will be trained by a qualified archaeologist regarding the potential for archaeological resources within the Natural Areas and how to identify such resources. The training will also include a review of penalties for looting and disturbance of these resources. At a minimum, the training will include the following:

- Assigned archaeological sensitivity level of each Natural Area;
- A discussion of the potential to encounter archaeological resources;
- Instructions for how to identify archaeological resources;
- Instructions for reporting observed looting, disturbances of known archaeological resources, or the presence of a previously unidentified archaeological site;
- An overview of the AMP for routine maintenance activities and accidental discovery procedures in the Natural Areas (see M-CP-10 and M-CP-11, respectively); and
- An overview of M-CP-18, Treatment of Human Remains and Associated or Unassociated Funerary Objects.

It shall be the responsibility of SFRPD Natural Areas Program staff, at the beginning of any management activities involving persons outside of the Natural Areas Program, to educate volunteers or other personnel on the potential to encounter archeological resources and instructions for reporting the presence of potential resources to SFRPD Natural Areas Program staff.

Impact CP-13. Implementation of routine maintenance under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources in the Lake Merced and Tank Hill Natural Areas. (Less than Significant with Mitigation)

Impacts on archaeological resources and human remains in Lake Merced and Tank Hill would be the same as described under Impact CP-12. However, since these two Natural Areas include documented archaeological resources within their management areas that could be affected by routine maintenance activities, primarily ground disturbances of any level, impacts in these Natural Areas and to these particular resources are more likely.

With implementation of Mitigation Measure M-CP-12, which requires an annual training program for Natural Areas Program staff implementing routine maintenance in all Natural Areas, as well as Mitigation Measure M-CP-10, which requires an AMP for these Natural Areas, impacts on archaeological resources from routine maintenance in Lake Merced and Tank Hill would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact CP-14. Implementation of the Sharp Park restoration efforts under the SNRAMP would result in a substantial adverse change in the significance of archaeological resources. (Less than Significant with Mitigation)

Although Sharp Park Natural Area has been identified as one of high archaeological sensitivity, the area affected by the proposed restoration activities does not include known archaeological resources. This is despite the fact that the location is a productive natural environment that likely drew prehistoric and historic populations. The project area has been severely disturbed by creation of the golf course, and the Holocene deposits in this area today extend no deeper than one foot from the surface (King 2010). Based on these factors, the specific restoration portion of Sharp Park is considered to be moderate in archaeological sensitivity. Proposed restoration efforts could significantly impact unidentified or buried archaeological resources but are less likely to do so in this location than in areas farther up the canyon. With implementation of Mitigation Measure M-CP-10, which requires an AMP, Sharp Park restoration project impacts on archaeological resources would be ***less than significant***.

Paleontological Resources and Unique Geological Formations

Programmatic Impacts

Impact CP-15. Implementation of programmatic projects under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations. (Less than Significant with Mitigation)

The UCMP records search results indicated that there are no known paleontological resources within or next to the Natural Areas (Holroyd 2008). Many of the Natural Areas are on shallow or exposed bedrock, and project activities may affect those geologic features. Additionally, five localities have been identified within two miles of Sharp Park, making that Natural Area relatively more sensitive for paleontological resources. In general, ground-disturbing activities that reach bedrock, including those that require modification of bedrock, such as terracing, grading, or drilling into bedrock, could impact unknown paleontological resources, potentially destroying a unique paleontological resource. Such impacts would be more likely to occur in areas where bedrock is shallow or at the surface, where activities would be completed closer in depth to the bedrock, and where any geologic features or paleontological resources are present. As such, significant impacts as a result of ground-disturbing activities could result from SNRAMP programmatic projects. With

implementation of Mitigation Measure M-CP-15, potential impacts on geologic features or paleontological resources would be ***less than significant.***

M-CP-15: Coordination with EP Regarding Paleontological Resources Prior to Implementation of Programmatic Projects

To mitigate the potential for the SNRAMP to affect paleontological resources, this mitigation measure will apply to programmatic projects. The SFRPD shall coordinate with EP prior to conducting any programmatic projects that would result in ground disturbance. In such instances, EP shall review the proposed activities to determine if ground-disturbing activities could occur at or near bedrock or other geologic features of CEQA significance. If such features exist and could be affected by project activities, a training program will be conducted and an alert sheet will be disseminated to all field personnel.

Any paleontological training will be conducted by a qualified paleontologist and will discuss the potential for such resources to exist in the Natural Area(s) and how to identify such resources. The training will also include a review of penalties for looting and disturbance of these resources. Alert sheets will be issued for all such projects and will include the following:

- A discussion of the potential to encounter paleontological resources;
- Instructions for reporting observed looting of a paleontological resource; and
- Instructions that if a paleontological deposit were encountered within a project area, all ground-disturbing activities in the vicinity of the deposit shall cease and the ERO shall be notified immediately.

When unanticipated paleontological resources are encountered during programmatic project activities, all project activities shall stop, and a professional paleontologist shall be hired to assess the find and its significance. The findings shall be presented to the ERO who would decide the additional steps to be taken before work in the vicinity of the deposit is authorized to continue.

Project-Level Impacts (Routine Maintenance)

Impact CP-16. Implementation of routine maintenance under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations. (Less than Significant with Mitigation)

Impacts on paleontological resources from routine maintenance are similar to those described under Impact CP-15. Given that routine maintenance activities are smaller in scale and less likely to reach

depths of paleontological resources or unique geological formations, significant impacts are accordingly less likely to occur. With the implementation of Mitigation Measure M-CP-16, which requires avoidance of surface bedrock, impacts of routine maintenance on paleontological resources or unique geological formations would be ***less than significant***.

M-CP-16: Avoidance of Surface Bedrock in Routine Maintenance Activities

To mitigate the potential for the SNRAMP to affect paleontological resources the following mitigation measure will apply to routine maintenance activities. Natural Areas Program staff and volunteers will avoid ground-disturbing activities in areas where surface bedrock exists. If routine maintenance activities cannot avoid bedrock, SFRPD will implement M-CP-15, discussed above.

Project-Level Impacts (Sharp Park Restoration)

Impact CP-17. Implementation of Sharp Park restoration activities under the SNRAMP would directly or indirectly destroy paleontological resources or unique geological formations. (Less than Significant with Mitigation)

The Sharp Park Natural Area has been identified as sensitive for paleontological resources. Restoration activities include dredging, recontouring, excavating, and deepening open water areas around the lagoon, creating sediment basins, and creating compensation wetlands. The depths are not known for these ground-disturbing activities and some may reach Pleistocene deposits that may contain paleontological resources or a unique geological formation; therefore, it is anticipated that excavation associated with the restoration at Sharp Park could encounter paleontological resources, potentially resulting in a significant impact. With implementation of M-CP-17, Sharp Park restoration impacts on paleontological resources would be ***less than significant***.

M-CP-17: Paleontological Training Program and Alert Sheet for the Sharp Park Restoration Project

To mitigate the potential for the Sharp Park restoration project to affect paleontological resources, the SFRPD shall arrange for a paleontological training by a qualified paleontologist regarding the potential for such resources to exist in the restoration area and how to identify such resources. The training shall also include a review of penalties for looting and disturbance of these resources. An alert sheet shall be issued and will include the following:

- A discussion of the potential to encounter paleontological resources;
- Instructions for reporting observed looting of a paleontological resource; and

- Instruct that if a paleontological deposit were encountered within a project area, all soil-disturbing activities in the vicinity of the deposit shall cease and the ERO would be notified immediately.

If an unanticipated paleontological resource is encountered during project activities, all project activities shall stop, and a professional paleontologist shall be hired to assess the find and its significance. The findings shall be presented to the ERO who would decide the additional steps to be taken before work in the vicinity of the deposit was authorized to continue.

Human Remains

Programmatic Impacts

Impact CP-18: Implementation of programmatic projects under the SNRAMP would disturb human remains. (Less than Significant with Mitigation)

Soil-disturbing activities resulting from implementation of the SNRAMP may affect human burials, human remains, and associated or unassociated burial goods. Human remains, burials, and burial items are frequently associated with prehistoric Native American occupation/activity sites or may occur independently of such sites. With implementation of Mitigation Measure M-CP-18, impacts of programmatic projects activities resulting from implementation of the SNRAMP on human remains would be ***less than significant***.

M-CP-18: Human Remains, Associated or Unassociated Funerary Objects

The treatment of human remains and of associated or unassociated funerary objects discovered during any ground-disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco (or San Mateo County Coroner if found at Sharp Park) and in the event of the Coroner's determination that the human remains are Native American remains, notification of the NAHC who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archaeological consultant, SFRPD, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

Project-Level Impacts (Routine Maintenance)

Impact CP-19. Implementation of routine maintenance under the SNRAMP would disturb human remains. (Less than Significant with Mitigation)

There is a possibility that intact burials exist within the Natural Areas, and routine maintenance activities, particularly those involving moderate to severe surface disturbance in moderately to highly sensitive Natural Areas, may encounter and impact those resources. The archaeological sensitivity levels outlined above can be applied to the possibility of human remains in the Natural Areas. Ground-disturbing activities, similar to those identified under Impacts CP-12 and CP-13, could disturb burials as well, resulting in potentially significant impacts on human remains. With implementation of Mitigation Measure M-CP-18, the impacts of routine maintenance on human remains would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact CP-20. Implementation of Sharp Park restoration activities under the SNRAMP would disturb human remains. (Less than Significant with Mitigation)

There is a possibility that intact burials exist within the Sharp Park restoration footprint. This impact is equivalent to that discussed for archaeological resources in Impact CP-14. Therefore, restoration may have significant impacts on human remains. With implemention of Mitigation Measure M-CP-18, impacts of the Sharp Park restoration on human remains would be ***less than significant***.

Cumulative Impacts

Impact CP-21: The proposed project, in combination with other planned and foreseeable future projects, would have a cumulatively considerable significant impact related to cultural and paleontological resources. (Significant and Unavoidable)

Cumulative projects, such as the Sharp Park Recycled Water project, the San Andreas Pipeline Number 3 project, the Water System Improvement Program Groundwater Project B, the SFPUC Sunset Supply Pipeline Vegetation project, and the ground disturbing projects at McLaren Park, involve construction and development at Sharp Park, McLaren Park, and Lake Merced. All three Natural Areas were determined to have high archaeological sensitivity (King 2010), and Sharp Park also includes historic architectural and potential historic landscape resources, including the Sharp Park Golf Course (a historic resource) and urban forests. The cumulative projects also involve construction and development in the vicinity of Natural Areas, such as the 15th Avenue Steps, Corona Heights, Lily Pond, and Buena Vista Park, such as the 1427 11th Avenue project, the SFRPD

Grandview Park Restoration Work project, 2299 Market Street project, the 1000 Great Highway – 811 Stanyan Street project, SFRPD Golden Gate Park Beach Chalet Soccer Fields, 37-39 Lloyd Street project and Carona Heights project. As with all projects that include ground disturbance, modern development, retaining wall repair, protective fencing installation, structure demolition, such as greenhouses, or historical resource removal or alteration (e.g., addition to or demolition of CRHR-eligible or CRHR-listed resources), such as the Japanese Tea Garden project, the SFRPD Buena Vista Park Improvement project, and the San Francisco Botanical Garden project, there is a potential for cumulative projects in the region to impact cultural and paleontological resources. In general, cumulative projects that involve construction of undeveloped land, extending construction deeper than current development, or developing new topographic features (such as trails) have the potential to impact archaeological and paleontological resources. New construction or modifications to buildings near or next to Natural Areas also have the potential to impact historic architectural resources by modifying historical resources or placing new construction within the historic landscape of a historical resource. Development near Natural Areas may also cumulatively impact potential historic, architecturally significant areas and historic landscapes. These impacts are particularly possible for the culturally and paleontologically sensitive Sharp Park-area cumulative projects, which include constructing a new recycled water pump station (Sharp Park Recycled Water project), and development of residential and commercial properties. Given that cultural and paleontological resources are nonrenewable, the historic landscape and regional archaeology of San Francisco and the Peninsula, in addition to a specific resource, can also be cumulatively impacted by projects. Implementing the City's various area plans would likely require taking into consideration cultural and paleontological resource management and implementing measures that would protect them. The impacts resulting from cumulative projects, as described above, could result in significant cumulative effects on cultural and paleontological resources in the San Francisco region. However, it is expected that all of these projects would be evaluated under CEQA and that their impacts would be mitigated to less than significant. With implementation of the mitigation measures to protect archeological resources as identified in this EIR, the proposed project's contribution to any cumulatively significant archaeological resources impact would be ***less than significant***.

Mitigation Measure M-RE-1 would require SFRPD to coordinate with a golf course consultant to restore the playability of the Sharp Park Golf course. However, if any reconfiguration of the course resulted in additional holes east of Highway 1, this would result in a significant impact on the historical significance of Sharp Park Golf Course, further contributing to significant cumulative impacts. Reconfiguration of the golf course holes to resemble its original layout (replacement holes west of Highway 1) would reduce cumulative impacts on the golf course. This reconfiguration

would result in a total of 15 holes on the west side of Highway 1 and three holes on the east side. Mitigation Measure M-RE-1 would be beneficial to the Sharp Park Golf Course because it would restore some of the elements in the original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where holes were situated in the original design, and would be in keeping with the historic boundaries of the golf course.

The proposed project, in combination with the cumulative projects, would have a significant and unavoidable impact on cultural resources, in particular architectural resources, as described under Impacts CP-7 and CP-9. The modifications to the historic Holes 10, 12, and 13 under the Sharp Park restoration plan would substantially affect the historical significance of Sharp Park Golf Course. This is both a significant and unavoidable adverse effect at the project level and cumulatively. As a result, the project's contribution to this significant and unavoidable cumulative impact would be cumulatively considerable.

V.E WIND AND SHADOW

Wind is included in the EIR because there were NOP comments regarding the wind-related effects of the project. Shadow impacts were adequately analyzed in the Initial Study (Appendix A), and no NOP comments related to shadows were received; as such, shadow impacts are not analyzed in the EIR.

Comments related to wind and shadow that were received during the NOP scoping process included concerns about the following:

- Effects of Mount Davidson tree removal on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion;
- Effects of Mount Davidson tree removal on fires that could be fanned by westerly winds;
- Impacts of removing trees and vegetation on increased wind in and beyond the park itself;
- Removing eucalyptus trees that grow in the sandy soil and withstand the fierce winds blowing off the Pacific Ocean. Studies in the Presidio have shown that eucalyptus trees slow the wind down at least 30 percent.

V.E.1 Regulatory Setting

Federal/State

There are no applicable federal or state regulations related to wind for this proposed project.

Regional/Local

San Francisco Planning Code

Planning Code Section 148 establishes two comfort criteria and one hazard criterion for assessing wind impacts of development projects in San Francisco. The comfort criteria are based on pedestrian-level wind speeds that include the effects of turbulence and are known as "equivalent wind speeds." Section 148 of the Planning Code establishes an equivalent wind speed of seven miles per hour (mph) for seating areas and 11 mph for areas of substantial pedestrian use. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than 10 percent of the time year round between 7:00 AM and 6:00 PM. If existing wind speeds exceed the comfort level, new buildings and additions in these areas must be designed to reduce ambient wind speeds to meet the requirements. Section 148 and Section 249 (c)(9) also establish a hazard criterion,

which is an equivalent wind speed of 26 mph for a single full hour, not to be exceeded more than once during the year. New buildings in governed areas cannot exceed this standard.

To provide a comfortable wind environment for people in San Francisco, development projects would be subject to specific comfort criteria. The Planning Code specifically outlines these criteria for areas that typically experience wind exceedances, specifically the Downtown Commercial (C-3) District and each of the following special use districts: Folsom and Main, Van Ness Avenue, and South of Market. While these criteria are not applicable to the proposed project, which does not involve buildings or structures in the downtown areas, they serve as a general point of reference regarding the impact analysis in this EIR.

V.E.2 Environmental Setting

The climate of the San Francisco Bay Area is characterized by a Mediterranean pattern of cool and mild temperatures along the coast, dry summers, and small fluctuations in seasonal temperatures. The Pacific High, a mass of cold air situated between San Francisco and Hawaii, dominates the weather much of the year. In the winter, the Pacific High moves southward, bringing wet stormy weather into the Bay Area (Gilliam 1966). In the summer, it moves northward, blocking the rains and causing an upwelling of cold offshore water along the central coast of California. This upwelling produces a thick layer of coastal fog that is drawn inland through San Francisco Bay when temperatures in the Central Valley rise. These east/west gradients of fog, precipitation, and temperature, coupled with the highly variable topography in San Francisco, produce strong microclimatic effects. Not only do weather conditions vary from one side of San Francisco to the next but from block to block, depending on the terrain and the degree of exposure.

Planetary wind systems, normally called prevailing winds, are large moving air masses that dominate whole areas and show constant directional characteristics, varying only with the movement of high- or low-pressure systems and with the seasons of the year. In many locations these are the dominant winds, particularly on exposed hilltops, shorelines facing the prevailing winds, open plains or plateaus, floors of open valleys running parallel to the prevailing winds, or the windward side of gently sloping hills. Local winds, by contrast, are caused by temperature differences created by local topographic conditions.

Winds are horizontal flows of air that blow from areas of high pressure to areas of low pressure. Wind strength depends on the difference between the high- and low-pressure systems and the distance between them (CCSF 2008d). A steep pressure gradient results from a large pressure difference or short distance between these systems and causes high winds. High winds are defined

as those that last longer than one hour at greater than 39 miles per hour (mph) or for any length of time at greater than 57 mph (CCSF 2008d). In San Francisco, high winds associated with cyclonic systems and their cold fronts occur in the winter, generally between November and March. All of San Francisco is subject to strong southeasterly winds associated with powerful winter cold fronts (CCSF 2008d).

Long-term wind data in San Francisco are available from historical wind gauge records from the US Weather Bureau weather stations above the old Federal Building at 50 United Nations Plaza and at San Francisco International Airport. Everyday wind climatology is defined using wind statistics of anemometers, which measure wind speed, in the northern portion of San Francisco Bay.

The dominant wind direction is known to shift with locations around the bay. Winds can fluctuate greatly depending on the time of year and the time of day. During winter, winds change markedly, becoming milder and less dominated by the west-northwesterly winds. Winds also change significantly during the day, typically intensifying from late morning until reaching an average peak of 20 knots (23 mph) in the late afternoon, diminishing in the evening.

Wind conditions can affect pedestrian safety on sidewalks and in other public areas, as follows (Lawson and Penwarden 1975):

- Winds up to 4 mph have no noticeable effect on pedestrians;
- Winds from 4 to 8 mph are felt on the face;
- Winds from 8 to 13 mph cause clothing to flap and extend a light flag mounted on a pole;
- Winds from 13 to19 mph raise loose paper, dust, and dry soil;
- Winds from 19 to 26 mph are felt on the body;
- Winds of 26 to 34 mph render umbrellas difficult to use, make walking steadily difficult, and cause unpleasant noise;
- Winds over 34 mph make it difficult for a person to maintain balance, and gusts at this speed can blow a person over.

V.E.3 Impacts

Significance Thresholds

A proposed project would have a significant wind impact if it were to alter wind in a manner that substantially affects public areas.

The San Francisco Planning Code includes a wind hazard criterion and pedestrian comfort criteria for evaluating wind impacts of a proposed building within four defined areas of San Francisco. The code has established a hazard level of a 26 mph-equivalent wind speed for a single hour of the year for certain downtown areas. It is generally understood that only buildings about 100 feet or taller in San Francisco would result in adverse wind effects at street levels that could achieve a hazard level wind speed.

While this wind hazard level is not applicable to the proposed project, which does not involve buildings or structures within the downtown areas, that level serves as a general point of reference regarding the impact analysis in this EIR.

Impacts Addressed in the Initial Study

In the Initial Study (Appendix A), impacts related to the following criterion were identified as not significant:

- Create new shadows in a manner that substantially affects outdoor recreation facilities or other public areas.

As a result, this CEQA significance criterion is not evaluated further in this EIR.

Significant Natural Resource Areas Management Plan Impacts

A total of 18,448 trees would be incrementally removed as part of the management activities; of these trees, approximately 15,000 would be removed from Sharp Park. In general, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Further, trees would typically be thinned over large areas, which would result in the removal of smaller trees and saplings.

Trees are proposed to be removed from 15 of the 32 Natural Areas: Bayview Park, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Glen Canyon Park and O'Shaughnessy Hollow, Golden Gate Park Oak Woodlands, Grandview Park, Interior Greenbelt, Lake Merced, McLaren Park, Mount Davidson, Palou-Phelps, Twin Peaks, and Sharp Park. This section does not address wind impacts in certain Natural Areas because trees targeted for removal are isolated individuals or small groups scattered throughout these Natural Areas, and this removal is not expected to have noticeable wind effects. These Natural Areas are Palou-Phelps, Brooks Park, Buena Vista Park, Grandview Park, and Twin Peaks. Natural Areas that do not include any tree removal

are Balboa, Bernal Hill, Billy Goat Hill, Duncan-Castro, Edgehill Mountain, Everson/Digby, Fairmont Park, Golden Gate Heights, Hawk Hill, India Basin Shoreline Park, Kite Hill, Lakeview/Ashton Mini Park, Pine Lake, Rock Outcrop, Tank Hill, and 15th Avenue Steps. No wind hazard impacts would result from the proposed project in any of these Natural Areas.

This analysis addresses wind impacts that would result from the proposed tree removals in each Natural Area. Large-scale tree removal is addressed only for Natural Areas where removal may exceed half an acre or more than 20 trees at one time; routine maintenance tree removal is evaluated at all Natural Areas where tree removal is proposed, except the five excluded Natural Areas, Palou-Phelps, Brooks Park, Buena Vista Park, Grandview Park, and Twin Peaks.

Trees could be removed on a large scale at Bayview Park, Glen Canyon Park and O'Shaughnessy Hollow, Golden Gate Park Oak Woodlands, Interior Greenbelt, Lake Merced, McLaren Park, Mount Davidson, and Sharp Park. Routine maintenance tree removal could occur at these Natural Areas plus Corona Heights and Dorothy Erskine Park.

Windthrow[1] is used to describe the effects of wind on a stand of trees. When the wind blows a tree over, this action is called windthrow. When trees are removed from a stand, windthrow can increase if wind-toughened edge trees are removed, exposing the interior of the stand to unusual wind conditions. Windthrow is a natural part of forest ecosystems.

The following discussion focuses on ground-level wind hazards and windthrow risks or instances where tree removal could substantially alter windthrow rates for a given stand. Public safety hazards associated with windthrow are discussed in Section V.I, Hazards and Hazardous Materials. Wind hazard impacts resulting from the proposed project were analyzed for public areas, such as residential areas, sidewalks, and trails.

Programmatic Impacts

Impact WS-1: Implementation of the programmatic projects under the SNRAMP would not result in significant ground-level wind hazards and windthrow risks. (Less than Significant)

The proposed programmatic projects do not include any aboveground structures that would alter wind. Programmatic projects include tree removal projects that exceed half an acre at any one time

[1]Windthrow—The effects of wind on a stand of trees.

or more than 20 trees at one location. Tree removal of wind-toughened edge trees[2] could expose the interior of a stand of trees to wind conditions that they are not adapted to. Trees removed within San Francisco would be replaced at a one-to-one ratio, although not necessarily at the same location or within the same Natural Area. In Sharp Park, trees would be removed in the upper canyon in an inaccessible area and would be replaced with native grassland and scrub species. Trees would be removed in accordance with the Urban Forestry Statements in Appendix F of the SNRAMP. In general, tree removal in the Natural Areas is planned to take individual trees or very small groups of trees in forest and scrub habitats to avoid altering the wind conditions and increasing ground-level wind hazards.

Bayview Park

Five hundred eleven trees would be removed at Bayview Park, with 5,489 trees to remain. Bayview Hill is relatively exposed to winds blowing in from San Francisco Bay or southerly storm winds. However, the risk of ground-level wind hazards and windthrow at Bayview Park is minimal because there are no homes, sidewalks, or trails near enough to be affected. Most of the tree removal would be well below the trails or more than 100 feet from trails. With much of the removal planned to occur along the edges of stands, there could be an increase in ground-level wind hazards along trails and an increase in windthrow if a large number of trees were removed at once. Most of the stands at Bayview Park are expected to be relatively wind toughened due to their level of wind exposure. To minimize the potential increase in ground-level wind hazards and windthrow, trees would be removed from forest edges gradually, in accordance with the SNRAMP. This would avoid creating an edge gap large enough that wind speed would become a substantial problem within the stand. Further, the removal of dead or aging trees would reduce the potential windthrow hazards. Therefore, increases in wind levels and windthrow hazards at Bayview Park as a result of the programmatic projects would be ***less than significant***.

Glen Canyon Park and O'Shaughnessy Hollow

One hundred twenty of an overall 6,000 trees would be removed at Glen Canyon Park. Trees to be removed are mostly on the slope near O'Shaughnessy Boulevard. Only selected trees would be removed, which would not substantially affect the density of the urban forest or result in high wind speeds. Further, trees would be gradually removed; therefore, trees to be removed would not expose nearby residential areas, sidewalks, and trails to increased ground-level wind hazards.

[2]Wind-toughened edge trees—Trees in a stand that have become tough or resistant to the wind.

The potential windthrow hazards to people from removing trees at Glen Canyon Park would be minimal because most of the trees are downslope of residences surrounding the Natural Area. Additionally, Glen Canyon Park is within a canyon and is sheltered from strong prevailing westerly winds. Windthrow is likely to occur naturally within the stand and along its edges. However, tree removal would not increase potential hazards of these events. This area is sheltered from prevailing winds, so removing trees from this stand is not likely to increase windthrow and cause significant wind impacts. Therefore, programmatic projects would have ***less than significant*** wind impacts at Glen Canyon Park.

Golden Gate Park Oak Woodlands

Eighty-two trees would be removed from Golden Gate Park Oak Woodlands, with 818 trees to remain. Individual trees are expected to be selected for removal from within the stands of this Natural Area. The Golden Gate Park Oak Woodlands is one of the few places within the Natural Areas system where a large stand of native trees persists. Implementation of the SNRAMP at the Golden Gate Park Oak Woodlands would not change significantly the overall look of the park and would enhance native oak woodland by preventing invasive tree species from becoming established. Removing dead or aging trees would reduce the potential windthrow hazards; therefore, tree removal as part of the programmatic projects of the SNRAMP would not result in high wind speeds or windthrow hazards. Any increase in wind levels at Golden Gate Park Oak Woodlands as a result of the programmatic projects would be ***less than significant***.

Interior Greenbelt

One hundred forty trees would be removed from Interior Greenbelt, with 5,860 trees to remain. Individual trees are expected to be selected for removal from within the stands of this Natural Area. Most of the trees to be removed are near the eastern boundary and the western tip of this Natural Area. There would not be a substantial change in edge conditions or an increase in wind exposure in any of the areas where trees are to be removed. The site is on the northeast-facing slope of Mount Sutro and is protected from the prevailing westerly winds. Therefore, programmatic projects at the Interior Greenbelt would not result in high wind speeds. Further, there are no houses, sidewalks, or trails close enough to the tree removal areas to increase the risk from windthrow or ground-level wind hazards. For this reason, any increase in wind levels at Interior Greenbelt as a result of the programmatic projects would be ***less than significant***.

Lake Merced

At Lake Merced, 134 of the approximately 12,000 trees would be removed from stands surrounding the lake, as part of the management activities. Removal would be focused near "the Mesa" and next

to the golf course on the eastern shore of South Lake. The closest existing and proposed trails are approximately 100 feet from the trees to be removed. In general, the potential ground-level wind hazard is minimal because there are no residential areas or sidewalks near the stands where trees would be removed, and trails are not next to the tree removal areas. Therefore, trees would not be removed near public areas, and wind impacts at Lake Merced would be ***less than significant***.

Most of the trees at Lake Merced are relatively exposed to the prevailing westerly winds, resulting in wind-hardened trees throughout the stand. Windthrow likely occurs naturally within the stands and along their edges, and proposed tree removal is not expected to substantially increase the potential for windthrow hazards because most of the trees to remain are wind hardened. Further, the removal of dead or aging trees would reduce the potential windthrow hazards. Any increase in ground-level wind hazards and windthrow would be minimal at Lake Merced, and wind impacts resulting from the proposed programmatic projects would be ***less than significant***.

McLaren Park

Eight hundred five of the 19,500 trees would be removed at McLaren Park. Tree removal at McLaren Park is planned mostly for individual trees or small groups of trees within grasslands. In the area downslope of Mansell Street, near the water tanks, the overall plan is to remove enough trees to preserve the grasslands and allow coastal scrub and oak woodland communities to become established. This would involve thinning the stand, which would leave the edges intact and would not result in a substantial change in ground-level wind hazards and windthrow. Also, this area is sheltered from the prevailing westerly winds by the topography of McLaren Park and by trees lining the adjacent golf course. Therefore, programmatic projects at McLaren Park would not result in high wind speeds and would not substantially alter wind patterns; any increase in wind levels at McLaren Park as a result of the programmatic projects would be ***less than significant***.

Mount Davidson

At Mount Davidson, 1,600 trees would be removed as part of the management activities, and 9,400 trees would remain. Most of the trees would be removed from the center of this Natural Area. Removing trees at Mount Davidson would not create ground-level wind hazards near residential areas because of the trees' locations within the stand or away from homes. Ground-level wind hazards also would not increase along the trails of Mount Davidson because mostly small and medium trees would be selectively removed. Some trees within the restoration zones would remain, as would most of the trees on the wind-hardened edges. Therefore, tree removal would not substantially decrease the density of the urban forest, expose the trails to excess wind, or result in high wind speeds.

Prevailing winds at Mount Davidson are from the west and southwest, so removing edge trees on the west side of the park could increase the rate of windthrow within the stand; however, no trees are proposed to be removed in these areas, minimizing or avoiding windthrow impacts in those locations. The forest grassland ecotone is not subject to prevailing winds, and trees could be removed from the forest edge without increasing the windthrow risk. Some windthrow is likely to occur naturally within the stand and its edges, but removing trees from Mount Davidson is not expected to substantially alter the windthrow rates. Further, the removal of dead or aging trees would reduce the potential windthrow hazards. Therefore, wind levels at Mount Davidson resulting from the programmatic projects would not substantially increase ground-level hazards or alter the windthrow rates. Therefore, wind impacts of the programmatic projects at Mount Davidson would be ***less than significant***.

Sharp Park

Fifteen thousand trees would be removed at Sharp Park, with 39,000 trees to remain. Trees to be removed are near the eastern border and in the center of the park, away from the golf course. Tree removal in some areas would be between 50 and 75 percent of the stand, depending on the area; no trees would be removed in other areas. The risk to people from a potential increase in ground-level wind hazard is minimal because these areas are inaccessible to the park visitors and no residences or sidewalks are near the trees to be removed. Therefore, the gradual removal of trees would not substantially increase wind speeds in public areas.

The windthrow rates at Sharp Park may be relatively higher following tree removal. This Natural Area is exposed to the strong westerly winds that funnel up off the beach and through the canyon. However, the trees would not be removed all at once, and gradual removal would not substantially elevate windthrow rates. Even if windthrow were to increase substantially in this portion of the Natural Area, the risk to people is minimal because there are no residences or sidewalks and very few visitors to this Natural Area, and the canyon east of the archery range is inaccessible. Therefore, increase in wind levels at Sharp Park resulting from the programmatic projects would be ***less than significant***.

Project-level Impacts (Routine Maintenance)

Impact WS-2: Implementation of the routine maintenance activities under the SNRAMP would not result in significant ground-level wind hazards and windthrow risks. (Less than Significant)

As part of routine maintenance, trees could be removed at the Natural Areas analyzed under the programmatic projects above. During routine maintenance, individual or groups of fewer than 20

trees would be removed in areas that are less than half an acre. Removed trees would mostly be those that are decaying and aging and that would likely fall naturally over time. Tree removal during routine maintenance in the Natural Areas analyzed under the programmatic projects would not create significant windthrow hazards because the bulk of the stands would remain intact. Further, the removal of dead or aging trees would reduce the potential windthrow hazards. Therefore, tree removal would not increase ground-level wind hazards near any residential areas or trails in these Natural Areas. Wind impacts at these Natural Areas resulting from routine maintenance would be ***less than significant***.

Corona Heights

Fifteen trees would be removed at Corona Heights, with 185 trees to remain. Trees selected for removal would be isolated individuals scattered through the Natural Area. Because only 15 trees are planned to be removed, the bulk of the stand would remain intact. Further, most trees to be removed are at the northeast slope, below the ridge at Corona Heights, and are somewhat sheltered from the prevailing westerly winds. There are also aging and dying trees that would likely fall naturally. Tree removal in this location would not increase ground-level wind hazards to any residential areas or trails in Corona Heights and would not result in high wind speeds. Further, tree removal would not create any windthrow hazards because a very small number of trees is planned to be removed, and the bulk of the stand would remain intact. As with any forest, windthrow is likely to occur naturally within the stand and at its edges, and tree removal under routine maintenance would not increase this potential. Further, the removal of dead or aging trees would reduce the potential windthrow hazards. Therefore, wind impacts at Corona Heights resulting from routine maintenance would be ***less than significant***.

Dorothy Erskine Park

Dorothy Erskine Park supports approximately 100 trees, 14 of which are planned for removal. The trees would be removed from the northeastern tip and the center of this Natural Area. These areas are somewhat sheltered from the prevailing westerly winds by stands that would remain. Further, removal of individual trees would not affect the density of the urban forest at Dorothy Erskine Park. The selection of individual trees would not create situations where the nearby residential area's sidewalks and trails are exposed to high winds or where the remaining stand is exposed to wind conditions that are substantially different from current levels. Removal of dead or aging trees would reduce the potential windthrow hazards and is not expected to increase ground-level wind hazards or windthrow. As such, tree removal would not result in high wind speeds and would not increase ground-level wind hazards on nearby residents or expose trees in a stand to high winds. Therefore,

the potential ground-level wind hazard and windthrow that would result from routine maintenance would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact WS-3: Implementation of the Sharp Park restoration under the SNRAMP would not result in ground-level wind hazards and windthrow risks. (No Impact)

A few individual trees may be removed as part of the wetland and upland habitat restoration, but no ground-level wind hazard or windthrow would result. As such, Sharp Park restoration would result in ***no impact*** from wind hazards and windthrow risks.

Cumulative Impacts

Impact WS-4: The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively significant impact related to wind and shadow. (Less than Significant)

The geographic context for an analysis of cumulative impacts from wind effects is limited to the area near the project sites. None of the reasonably foreseeable future developments in these areas include structures with heights greater than 100 feet, which would intercept a large volume of wind and result in high wind speeds in the Natural Areas. The Hunters Point Shipyard/Candlestick Park Redevelopment could result in wind impacts on Bayview Hill with the construction of high-rise buildings. However, in compliance with the requirements of the San Francisco Planning Code, this is expected to minimize the level of wind impacts from high-rise construction to less than significant levels. The EIR prepared for the Hunters Point Shipyard/Candlestick Park Redevelopment includes a mitigation measure for building design wind analysis. The measure requires a wind study for buildings higher than 100 feet. The study is to assist in identifying design changes that would mitigate the adverse wind conditions to below the threshold of 26-mph-equivalent wind speed for a single hour of the year. Implementation of appropriate design changes would reduce hazardous wind effects on pedestrians to a less than significant level. Other cumulative projects include the University of California San Francisco Mount Sutro Open Space Reserve Management Plan, which proposes management actions for the 61-acre forest that include thinning of the forest, native plant restoration and enhancement, and removal of nonnative trees and plants and conversion to native species. Tree removal could increase the ground level wind speed in this area, possibly exposing areas to high winds and therefore resulting in high wind impacts. However, one of the objectives of the project is minimizing windthrow hazards and improving the health of the remaining trees.

Therefore, the Mount Sutro project would not contribute significantly to the wind hazards within the project area.

Under cumulative conditions without the proposed project, wind speeds in the vicinity of the other Natural Areas would not significantly increase, and the project contribution to cumulative wind impacts would not be considerable. Therefore, cumulative wind impacts would be ***less than significant***.

V.F RECREATION

This section describes the recreation activities within the Natural Areas and evaluates the potential for the proposed management activities to result in environmental impacts. Due to the diversity of attractive natural features, topography, and proximity to San Francisco, each of the 32 Natural Areas identified in the SNRAMP are valued for their recreational opportunities. As such, these lands support a substantial amount of outdoor recreation use by both local residents and visitors to the area.

Comments related to recreation received during the NOP scoping process included concerns about:

- The quality of the public recreation experience;
- Consideration of bicycling trails;
- Effects of off-leash dog areas on recreational resources;
- Effects of the introduction of endangered/threatened species on recreational opportunities, public access, and the administration of local public lands;
- Effects of restricting access and limiting activity uses in Natural Areas on recreation.

V.F.1 Regulatory Setting

Federal Regulations

There are no applicable federal regulations related to recreation for the proposed project.

State Regulations

California Coastal Act

The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The act also permanently established the California Coastal Commission. The policies of the act are the statutory standards that apply to planning and regulatory decisions made by the commission and by local governments, pursuant to the act. Implementation of the act's policies is accomplished primarily through the preparation of local coastal programs that include land use plans. To ensure that coastal resources are effectively protected in light of changing circumstances, such as new information and changing development pressures and impacts, the

commission is required to review each certified local coastal program at least once every five years. The only Natural Areas with recreation resources that fall within the jurisdiction of the California Coastal Act are India Basin Shoreline Park and Sharp Park.

Regional and Local Regulations

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) contains policies pertaining to the development of parks and recreational facilities in and near the Bay and public access to the Bay. The Bay Plan identifies priority use(s) for the Bay shoreline, an area defined as 100 feet inland from the mean high water line. These priority uses are identified on the plan maps and are defined as Ports, Water-related Industry, Water-oriented Recreation, Airports, and Wildlife Refuges. The only Natural Area with recreation resources that overlap the Bay shoreline is India Basin Shoreline Park.

Golden Gate Park Master Plan

Golden Gate Park is a 1,017-acre urban park located on the northern part of the San Francisco peninsula. The Golden Gate Park Master Plan contains objectives and policies to be used as guidelines for preservation, use, and development of the park. Objectives in the plan pertain to land use and activities, landscape preservation and renewal, park circulation, buildings, structures, and monuments, recreational uses and facilities, park management and security, and community involvement. Golden Gate Park contains the 26-acre Oak Woodlands Natural Area.

San Francisco General Plan, Recreation and Open Space Element

The Revised Draft Recreation and Open Space Element of the General Plan of the City and County of San Francisco was released for public review in the summer of 2011. The Revised Draft incorporates public and agency comments received since the release of the initial draft plan in May 2009. The revised draft contains objectives and policies regarding the short-term and long-term management of the open space network in the City and County of San Francisco as well as acting as a resource and planning guide for agencies with open space holdings in the City and County of San Francisco. Thirty-one of the 32 Natural Areas fall within the jurisdiction of the Recreation and Open Space Element of the General Plan for the City and County of San Francisco and must therefore be in compliance with the General Plan. The only Natural Area that falls outside the jurisdiction of the General Plan is the Sharp Park Natural Area, which is in San Mateo County.

San Francisco Dog Policy

The SFRPD released the Final Dog Policy in May 2008, which established designs and policies for specific parks that support off-leash dog use. The Dog Policy provides specific rules and regulations concerning dog use on lands within the City limits, including DPA siting criteria, boundaries, amenities, required signage, and specific criteria each dog must meet before entering an area, such as vaccinations and age requirements. There are 19 designated areas that support off-leash dog use within San Francisco, seven of which are Natural Areas. They are Bernal Hill, Buena Vista Park, Corona Heights, Oak Woodlands, Lake Merced, McLaren Park, and Pine Lake.

V.F.2 Environmental Setting

The predominant types of passive recreation activities that take place in Natural Areas are walking, hiking, running, dog walking, and nature watching. Active recreation is not supported by the Natural Areas, but some biking does take place on the paved trails around Lake Merced. Almost all of the Natural Areas include hiking trails, and most provide scenic views of San Francisco. Walking and biking trails were identified as one of the most important recreation facility needs for San Francisco residents, according to the 2004 SFRPD Recreation Assessment (SFRPD 2004). Of the individuals surveyed for that assessment, 67 percent participated in running or walking, the highest percentage for any of the 26 activities identified in the survey. Other activities that San Francisco residents participate in included visiting nature areas (61 percent, second on the activities list), bicycling (38 percent, fifth on the activities list), volunteering (22 percent, tenth on the activities list), and dog walking (20 percent, twelfth on the activities list).

For the purposes of the SNRAMP, recreation facilities refer primarily to trails, DPAs, and lakes within the 32 Natural Areas analyzed in this EIR.

As described in Section III.E.1, the recreation goals for the Natural Areas are as follows:

- To provide opportunities for passive recreation uses (e.g., hiking and nature observation) that are compatible with conservation and restoration goals; and
- To improve and develop a recreation trail system that provides the greatest accessibility, while protecting natural resources.

Approximately 211,303 feet (40.0 miles) of trails exist within the Natural Areas. This includes primary (those officially designated as main routes into a Natural Area from large neighborhoods, main roadways, or parking areas) and secondary trails (those officially designated as routes and social trails that have not been officially designated and are usually trails created by users). There

are 95.2 acres of SFRPD DPAs within the Natural Areas that are designated off-leash areas for dogs. In addition, the Sharp Park Natural Area in Pacifica surrounds the Sharp Park Golf Course and archery range, which are not part of the Natural Area. The 18-hole golf course is at the foot of Sharp Park Road, bisected by Highway 1, and covers approximately 120 acres of the 411-acre Sharp Park.

V.F.3 Impacts

Significance Thresholds

A proposed project would have a significant recreation impact if it were to result in the following:

- Increase the use of neighborhood and regional parks or other recreation facilities such that the physical deterioration of the facilities would be substantial or accelerated;
- Include recreation facilities or require the construction or expansion of recreation facilities that might have an adverse physical effect on the environment; or
- Physically degrade existing recreation resources.

Trails and trail-related activities are a main component of recreation within the Natural Areas, and trail users generally benefit from the presence of natural resources. As such, the SNRAMP provides recommendations to develop site stewardship and recreation uses compatible with natural resource protection. Three of the major actions proposed by the SNRAMP that would impact recreation are modifying and closing trails, reducing space allotted for DPAs, and continuing to allow off-leash dog recreation in areas where the Natural Areas' resources have the potential to deteriorate. As a result, paved, social, and hiking trails, as well as DPAs are the primary recreation facilities discussed in the impacts section. In addition to these actions, proposed modifications to the Sharp Park Golf Course are also discussed in this analysis.

The SNRAMP outlines an adaptive management approach (Section III.E.4). Through this process, the ongoing management of recreation facilities in the Natural Areas would be monitored to ensure that the recreation goals and the intent of the adaptive management process are being met. This would be achieved by evaluating the success of site-specific recreation facility recommendations that are in this impacts section and are outlined in Section III.I.

Impacts Addressed in the Initial Study

The Initial Study and NOP did not address the SNRAMP's potential to affect recreational resources. Therefore, this EIR evaluates the impacts of the SNRAMP's management action for each of the 32

Natural Areas as they relate to recreational resources. Recreational impacts are identified based upon the CEQA significance criteria set forth on page 255.

Significant Natural Resource Areas Management Plan Impacts

Impacts related to the second CEQA significance threshold identified above, related to adverse physical impacts of new or expanded recreation facilities, are addressed in the other sections of Chapter V; proposed project is a recreation/management project and as such this EIR evaluates the physical environmental impacts of the SNRAMP on the natural environment in the other Chapter V sections. For the other two CEQA significance thresholds, this analysis addresses the potential impacts of the proposed SNRAMP's programmatic projects followed by project-level impacts (routine maintenance and the Sharp Park restoration activities).

Increased Use of Neighborhood and Regional Parks

Programmatic Impacts

Impact RE-1: Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities such that increased physical deterioration of those facilities would occur. (Less than Significant)

Programmatic projects with the potential to affect recreational resources include trail related activities and modifications to dog play areas, as addressed below.

Trails

According to the SFRPD Recreation Assessment, the condition of many SFRPD facilities is deteriorating, and the recreation facilities most important to residents are walking, running and visiting nature (SFRPD 2004). As a programmatic project, the SNRAMP calls for closing 54,411 feet (10.31 miles) of social trails and creating 5,897 feet (1.1 miles) of new trails, resulting in a net decrease of 48,514 feet (9.2 miles), or 23.0 percent of the trails with Natural Areas. Trail closures would focus primarily on eliminating social trails because they are considered unsafe, to protect sensitive species or habitat, or to prevent soil erosion. It is unlikely that closing social trails, redundant trails, or trails near sensitive species or habitat would deter a substantial number of people from using Natural Areas and increase the use of other recreational facilities because general access would remain unimpeded and may improve through the creation of new trails and improving existing trails. Therefore, it is unlikely that closing trails in Natural Areas would

substantially increase the use of other recreational facilities to an extent that would result in substantial deterioration or the acceleration of deteriorating conditions at those facilities.

To accommodate the recreating public, approximately 1.1 miles of new trails would be created, and existing primary trails would be improved to provide a more manageable trail system with greater access and easier navigation through the parks. An improved trail system in Natural Areas could result in an increase in visitor use by making them more attractive and accessible to more types of users.

The new trail locations in the SNRAMP are conceptual and require further refinement and evaluation when resources become available to construct them. While the basic concept for primary and secondary trails would continue to guide trail creation in the Natural Areas, the exact routes and configurations may be subject to further refinements, based on topography and other site-specific conditions.

The construction of new trails could impact trail users in the short-term by altering the landscape and introducing noise and equipment that diminish the recreational experience. However, these impacts would be temporary and limited in extent and duration. In the long-term, trail users would benefit from improved trail conditions and from potential connections with the existing City street bicycle system, resulting in direct beneficial impacts. Therefore, construction of new trails would have a ***less than significant*** impact on recreational resources.

Dog Play Areas

Of the 95.2 acres of DPAs within the Natural Areas, 19.3 acres (20.3 percent) are proposed for closure (Recommendations GR-8a, GR-8b, and GR-8c). This accounts for 16.4 percent of the total acres of SFRPD-maintained DPAs. Under the SNRAMP, SFRPD would remove the Lake Merced DPA and would decrease the area of two DPAs, one on Bernal Hill and the other in McLaren Park. These DPAs are in areas with high erosion potential and sensitive vegetation or habitat, and additional protection is required. Although the Lake Merced DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011), all Natural Areas would still be open to on-leash dog use. The SNRAMP also calls for monitoring the potential impact of DPAs on oak woodlands at Buena Vista Park, Golden Gate Park Northeast, and MA-1 areas of the McLaren Park Shelley Loop. At Bernal Hill, at least 2.5 acres of the proposed closures are largely inaccessible due to slopes of between 45 and 90 degrees. The possibility for an increase in users at the DPAs in McLaren Park and on Bernal Hill depends on the current and reasonably foreseeable future use of the DPAs and enforcement of the citywide dog

policy. According to the SFRPD Final Dog Policy (SFRPD 2002), DPAs should be reviewed every three years for, among other things, degradation of the area. Similarly, the likelihood that Lake Merced recreation users would use other DPAs within or outside of the Natural Areas largely depends on the users' proximity to another DPA; the next closest DPA is at Pine Lake, less than one mile north of Lake Merced. As the distance between a user and a DPA increases, the likelihood that the user would visit that DPA decreases. Thus, it is unlikely that DPAs within and outside of the Natural Areas would experience increased use to the point of physical degradation from the loss of 19.3 acres distributed among three DPAs; the remaining six DPAs (Bernal Hill, Buena Vista Park, Corona Heights, Golden Gate Park Oak Woodlands, McLaren Park, and Pine Lake) would have 75.9 acres available for off-leash use. The closure of the Lake Merced DPA would have two potential direct, adverse long-term impacts: reducing access to DPA users and concentrating DPA users into the areas that remain open. However, because the DPA at Lake Merced is not heavily used and the Bernal Hill and McLaren Park DPA reductions represent a small portion of otherwise large DPAs, the increase in DPA users at other areas would not be substantial enough to result in the physical deterioration or accelerated deterioration of recreational facilities. As a result, the programmatic activities related to dog use would have a ***less than significant*** impact with respect to the physical deterioration of recreation facilities from increased use.

Project-Level Impacts (Routine Maintenance)

Impacts RE-2: Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities such that increased physical deterioration of those facilities would occur. (No Impact)

While improving primary trails in Natural Areas could encourage use, regular routine maintenance of trails, such as clearing deposited soil from steps and replacing steps or trail edging, would help mitigate any deterioration of those facilities; routine maintenance is not likely to increase use of recreational facilities outside the Natural Areas, for example by deterring visitors from using the Natural Areas. Such activities as removing invasive weeds and trees and maintaining trails and catchment basins are not considered activities that would deter the recreating public from visiting the Natural Areas. Rather, routine maintenance activities would likely enhance the recreation experience offered by the Natural Areas. As a result, the proposed routine maintenance activities would not be expected to increase the use of the neighborhood or regional parks, and the proposed routine maintenance activities would have ***no impact*** related to the physical deterioration of such recreation facilities.

Project-Level Impacts (Sharp Park Restoration)

Impact RE-3: Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial adverse effect on the use of recreation facilities in neighborhood and regional parks or other recreation facilities such that increased physical deterioration of those facilities would occur. (Less than Significant)

The habitat restoration effort proposed to take place at Sharp Park would modify about 19 acres of the golf course. The impact of the Sharp Park restoration activities on the golf course is addressed further below under Impact RE-6. The restoration effort entails removing a hole and reducing the size of other holes, which could affect the playability and might deter people from using the Sharp Park Golf Course, potentially resulting in an increased use of other nearby golf courses. There are approximately 16 public and municipal golf courses within reasonable driving distance of the Sharp Park Golf Course (the farthest is 32 road miles away), 12 of which are on the San Francisco peninsula. Ten courses, including the closest course (Harding Park) at approximately eight miles north of Sharp Park, offer a full 18 holes, and the remaining six offer nine holes. Visitation to these public golf courses may increase slightly during the short-term restoration of Sharp Park and renovation of the golf course. However, due to the relatively large number of nearby golf courses, and because any increase in visitation would be dispersed among the many other public and municipal golf courses along the San Francisco peninsula, Sharp Park restoration activities are not expected to result in a substantial increase of users at any one golf course such that physical deterioration would be expected to occur. Also, increased use of other golf courses would not exceed the maximum daily capacity established by those courses. Based on the above, the proposed habitat restoration efforts at Sharp Park would result in a ***less than significant*** impact on other nearby golf courses.

Physical Degradation of Existing Recreation Facilities

Programmatic Impacts

Impact RE-4: Implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on the physical characteristics of existing recreation facilities. (Less than Significant)

One of the objectives of the proposed project is to provide guidelines for recreational uses compatible with San Francisco's natural resources. These guidelines are intended to promote passive recreation, including improving and developing a recreational trail system within the Natural Areas. As such, the SNRAMP calls for the creation of 5,897 feet (1.1 miles) of new trails and

the closure or rerouting of 54,411 feet (10.31 miles) of trails. However, trail access would be maintained in all Natural Areas. Creating new trails and closing some existing social trails could enhance the recreation experience offered by the Natural Areas by upgrading trails to be more user friendly through increased accessibility and improved trail conditions.

The creation of new trails is not expected to have an adverse impact on fishing and water access at Lake Merced and India Basin. Current levels of access to the lakes would remain over the long-term, and fishing would continue to be offered in these Natural Areas.

As a result, the proposed project would not limit access to, or result in the physical deterioration of the Natural Areas or any other recreation facilities. For the reasons stated above, the impact of the SNRAMP on recreational resources would be considered ***less than significant***.

Project-Level Impacts (Routine Maintenance)

Impact RE-5: Implementation of routine maintenance projects under the SNRAMP would not have a substantial adverse effect on the physical characteristics of existing recreation facilities. (Less than Significant)

Impacts on recreation facilities from routine maintenance are similar to those described above under Impact RE-2. Routine maintenance may create short-term disturbance of recreation facilities, but over the long-term it would enhance those facilities, resulting in a ***less than significant*** impact with respect to the physical deterioration of recreational resources.

Project-Level Impacts (Sharp Park Restoration)

Impact RE-6: Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on the physical characteristics of existing recreation facilities. (Less than Significant with Mitigation)

The proposed habitat restoration effort at Sharp Park would modify about 19 acres of the Sharp Park Golf Course. The golf course is on the western side of Sharp Park, and restoration would primarily affect the layout of the golf course holes, including Holes 10, 12, 14, 15, and 18 on the eastern edge of Laguna Salada. The proposed habitat corridor between Horse Stable Pond and Laguna Salada also would be constructed requiring Holes 10 and 13 to be slightly shortened or narrowed and Hole 12 to be closed. This habitat corridor would be approximately six acres, bringing the total of modified area at the golf course to about 19 acres. Although the approximately 19 acres includes both playable and unplayable space, removing a hole would affect the playability of the 18-hole course,

significantly affecting this recreation facility. However, with implementation of M-RE-6, which calls for retaining the golf course as an 18-hole course, this impact would be reduced to ***less than significant***. CEQA requires an analysis of impacts of mitigation measures (CEQA Guidelines Section 15126.4(a)(1)(D)); therefore, pages 264 through 269 address the impacts of M-RE-6.

Due to the location of the archery range on the opposite side (eastern side) of Sharp Park, the archery range would not be impacted by the proposed Sharp Park restoration project.

M-RE-6: Restoration of the Sharp Park Golf Course to 18 Playable Holes

The SFRPD shall coordinate with a golf course consultant to restore the playability of the Sharp Park Golf Course, which would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway to retain playability and flow of the course, thereby increasing the number of holes west of the highway to 15 and decreasing to three the number of holes to the east. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increase to five the number of holes to the east. The determination of where the replacement hole is constructed and whether additional holes need to be moved would require additional environmental review.

Cumulative Impacts

Impact RE-7: The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to recreation. (Significant and Unavoidable)

The geographic scope of this analysis includes San Francisco and Pacifica. Cumulative projects that would have an impact on recreation resources include those that reduce the overall recreation experience provided by the Natural Areas. This includes projects that may result in a significant increase in the regional population resulting in overcrowding of the Natural Area, a decrease in currently available recreation opportunities, consequently putting increased pressure that is unable to be absorbed by other Natural Areas, or a physical or visual change in the landscape that adversely impacts the appeal of a Natural Area. Implementation of the proposed GGNRA Dog Management Plan may further restrict dog access and off-leash areas within GGNRA land holdings, including Fort Funston (near Lake Merced), Milagra Ridge (near Sharp Park), Mori Point (near Sharp Park), and Sweeney Ridge (near Sharp Park). In addition, the SNRAMP proposes to close the Lake Merced DPA and reduce the size of the DPAs at Bernal Hill and McLaren Park. On-leash dog use would still be allowed at these and all other Natural Areas. The combined reductions in off-

leash areas proposed by the GGNRA and the SFRPD could result in an increase in dog use at the remaining Natural Areas. An increase in dog use at the Natural Areas could accelerate the physical deterioration of those DPAs and the Natural Areas in general. Given the speculative nature of the increased level of use that could result from these proposals, the impacts to recreation are conservatively determined to be significant from the combined cumulative projects. The contribution of the SNRAMP project to this potentially significant impact would be cumulatively considerable, specifically as a result of the closure of the Lake Merced DPA.

DPAs within the Natural Areas would continue to be evaluated in accordance with the SFRPD's Dog Policy; the SFRPD would monitor DPAs for their effects on the Natural Areas and develop solutions to any identified issues. These established procedures are considered adequate, and further monitoring procedures would not be expected to reduce the impact. The potentially significant impact to recreational resources as a result of increased use resulting from cumulative actions could be mitigated by adding a new DPA at a nearby Natural Area or other nearby property. However, as discussed in this document, there is a current moratorium[1] on new DPAs, and the mitigation therefore would not be feasible. As a result, this impact would be ***significant and unavoidable***.

The Natural Areas are within parks throughout San Francisco and in Pacifica. They are insulated from the urban environment and are open environments composed of vegetation, trails, lakes, and geologic features. Most of the projects that may cumulatively impact recreation resources within Natural Areas are residential/commercial developments and recreation facility construction occurring outside the Natural Areas. New developments could bring additional recreation users to the Natural Areas, which could increase the use of those natural areas, resulting in some crowding, degrading the overall passive recreation experience over time. The residential/commercial development that would have the greatest potential impact on cumulative recreation resources is the Candlestick Point-Hunters Point Shipyard Phase II Development project, which would have a permanent workforce of over 10,000 people and provide housing for over 25,000 residents. The Natural Areas most affected by the Candlestick Point-Hunters Shipyard project are Bayview and India Basin Shoreline Park, both of which are in eastern San Francisco. These areas offer recreation trail uses, views of the City, and abundant wildlife observation. Bayview Park is a popular Natural

[1]There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

Area where most public use is confined to a looping primary paved path that is in generally good condition. However, this paved path is experiencing minor erosion issues due to use, which may further deteriorate if increased visitation and use were to occur as a result of the Candlestick Point project and without regular maintenance. Natural open space is included as part of the Candlestick Point project, which would offer additional public recreational opportunities, reducing the potential for overuse of the Natural Areas due to the anticipated increase in population from the Candlestick project. India Basin Shoreline Park is also a popular Natural Area that offers shoreline access to the Bay for fishing, kayaking, and other water-dependent recreation. Improvements to this Natural Area are ongoing and include the addition of picnic tables, pathway improvements, landscaping, irrigation, and wetland restoration and creation.

Some of the key goals identified in the SNRAMP include those related to conservation and restoration, environmental stewardship, monitoring the health of the Natural Areas, as well as aesthetic viewsheds. Regular maintenance activities, such as those discussed in Impact RE-2 above, would help achieve these goals and minimize any potential cumulative impacts of additional development around the Natural Areas. In addition to aforementioned improvements and regular maintenance, as a part of the SFRPD Trails Program, trails would be improved with SFRPD- and/or grant-funded capital projects. Trail improvement in areas surrounding the 32 Natural Areas would dissipate recreation users throughout the trail system and overall would enhance the experience of passive recreation users, resulting in a beneficial and ***less than significant*** cumulative impact on recreational facilities.

Other potential projects proposed outside the SNRAMP include creating additional recreation opportunities at McLaren Park (outside the Natural Area) and Oak Woodlands in Golden Gate Park. Additionally, replacing existing turf fields with new artificial turf and adding new amenities such as benches, bleachers, picnic tables, barbeque pits, new maintenance sheds, and new pedestrian pathways (at such locations as Buena Vista Park, Lily Pond, Oak Woodlands, Strawberry Hill, and Whiskey Hill Natural Areas) could shift some passive activities and visitors away from some of the recreation areas in these Natural Areas. However, these projects are designed to improve the recreation experience in these areas, making the overall cumulative impact on recreational resources beneficial and ***less than significant.***

V.F.4 Impacts of Mitigation Measures

Implementation of Mitigation Measure M-RE-6 could result in additional environmental impacts; other mitigation measures identified in this EIR would not result in environmental impacts. In accordance with CEQA and CEQA Guidelines Section 15126.4(a)(1)(D), impacts of mitigation measures must be addressed.

M-RE-6: Restoration of the Sharp Park Golf Course to 18 Playable Holes

The SFRPD would coordinate with a golf course consultant and would restore the playability of the Sharp Park Golf Course, which would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway to retain playability and flow of the course, thereby increasing the number of holes west of the highway to 15 and decreasing to three the number of holes to the east. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increasing to five the number of holes to the east. The determination of where the replacement hole is constructed and whether additional holes require moving would be evaluated under a separate environmental review.

Implementation of Mitigation Measure M-RE-6 could result in additional environmental impacts. While it is speculative to precisely identify all potential impacts related to its implementation, discussed below are the types of impacts that could result from the range of activities under this mitigation measure.

Land Use and Land Use Planning

Implementing M-RE-6 would change the layout of the golf course holes and ensure playability of the Sharp Park Golf Course. This would not impact land use and land use planning.

Aesthetics

This mitigation measure would occur within the area of the existing golf course. While trees and other vegetation may be removed, alterations to the landscape under this mitigation measure would be consistent with the existing use and character of the area. No buildings or structures would be constructed that could block or alter general scenic vistas. No new lighting would be installed that could alter nighttime darkness or create glare. As a result, there would be less than significant impacts on aesthetics.

Population and Housing

Implementation of the Mitigation Measure M-RE-6 would have no impacts on population and housing because it would only reconfigure the golf course within the Sharp Park area and not induce population growth or result in displacement of houses or people.

Cultural and Paleontological Resources

Impacts on archaeological resources and human remains would be similar to those identified under Impacts CP-16 and CP-22, but more likely to occur as a result of this mitigation measure because there is the potential for ground disturbance outside the existing landscaped golf course and east of Highway 1.

Impacts on paleontological resources would be the same as those identified under Impact CP-19.

Impacts on historical resources, specifically the Sharp Park Golf Course, would result in significant impacts if any reconfiguration of the course resulted in additional holes east of Highway 1. Adding holes on the east side of the freeway diminishes the historic integrity of the landscape because it changes the balance of holes that were originally on the east and west side of Highway 1 and creates a hole in an area that was not originally planned and not originally part of the Mackenzie-designed course. As a result, these impacts could be significant and unavoidable. Increasing the number of holes west of Highway 1 would be beneficial to the Sharp Park Golf Course because it would restore some of the elements that Mackenzie had implemented in his original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where Mackenzie situated holes in his original design, and would be in keeping with the historic boundaries of the golf course. As a result, impacts to architectural historic resources could be less than significant if the hole is placed west of Highway 1.

Transportation and Circulation

Implementation of this mitigation measure would have no impact on roadway capacity or level of service near the project area. The reconfiguration activities would result in a temporary increase of construction vehicles. However, this increase would be minor and is not expected to result in a substantial impact on the nearby roadways Therefore, impacts on transportation and circulation would be less than significant.

Noise

The replacement of Hole 12 to restore the playability of the Sharp Park Golf Course would result in additional construction activities potentially on either side of Highway 1. Noise generated from

these construction activities would be on the north side of the golf course, at least 500 feet away from residential areas. Further, potential noise impacts are expected to be discontinuous and of short duration during the day time. Therefore, noise impacts would be less than significant.

Air Quality

This mitigation measure could result in additional air pollutant emissions on the east and west sides of Highway 1. Because the SFRPD would comply with the San Francisco Dust Control Ordinance and submit a dust control plan, impacts from fugitive dust emissions would be less than significant. Because of the nature and timeline for these activities, these emissions may exceed the daily criteria pollutant thresholds of significance established by the Bay Area Air Quality Management District (BAAQMD). As would be done for the Sharp Park restoration, the SFRPD would implement mitigation measures to reduce the impacts of these emissions. However, even with the implementation of those measures, criteria pollutant levels may remain above the BAAQMD daily threshold and could result in significant and unavoidable air quality impacts. Although the degree of excavation and cut and fill to maintain the playability of the golf course is unknown, it is anticipated that the level of activity would be lower than that associated with the Sharp Park restoration activities. A quantitative health risk assessment of the Sharp Park restoration activities indicated that the BAAQMD health risk thresholds would not be exceeded; therefore, health risk impacts on sensitive receptors from this mitigation measure also would be less than significant. Equipment exhaust could occasionally emit odors attributed to gasoline combustion, but these odors would be less than significant.

Greenhouse Gas Emissions

Increased construction vehicles and equipment operation under this mitigation measure would contribute short-term emissions to the annual increases in GHGs. The BAAQMD has not identified a significance threshold for construction-related GHG impacts. Rather, the BAAQMD recommends consideration of best management practices, including the use of alternative fueled equipment and recycling or reuse of construction waste or demolition materials. All municipal projects are required to comply with the City's Construction Demolition and Debris Ordinance. The Construction Demolition and Debris Ordinance requires recycling or diversion of at least 75 percent of construction waste. SFRPD would be required to comply with these applicable regulations. Furthermore, as discussed in Section VI, Other CEQA Issues, the Sharp Park restoration activities are anticipated to result in construction-related GHG emissions on the order of 796 metric tons of carbon dioxide equivalents. Although the degree of excavation and cut and fill to maintain the playability of the golf course is unknown, any construction-related GHG emissions would be

negligible compared to annual emissions within the region, and all municipal projects would be required to comply with the aforementioned City regulations, ensuring that any impacts would be less than significant.

Wind and Shadow

Implementation of M-RE-6 may result in tree removal, which is not expected to alter wind patterns or result in a net increase in shadow. Any tree removal would not be anticipated to increase ground-level wind speeds substantially. Further, the mitigation measure would not result in new structures and therefore would not have the potential to increase shadow on open spaces. Therefore, the mitigation measure would have no impacts related to wind and shadow.

Utility and Service Systems

Implementation of M-RE-6 would not increase the demand related to wastewater treatment, water supply, or stormwater drainage. Further, no additional solid waste would be generated as a result of this mitigation measure. Therefore, it would have no impacts on utility and service systems.

Public Services

This mitigation measure would not result in the increase of population and therefore would not require the need for new or expansion of existing public services; therefore, it would have no impacts on public services.

Biological Resources

The impacts to biological resources as a result of Mitigation Measure M-RE-6 may include the additional removal of trees on the east side of Highway 1 to accommodate potential new hole construction. The potentially impacted environment east of Highway 1 is composed primarily of urban forest which is dominated by nonnative tree species. Creating a new hole to the west of Highway 1 would require the conversion of a small amount of coastal scrub habitat which has been identified as a sensitive natural community. These activities would have temporary impacts as well as potential long-term impacts, specifically potential for disturbance of special status bird species and the removal of coastal scrub habitat. With implementation of biological mitigation measures identified in Section V.G, such as M-BI-1a and M-BI-1b, M-BI-5, and M-BI-13, the impacts from this mitigation measure would be reduced to less than significant.

Geology and Soils

This mitigation measure may result in short-term disturbance of soils and vegetation that could increase the erosion potential within the active project areas. This potential would be minimized by

the use of the erosion control BMPs included as part of the SNRAMP. Over the long-term, disturbed areas would be revegetated or otherwise landscaped, resulting in negligible net changes in the erosion potential following completion of the mitigation actions. As a result, the impacts on geology and soils would be less than significant.

Hydrology and Water Quality

Under this mitigation measure, the golf course boundary may be expanded into the Natural Area. Hydrologic and water quality impacts could result from activities associated with this land conversion. One of the potential areas where expansion could occur is between the seawall and Laguna Salada south of current Hole 16, although expansion could also potentially occur east of Highway 1. Short-term impacts on water quality could occur if soil or spilled fuels or other substances were transported from new construction sites to Laguna Salada or Sanchez Creek via storm water runoff. Such occurrences would be prevented or minimized by implementation of construction storm water BMPs in accordance with National Pollutant Discharge Elimination System (NPDES) permit requirements and Mitigation Measure M-HZ-13. Expansion of the golf course into new areas could alter existing drainage and infiltration patterns, either increasing or reducing storm water runoff. Due to the small land areas involved and because the golf course would involve a change in vegetation cover rather than any increase in impervious surface area, any change in runoff volume is likely to be insignificant to flooding potential. As the amount of land area devoted to golf course use would not change significantly, the net quantities of agricultural chemicals (fertilizers, herbicides) used on the golf course, and the net loading to surface water or groundwater is not expected to change significantly. Therefore, this mitigation measure would have a less than significant effect.

Hazards and Hazardous Materials

Implementation of M-RE-6 would not have significant impacts on hazards and hazardous materials. Replacement of Hole 12 would require the use of motor vehicles which includes the use of hazardous materials such as fuel, oil, solvents, and lubricants. Hazardous materials would be used in marginal quantities, and activities involving hazardous materials and hazardous waste would be conducted in accordance with strict health and safety standards mandated by the Occupational Safety and Health Administration (OSHA). Further, with the implementation of M-HZ-13, which requires the preparation of an emergency response plan, potential impacts related to the transport, use, or release of hazardous materials would further ensure that impacts of this mitigation measure would be less than significant.

Mineral and Energy Resources

The Natural Areas are not designated areas of significant mineral deposits. Therefore, implementation of M-RE-6 would have no impacts on mineral resources. Use of energy resources, such as diesel and gasoline, is expected to be minor and is considered a less than significant impact. Additionally, implementing Improvement Measure I-ME-1 to increase energy efficiency and Mitigation Measure M-AQ-4 to limit idling of diesel-fueled vehicles would reduce the potential impacts on the use of energy resources.

Agriculture and Forest Resources

Implementation of M-RE-6 would have no impacts on agriculture or forest resources because there are no farmlands at Sharp Park. Further, any removal of trees to replace Hole 12 would not impact zoning of forest land or timberland and would not result in a substantial loss or conversion of forest land. Tree removal would not include trees designated for commercial harvest. Further, tree removal would be in a very small area that would not result in a substantial conversion of the urban forest to non forest use. The Sharp Park Golf Course would continue to be used for recreational activities. Therefore, implementation of M-RE-6 would have no impacts on agriculture and forest resources.

V.G BIOLOGICAL RESOURCES

This section describes the biological resources of the Natural Areas and the potential for the proposed project to impact those resources. The environmental setting information is largely based on the data generated and gathered for the SNRAMP (SFRPD 2006); additional sources of information are cited in the text and are listed in Chapter VIII, References.

Comments related to biological resources received during the NOP scoping process included concerns about the following:

- The use of wood chips on wildlife, including bees and birds, some of which use dirt areas for dust baths;
- India Basin Shoreline waterfowl species that are present from fall through spring;
- Great blue herons at Lake Merced;
- The impacts on several nesting bird species from having access to Lake Merced's East Lake shoreline between September 1 and March 31;
- Non-breeding birds that use the Natural Areas during some part of the year;
- An updated inventory of all species of concern;
- Effects of mosquito control measures on the California red-legged frog population and on residential neighbors of Sharp Park;
- Impacts of tree removal on bird and wildlife habitat;
- Impacts of Sharp Park activities on the long-term survival and recovery of the San Francisco garter snake;
- Effects of dog impacts on plants and wildlife;
- Impacts on common wildlife from clearing underbrush and blackberry;
- Failure to replace eucalyptus trees with native plants;
- Discussion of important bird habitat at Interior Greenbelt for yellow warblers, Steller's jays, bush-tits, song sparrows, owls, and red-tailed hawks and impacts on sensitive bird species living in or using the Interior Greenbelt from the removal of eucalyptus trees and brush;
- Impacts of new trails through sensitive natural areas and wildflower fields;
- Impacts on endangered species that use Sharp Park lands;
- Impacts on beach areas used for roosting and breeding;

- Impacts on newts in the pond in east Sharp Park;
- Effects of ecosystem changes;
- Impacts of tree removal at Mount Davidson and Sharp Park;
- Impacts of off-leash dog areas in sensitive Natural Areas;
- Impacts on people, animals, and insects from herbicide application;
- Impacts on amphibians from chloramine in the water; and
- Impacts from leaving tree stumps on the ground that create a breeding medium for mosquitoes, which are vectors of dog and cat heartworm.

V.G.1 Regulatory Setting

Federal Regulations

Endangered Species Act of 1973

The Endangered Species Act (ESA) (16 USC, 1531-1543) and subsequent amendments establish legal requirements for the conservation of endangered and threatened species and the ecosystems they depend on.

Section 7 of the ESA requires federal agencies, in consultation with, and with the assistance of, the Secretary of the Interior or the Secretary of Commerce, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or to destroy or adversely modify critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the ESA. Regulations governing interagency cooperation under Section 7 are found at 50 CFR, Part 402. The biological opinion (BO) issued at the conclusion of formal Section 7 consultation may include a statement authorizing a take (i.e., to harass, harm, pursue, hunt, wound, kill) that may occur incidental to an otherwise legal activity.

Section 9 of the ESA lists those actions that are prohibited, including take of listed species of fish and wildlife without special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns, such as breeding, feeding, or sheltering. "Harass" is further defined as actions that create the likelihood of injury to listed species to an extent that significantly disrupts normal behavior patterns, which include breeding, feeding, and sheltering.

Clean Water Act

The Clean Water Act (33 USC, 1251-1376) establishes legal requirements for restoring and maintaining the chemical, physical, and biological integrity of the nation's waters.

Section 401 of the Clean Water Act requires an applicant for a federal license or permit that allows activities that discharge to waters of the United States to obtain a state certification that the discharge complies with other provisions of the Clean Water Act. The Regional Water Quality Control Boards administer the certification program in California.

Section 404 of the Clean Water Act establishes a permit program, administered by the U.S. Army Corps of Engineers (USACE), regulating the discharge of dredged or fill material into waters of the United States, including wetlands. An area is classified as a wetland under Section 404 of the Clean Water Act if it contains all three of the following parameters: hydric soils, hydrophytic vegetation, and wetland hydrology.

Implementing regulations by the USACE are found at 33 CFR, Parts 320-330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines and were developed by the EPA in conjunction with the USACE (40 CFR, Part 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

In order to be protected under Sections 404 and 401 of the Clean Water Act, wetlands and other waters of the US must be classified as one of the following:

- Traditional navigable waters;
- Wetlands next to traditional navigable waters;
- Nonnavigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); or
- Wetlands that directly abut the tributaries described in the previous bullet (USACE 2008).

The USACE would decide jurisdiction over the following waters, based on a fact-specific analysis, to determine whether they have a significant nexus with a traditional navigable water:

- Nonnavigable tributaries that are not relatively permanent;

- Wetlands next to nonnavigable tributaries that are not relatively permanent; or
- Wetlands next to but that do not directly abut a relatively permanent nonnavigable tributary.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC, 703-711) implements a treaty signed by the United States, Canada, Mexico, and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law also applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. The MBTA states that it is unlawful to take these species, their nests, their eggs, or their young anywhere in the United States.

Noxious Weed Act of 1974

This act provides for the control and management of nonindigenous weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. Under this act, the Secretary of Agriculture has the authority to designate plants as noxious weeds and to inspect, seize, and destroy products and to quarantine areas, if necessary, to prevent the spread of such weeds.

State Laws and Regulations

California Environmental Quality Act

CEQA (PRC. 21000 et seq.) was enacted in 1970 to provide for full disclosure of environmental impacts to the public before state and local public agencies issue a permit. With regard to biological resources, CEQA gives consideration to "sensitive" (or "special status") plants, in addition to federally or state listed species. Sensitive species also include wildlife species of special concern listed by the CDFG. Sensitive species include plants on the California Native Plant Society's (CNPS) List 1A (presumed extinct), List 1B (rare, threatened, or endangered in California and elsewhere; eligible for state listing), or List 2 (rare, threatened, or endangered in California but more common elsewhere; eligible for state listing). To be conservative, CNPS List 3 (plants for which more information is needed) and List 4 (plants of limited distribution) are also considered sensitive.

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code 2050 et seq.) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates state agencies to not approve projects that would jeopardize the

continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect a species listed under both CESA and the federal ESA, compliance with the federal ESA would satisfy CESA if the CDFG were to determine that the federal incidental take authorization is consistent with CESA under Fish and Game Code Section 2080.1. For projects that would result in a take of only a state listed species, the applicant must apply for a take permit under Section 2081(b) of the CESA.

Native Plant Protection Act

California's Native Plant Protection Act (Fish and Game Code, 1900-1913) requires all state agencies to use their authorities to carry out programs to conserve endangered and rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification to the CDFG at least 10 days in advance of any change in land use. This allows the CDFG to salvage listed plant species that would otherwise be destroyed. The applicant is required to conduct botanical inventories and consult with the CDFG during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

California Fish and Game Code, Sections 1600-1616

Under these sections of the Fish and Game Code, CDFG jurisdiction is determined to occur within the water body of any natural river, stream, or lake. The term stream, which includes creeks and rivers, is defined in Title 14, CCR, Section 1.72. The applicant is required to notify CDFG before constructing any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When a fish or wildlife resource may be substantially adversely affected, CDFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

California Fish and Game Code, Sections 3511, 4700, 5515, and 5050

The classification of fully protected species was the state's initial effort to identify and provide additional protection to those animals that were rare or that faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under either the state or federal endangered species act or both, although there are several exceptions, including the golden eagle.

The Fish and Game Code sections dealing with fully protected species state that these species "...may not be taken or possessed at any time and no provision of this code or any other law would be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. This language arguably makes the "fully protected" designation the strongest and most restrictive regarding the take of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFG to authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species. The San Francisco garter snake, which occurs at the Sharp Park Natural Area, is listed as fully protected under the Fish and Game Code.

California Fish and Game Code, Sections 3503 and 3513

Section 3503 prohibits the take and possession of any bird egg or nest, except as otherwise provided by this code or subsequent regulations. Further, Section 3513 provides for the adoption of the MBTA's provisions. As with the MBTA, this state code offers no statutory or regulatory mechanism for obtaining an incidental take permit for the loss of nongame migratory birds. The administering agency for these sections is the CDFG.

California Coastal Act

The California Coastal Act applies to projects that result in the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes occurring in the coastal zone. The act limits these activities to certain types of projects (restoration projects, for example, are included among the permitted projects) and stipulates criteria under which development is permitted. Under the act, an area is classified as a wetland if it meets only one or more of the three parameters required by Section 404 of the Clean Water Act's definition of a wetland: hydric soils, hydrophytic vegetation, or wetland hydrology. The portion of the Sharp Park Natural Area extending 1,000 feet inland from the sea wall levee is in the coastal zone; of this area, the portion surrounding Laguna Salada and Horse Stable Pond falls within the jurisdiction of the California Coastal Commission, with the remainder under the City of Pacifica's Local Coastal Program. The proposed Sharp Park wetland restoration activities in the coastal zone would require a coastal development permit from the California Coastal Commission.

The Balboa Natural Area, the Lake Merced Natural Area, and the India Basin Shoreline Park Natural Areas are also within the coastal zone. None of the proposed routine maintenance activities at these Natural Areas are expected to require a coastal development permit. For programmatic projects, the SFRPD would determine the need for a coastal development permit at which time project details are known and a specific project is proposed. Although within the coastal zone,

shoreline areas within San Francisco Bay, including the India Basin Shoreline Park Natural Area, are under the jurisdiction of the Bay Conservation and Development Commission, which regulates shoreline development and other activities within 100 feet of the Bay shoreline. For programmatic projects at India Basin Shoreline Park, the need for a Bay Conservation and Development Commission permit would be determined at which time a specific project is proposed.

Regional and Local Regulations

The regional and local plans that contain policies protecting biological resources in the Natural Areas include the following and are discussed in more detail in Section IV, Plans and Policies:

- San Francisco General Plan, including the Draft Update of the Recreation and Open Space Element;
- Golden Gate Park Master Plan;
- San Francisco Sustainability Plan;
- Endangered Species Compliance Plan for the Sharp Park Golf Course;
- City of Pacifica General Plan;
- City of Pacifica Local Coastal Land Use Plan; and
- City of San Francisco Urban Forestry Council Landmark Tree Ordinance.

The SFRPD and the SNRAMP are not subject to the City of Pacifica's regulations protecting biological resources, such as its logging ordinance; for informational purposes, these regulations are presented in Section IV.B. However, activities may be subject to the Local Coastal Land Use Plan. No Habitat Conservation Plans or Natural Community Conservation Plans overlap with the Natural Areas. The goals of the SNRAMP are discussed in Chapter III, Project Description.

V.G.2 Environmental Setting

As discussed in Chapter III, the 32 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately four percent of the total city area; one Natural Area is in Pacifica. Most of the Natural Areas are used as recreational open spaces by residents and visitors. There are a number of designated trails and DPAs within the Natural Areas. As a result, although these are Natural Areas, use has impacted the habitat within the Natural Areas.

Other than a wetland delineation (described below), no additional field surveys were performed in preparation of this EIR to characterize the biological resources in the Natural Areas. Biological information for the Natural Areas is available in the SNRAMP and was based on extensive previously conducted field surveys performed specifically to characterize the biological resources in the Natural Areas; the information in the SNRAMP is assumed to have not changed substantially because the SFRPD conducted extensive surveys of the Natural Areas for preparation of the SNRAMP and ongoing maintenance activities have not revealed any new information that is not reflected in this EIR.

Special Status Species

The analysis of special status species in this EIR addresses all special status species anticipated to occur within each of the Natural Areas. For this EIR, special status species are those that are 1) legally protected by the CDFG, the USFWS, or the MBTA or 2) are locally significant sensitive species, including species on the National Audubon Society's Watch List or those under threat of local extirpation, as determined by the Yerba Buena chapter of the CNPS or the Golden Gate chapter of the National Audubon Society. State and federally listed species known to occur or that have been recorded historically in Natural Areas are presented in Table 9.

Legally protected species include species that are federally listed as endangered, threatened, or candidate species (USFWS 2009), that are state listed as endangered, rare, threatened, California fully protected, or species of special concern (CDFG 2009), or that are listed in the MBTA (protected species). Protected species also include those listed as 1A or 1B on the CNPS plant list; that is, the 1A list is for plants presumed to be extinct in California, and the 1B list is for plants that are rare or endangered in California and elsewhere (CNPS 2009). Protected species deserve special consideration and are therefore treated differently from locally significant species.

CEQA Guidelines Section 15380 further provides that a plant or animal species may be treated as rare or endangered even if it is not on one of the official lists but otherwise meets the criteria for an endangered or rare species (e.g., it is likely to become endangered in the foreseeable future). For this reason, this EIR also addresses locally significant species, which include species on CNPS List 2 (rare, threatened, or endangered in California but more common elsewhere and eligible for state listing), CNPS List 3 (plants for which more information is needed), and List 4 (plants of limited distribution). Locally significant species also include species on the National Audubon Society's Watch List or those under threat of local extirpation, as determined by the Yerba Buena chapter of

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas

Common Name	*Scientific Name*	Federal/State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Invertebrates				
Bay checkerspot butterfly	*Euphydryas editha bayensis*	FT/--/--	Native grasslands on outcrops of serpentine soil. Primary host plant is *Plantago erecta*; secondary host plants are *Orthocarpus densiflorus* and *O. purpurscens*.	P/Reported from Mount Davidson and Twin Peaks in 1980. Not currently present at either Natural Area.
Mission blue butterfly	*Icaricia icarioides missionensis*	FE/--/--	Grasslands. Larval host plants include *Lupinus albifrons*, *L. variicolor*, and *L. formosus.*	C/Reported at Sharp Park and McLaren Park in 1988 and at Bayview Park in 2001. Currently breeds on Twin Peaks and has been recorded in the Sharp Park upper canyon.
San Francisco silverspot butterfly	*Speyeria callippe callippe*	FE/--/--	Coastal scrub. Host plant is *Viola pedunculata*.	P/Historical population on Twin Peaks is presumed extirpated.[1]

Federal Status
FE = Endangered. Species in danger of extinction throughout all or a significant portion of its range.
FT = Threatened. Species likely to become endangered within foreseeable future throughout all or a significant portion of its range.
FPD = Proposed delisting.

California State Status
SE = Endangered. Species whose continued existence in California is jeopardized.
ST = Threatened. Species, although not presently threatened with extinction, that is likely to become endangered in the foreseeable future.
CSC = Species of Concern.
SFP = State Fully Protected under Sections 3511 and 4700 of the Fish and Game Code.
SR = State Rare.

California Native Plant Society
1A = Plants presumed extinct in California.
1B = Plants that are rare or endangered in California and elsewhere.

Occurrence
P = Potential
C = Confirmed
U = Unlikely

*Indicates species that may occur at Sharp Park only.

[1] Extirpate—to remove or destroy totally.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Reptiles and Amphibians				
California red-legged frog	*Rana aurora draytonii*	FT/CSC/--	Lowlands and foothills in or near permanent sources of deep water, with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development.	C/Historically observed at Lake Merced, believed to be extirpated. Recently observed at Sharp Park.
San Francisco garter snake	*Thamnophis sirtalis elegans*	FE/SE, SFP/--	Freshwater marshes, ponds, and slow-moving streams. Prefers dense cover and water depths of at least one foot.	C/Reported near Horse Stable Pond in Sharp Park in 2008.
Western pond turtle	*Clemmys marmorata*	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites and upland habitat for egg-laying.	C/Presently occurs at Lake Merced and Sharp Park. Historically occurred at Pine Lake; however, presumed extirpated at this location.
Fish				
Tidewater goby*	*Eucyclogobius newberryi*	FPD (FE)/CSC/--	Shallow lagoons and lower stream reaches. Needs fairly still but not stagnant water and high oxygen levels.	P/Historically collected (1895), not recently observed in San Francisco.
Central California coast steelhead*	*Oncorhynchus mykiss irideus*	FT/--/--	Cold flowing freshwater.	P/Not available.
Birds				
Bank swallow	*Riparia riparia*	--/ST/--	Requires vertical banks/cliffs with fine-textured sandy soils near streams, rivers, lakes, and the ocean to dig a nesting hole.	C/Currently nests at Fort Funston and forages over Lake Merced.
California black rail	*Laterallus jamaicensis coturniculus*	--/ST/--	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	P/Historically reported, not recently observed in San Francisco.
Double-crested Cormorant	*Phalacrocorax auritus*	--/CSC/-	Nests on coastal cliffs and in trees.	C/Presently nests at Lake Merced.
Salt marsh common yellowthroat	*Geothlypis trichas sinuosa*	--/CSC/--	Saltwater and freshwater marshes. Requires thick cover for foraging and dense vegetation for nesting.	C/Presently occurs at Lake Merced and Sharp Park.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Yellow warbler	*Dendroica petechia*	--/CSC/--	Riparian woodlands.	C/Observed at Lake Merced in spring 2000, breeding undocumented.
Mammals				
American badger	*Taxidea taxus*	--/CSC/--	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Digs burrows and preys on burrowing rodents.	P/Not available.
Big free-tailed bat*	*Nyctinomops macrotis*	--/CSC/--	Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	P (foraging habitat)/Not available.
Pallid bat*	*Antrozous pallidus*	--/CSC/--	Deserts, grasslands, shrublands, woodlands, and forests.	P (foraging habitat) /Not available.
San Francisco dusky-footed woodrat*	*Neotoma fuscipes annectens*	--/CSC/--	Forest habitat of moderate canopy and moderate to dense understory.	C/Observed in Sharp Park.
Western red bat	*Lasiurus blossevillii*	--/CSC/--	Roosts primarily in trees, 2-40 feet above the ground. For foraging, prefers habitat edges and mosaics with trees that are protected from above and open below.	C/Recorded in Golden Gate Park (2000), and at Mount Davidson, Twin Peaks, Pine Lake, and McLaren Park.
Plants				
Adobe sanicle	*Sanicula maritime*	--/SR/1B	Meadows and seeps, grasslands, chaparral, and coastal prairie.	P/Not available.
Alkali milk-vetch	*Astragalus tener* var. *tener*	--/--/1B	Low ground, alkali flats, and flooded lands; in annual grassland, playas, or vernal pools between 1 and 170 meters elevation.	P/Not available.
Beach layia	*Layia carnosa*	FE/SE/1B	On sparsely vegetated, semistabilized coastal dunes, usually behind foredunes, between 0 and 75 meters elevation.	P/Historically reported from San Francisco, location not well mapped, presumed extirpated.
Bent-flowered fiddleneck*	*Amsinckia lunaris*	--/--/1B	Woodlands and grasslands between 50 and 500 meters elevation.	P/Not available.
California seablite	*Suaeda californica*	FE/--/1B	Restricted to the upper intertidal zone of coastal salt marsh along the perimeter of a bay.	C/Recorded at India Basin.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Choris' popcorn-flower	*Plagiobothrys chorisianus* var. *chorisianus*	--/--/1B	Chaparral, coastal scrub, coastal prairie. On mesic sites between 15 and 100 meters elevation.	P/Not available.
Coast yellow leptosiphon*	*Leptosiphon croceus*	--/--/1B	Coastal bluff scrub and coastal prairie between 10 and 150 meters elevation.	P/Not available.
Coastal marsh milk-vetch*	*Astragalus pycnostachyus* var. *pycnostachyus*	--/--/1B	Mesic sites in dunes or along streams or coastal salt marshes between 0 and 30 meters elevation.	P/Not available.
Coastal triquetrella	*Triquetrella californica*	--/--/1B	Coastal bluff scrub or coastal scrub habitats. Grows on moss growing on soil between 10 and 100 meters elevation.	C/Recorded on Tank Hill and several other locations within San Francisco.
Compact cobwebby thistle	*Cirsium occidentale* var. *compactum*	--/--/1B	On dunes and on clay in chaparral; also in grassland, coastal prairie, and coastal scrub. Found between 5 and 155 meters elevation.	P/Historically recorded near Lake Merced.
Crystal Springs lessingia*	*Lessingia arachnoidea*	--/--/1B	Coastal sage scrub, grasslands, and woodlands. Found on grassy slopes on serpentine; also along roadsides. Between 60 and 200 meters elevation.	P/Not available.
Dark-eyed gilia	*Gilia millefoliata*	--/--/1B	Coastal dunes between 2 and 20 meters elevation.	P/Historically recorded within San Francisco.
Dune gilia	*G. capitata* ssp. *chamissonis*	--/--/1B	Coastal dunes and coastal scrub between 2 and 200 meters elevation.	C/Presently occurs at Hawk Hill and Lake Merced.
Fragrant fritillary	*Fritillaria liliacea*	--/--/1B	Coastal scrub, grassland, and coastal prairie between 3 and 410 meters elevation.	C/Presently occurs at Bernal Heights.
Franciscan onion*	*Allium peninsulare* var. *franciscanum*	--/--/1B	Woodlands and grasslands, on dry hillsides. Found on clay soils or serpentine between 100 and 300 meters elevation.	P/Not available.
Franciscan thistle	*C. andrewsii*	--/--/1B	Coastal bluff scrub, broadleaved upland forest, coastal scrub. Sometimes serpentine seeps. Between 0 and 135 meters elevation.	P/Historically recorded within San Francisco.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Hairless popcorn flower	*Plagiobothrys glaber*	--/--/1A	Alkali meadows, seeps, coastal salt marshes, and swamps between 5 and 180 meters elevation.	P/Not available.
Hickman's cinquefoil*	*Potentilla hickmanii*	FE/SE/1B	Freshwater marshes, seeps, and small streams in open or forested areas along the coast. Found between 5 and 125 meters elevation.	P/Not available.
Kellogg's horkelia	*Horkelia cuneata* ssp. *Sericea*	--/--/1B	Closed-cone coniferous forest, coastal scrub, chaparral, old dunes, coastal sandhills. Between 10 and 200 meters elevation.	P/Recorded within San Francisco.
Marin checker lily	*Fritillaria lanceolata* var. *tristulis*	--/--/1B	Coastal scrub, coastal bluff scrub, or coastal prairie between 15 and 150 meters elevation.	P/Not available.
Marin western flax	*Hesperolinon congestum*	FT/ST/1B	In serpentine barrens and in serpentine grassland and chaparral at 30 and 365 meters elevation.	U/Historically recorded on Mount Davidson.
Marsh microseris	*Microseris paludosa*	--/--/1B	Closed-cone coniferous forest, woodlands, and grasslands between 5 and 300 meters elevation.	P/Not available.
Marsh sandwort	*Arenaria paludicola*	--/--/1B	Grows up through dense mats of *Typha* spp., *Juncus* spp. and *Scirpus* spp. in freshwater marshes and swamps between 10 and 170 meters elevation.	P/Not available.
Pale yellow hayfield tarplant	*Hemizonia congesta* ssp. *Congesta*	--/--/1B	Valley and foothill grassland (sometimes roadsides) between 20 and 560 meters elevation.	P/Not available.
Pappose tarplant*	*Centromadia parryi* ssp. *parryi*	--/--/1B	Vernally mesic, often alkaline sites in coastal prairie, meadows, seeps, coastal salt marshes, and grassland. Found between 2 and 420 meters elevation.	P/Not available.
Point Reyes bird's-beak	*Cordylanthus maritimus* ssp. *Palustris*	--/--/1B	Coastal salt marsh with *Salicornia* spp., *Distichlis* spp., and *Spartina* spp. between 0 and 15 meters elevation.	P/Habitat exists at India Basin Park.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Point Reyes horkelia*	*Horkelia marinensis*	--/--/1B	Sandy flats and dunes near the coast, in grassland or scrub plant communities between 5 and 30 meters elevation.	P/Not available.
Robust spineflower*	*Chorizanthe robusta* var. *robusta*	FE/--/1B	Sandy terraces and bluffs or in loose sand in coastal habitats between 3 and 120 meters elevation.	P/Not available.
Rose leptosiphon	*Leptosiphon rosaceus*	--/--/1B	Coastal bluff scrub between 0 and 100 meters elevation.	P/Not available.
Round-headed Chinese houses	*Collinsia corymbosa*	--/--/1B	Dunes and coastal prairie between 10 and 30 meters elevation.	P/Not available.
San Francisco Bay spineflower	*Chorizanthe cuspidata* var. *cuspidate*	--/--/1B	Coastal scrub and coastal dunes on sandy slopes and terraces between 5 and 550 meters elevation.	C/Presently occurs at Fort Funston, Golden Gate Heights, and Lake Merced.
San Francisco campion	*Silene verecunda* ssp. *Verecunda*	--/--/1B	Coastal scrub, grassland, coastal bluff scrub, chaparral, coastal prairie at elevations between 30 and 645 meters.	C/Presently occurs at Mount Davidson and Rock Outcrop.
San Francisco collinsia	*Collinsia multicolor*	--/--/1B	Closed-cone coniferous forest and coastal scrub between 30 and 250 meters elevation.	C/Presently occurs at Bayview Park.
San Francisco gumplant	*Grindelia hirsutula* var. *maritime*	--/--/1B	Coastal scrub and grasslands between 15 and 400 meters elevation.	C/Presently occurs at Mount Davidson, Twin Peaks, Corona Heights, and Balboa Natural Area.
San Francisco lessingia	*Lessingia germanorum*	FE/SE/1B	Open sandy soils relatively free of competing plants, between 20 and 125 meters elevation.	P/Historically recorded at Lake Merced. Only current population found in the Presidio.
San Francisco owl's-clover	*Triphysaria floribunda*	--/--/1B	Coastal prairie and grassland between 10 and 160 meters elevation.	P/Historically recorded near Lake Merced.
San Francisco popcorn-flower	*Plagiobothrys diffuses*	--/SE/1B	Grassland and coastal prairie with marine influence between 60 and 485 meters elevation.	P/Not available.
San Mateo woolly sunflower*	*Eriophyllum latiobum*	FE/SE/1B	Woodlands between 45 and 150 meters elevation. Found on and off serpentine.	P/Not available.

Table 9
State and Federally Listed Species That May Occur Within the Natural Areas (*continued*)

Common Name	*Scientific Name*	Federal/State /CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Santa Cruz microseris	*Stebbinsoseris decipiens*	--/--/1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub. Found in open areas in loose or disturbed soils between 10 and 500 meters elevation.	P/Not available.
Western leatherwood*	*Dirca occidentalis*	--/--/1B	On mesic, brushy slopes. Mostly in mixed evergreen and foothill woodland communities between 3 and 550 meters elevation.	P/Not available.
White-rayed pentachaeta	*Pentachaeta bellidiflora*	FE/SE/1B	Open, dry, rocky slopes and grassy areas, often on soils derived from serpentine bedrock. Found between 35 and 620 meters elevation.	P/Not available.

Sources: CDFG 2009; USFWS 2009; CNPS 2009; SFRPD 2008b.

Federal Status
FE = Endangered. Species in danger of extinction throughout all or a significant portion of its range.
FT = Threatened. Species likely to become endangered within foreseeable future throughout all or a significant portion of its range.
FPD = Proposed delisting.

California State Status
SE = Endangered. Species whose continued existence in California is jeopardized.
ST = Threatened. Species, although not presently threatened with extinction, that is likely to become endangered in the foreseeable future.
CSC = Species of Concern.
SFP = State Fully Protected under Sections 3511 and 4700 of the Fish and Game Code.
SR = State Rare.

California Native Plant Society
1A = Plants presumed extinct in California.
1B = Plants that are rare or endangered in California and elsewhere.

Occurrence
P = Potential
C = Confirmed
U = Unlikely

*Indicates species that may occur at Sharp Park only.

the CNPS or the Golden Gate chapter of the National Audubon Society. The SFRPD has worked closely with such groups as the CNPS and the Audubon Society to develop a list of locally significant species. The CNPS and Golden Gate Audubon Chapter lists are in draft form and are presented in Appendix D. Currently the SFRPD does not have data on the locations of all locally significant species with the potential to occur within the Natural Areas.

The species from all lists are important for local conservation efforts and thus are analyzed in this EIR. However, impacts on federal, state, and CNPS 1A and 1B listed species are given additional consideration because of their protected status by federal and/or state laws.

Recovery Action Plan for the Mission Blue Butterfly

There is currently only one recovery action plan and associated Biological Opinion in effect for SFRPD operations in the Natural Areas. The Recovery Action Plan for the Mission Blue Butterfly (*Icaricia icarioides missionensis*) at Twin Peaks Natural Area (SFRPD 2009d) was initiated after a series of monitoring efforts suggested that the population of mission blue butterflies at Twin Peaks was extremely low. The Twin Peaks Natural Area is a relatively intact remnant of San Francisco's indigenous landscape, containing a mix of coastal scrub and grassland habitats. The grasslands at Twin Peaks currently support several colonies of lupine (*Lupinus albifrons* and *L. variicolor*), which are known host plants for the mission blue butterfly larvae. The Recovery Action Plan includes the relocation of individuals from populations at nearby San Bruno Mountain, the initiation of a captive rearing program, implementation of specific habitat enhancement activities, and the continued monitoring of reintroduction success. This plan was approved by the USFWS in 2009. The SFRPD manages the Twin Peaks Natural Area as prescribed in the Recovery Action Plan, which includes measures regarding habitat restoration and management, trash and debris removal, and recreation trail use and maintenance. The SFRPD continues to adhere to the Trail Maintenance and Construction BMPs and conducts annual monitoring of mission blue butterfly eggs and larvae each spring.

Habitat Types

Habitat types within the Natural Areas include annual grassland, perennial grassland, wetland, other herbaceous vegetation, northern Franciscan coastal scrub, central dune scrub, central coast riparian scrub, nonnative scrub, mosaic, native forest, nonnative forest, and "other," which is a general category for areas that either are not dominated by vegetation or are dominated by ornamental vegetation. These correspond roughly to the classification system of Sawyer et al. (2009). Special status species that may use these habitat types are presented in Table 9.

Riparian Habitat, Wetlands, and Other Sensitive Habitats

The sensitive habitats and natural communities identified in this EIR include riparian habitat, wetlands, and those identified in the SNRAMP, in local or regional plans, policies, or regulations, or by the CDFG or USFWS. Coastal scrub, while not identified as sensitive habitat in local or regional plans, policies, or regulations, or by the CDFG or USFWS, was identified in the SNRAMP as a sensitive habitat.

Riparian habitat within the Natural Areas consists of willow scrub, which can be found within the central coast riparian scrub vegetation type. This habitat type occurs at Glen Canyon Park, Lake Merced, McLaren Park, and Sharp Park.

Several different types of wetlands are present within the Natural Areas, such as free-flowing creeks (Glen Canyon Park and Sharp Park), tidal salt marsh wetland (India Basin), open water (Lake Merced, Pine Lake, and Sharp Park), wet meadow (Bayview Park, Lake Merced, McLaren Park, and Sharp Park), willow scrub, and freshwater marsh (Lake Merced, McLaren Park, Pine Lake, and Sharp Park).

A wetland delineation was conducted for the Laguna Salada wetland complex at Sharp Park. Most of the wetlands delineated were characterized as freshwater marsh (19.5 acres), followed by wet meadow (2.5 acres) and willow scrub (1 acre) (SFRPD 2008a). These areas meet the USACE's technical criteria for classification as wetlands. The unvegetated open water (4.5 acres) met the USACE technical criteria for "other waters of the US." due to the presence of an ordinary high water mark. Although wetland delineations have not been conducted in areas other than Sharp Park within the Natural Areas, other wetland types in these areas likely meet the USACE technical criteria for wetlands or other waters of the US.

Areas that meet the USACE technical criteria for wetlands or other waters of the US may be protected under Section 1600 of the California Fish and Game Code and thus may be regulated by the CDFG. In addition, these areas are considered wetlands and thus are protected, under the California Coastal Act. However, these areas may or may not be protected by Section 404 of the Clean Water Act, depending on whether they are one of the following:

- Traditional navigable waters;
- Wetlands next to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent; or

- Wetlands that directly abut the tributaries described in the previous bullet.

Under the California Coastal Act, an area is classified as a wetland if it meets only one of the three parameters required by Section 404 of the Clean Water Act's definition of a wetland: hydric soils, hydrophytic vegetation, or wetland hydrology. Some wetlands may also meet criteria as "waters of the state" and be regulated by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). Additionally, wetlands meeting CCC criteria may also occur at Lake Merced and India Basin which are both within the coastal zone jurisdiction. The SNRAMP maps all wetland features throughout the Natural Areas. Although not evaluated as to whether they meet USACE jurisdiction standards, all wetland features have been identified. A wetland delineation of each of these areas would be required prior to implementation of programmatic projects to determine the exact jurisdiction of the USACE, SFBRWQCB or CCC. It is expected that no additional wetland areas within the Laguna Salada wetland complex would be identified based on the SFBRWQCB and CCC classifications.

Several types of other sensitive habitat exist within the Natural Areas, including coastal scrub, dune habitat, oak woodlands, and native grasslands. These were all conspicuous components of the historic San Franciscan landscape and are considered regionally sensitive due to acreage lost to urban development, high value to special status species, and lack of recruitment (within oak woodlands). Table 10 presents the locations of riparian, wetland, and other sensitive habitat types in the Natural Areas.

The SFRPD's Final Dog Policy (SFRPD 2002) excludes dogs (on- and off-leash) from sensitive habitat areas, such as sensitive wildlife areas (e.g., breeding habitat for birds), sensitive remnant native plant communities (e.g., wetlands), sensitive plant populations (e.g., locally rare wildflower species), and high erosion-prone areas and excludes them temporarily from restoration areas. This policy attempts to reconcile conflicting priorities between dog walkers and other recreational uses.

Native Resident and Migratory Fish

Native resident and migratory fish are limited in the Natural Areas but do exist in Lake Merced and Pine Lake. Native resident fish in Lake Merced are hitch (*Lavinia exilicauda*), hardhead (*Mylopharadon conocephalus*), Sacramento blackfish (*Orthodon microlepidotus*), Sacramento sucker (*Catostomus occidentalis*), threespine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), and Sacramento perch (*Archoplites interruptus*). Rainbow trout (*Oncorhynchus mykiss*) are present in Lake Merced, but there is no spawning habitat for them in the lake, so they cannot reproduce.

Table 10
Sensitive Habitat Types Identified in the SNRAMP

	Natural Area																								
	Lake Merced	**Glen Canyon Park**	**Sharp Park**	**McLaren Park**	**O'Shaughnessy Hollow**	**Twin Peaks**	**Hawk Hill**	**Oak Woodlands***	**Balboa**	**Buena Vista**	**Strawberry Hill***	**Corona Heights**	**Lily Pond***	**Whiskey Hill***	**15th Avenue Steps**	**Everson-Digby**	**Mount Davidson**	**Rock Outcrop**	**Brooks Park**	**Duncan-Castro**	**Bayview Park**	**Palou-Phelps**	**Bernal Hill**	**Pine Lake**	**India Basin**
Habitat Type																									
Riparian	X	X	X	X			X											X			X		X	X	
Coastal scrub	X	X	X	X	X	X		X				X			X		X		X		X			X	
Dune	X						X	X	X		X							X							
Oak Woodland	X	X	X	X		X		X		X	X	X									X				
Native Grasslands	X	X	X	X	X	X						X	X	X	X	X		X	X	X	X	X	X		
Wetlands	X	X	X	X	X																X			X	X

*Part of the Golden Gate Park Oak Woodlands Natural Area

Ongoing stocking occurs to maintain this fishery. Threespine stickleback are found at Pine Lake. The one migratory fish found in the Natural Areas is coho salmon (*O. kisutch*), which was historically recorded at Lake Merced (Appendix D); coho salmon are federally listed as threatened along the northern California coast and as endangered along the central California coast, but they are not listed in the project area. Lake Merced has been disconnected from the ocean for many years and coho salmon are no longer present at this Natural Area. No fish are known to exist in Laguna Salada or Horse Stable Pond at Sharp Park.

Migratory Birds

Many migratory birds use the Natural Areas for foraging, nesting, and perching habitat, as the Natural Areas provide habitat in an area that is otherwise highly urbanized. Migratory birds that use the Natural Areas are presented in Appendix D.

Some of the larger Natural Areas, such as Lake Merced, McLaren Park, and Sharp Park, provide a complex mosaic of habitats that migratory and resident birds use for foraging, nesting, and roosting and thus are more important bird habitat than the smaller natural areas. In particular, Lake Merced provides open water, freshwater marsh, riparian, and upland habitats that are heavily used by bird species. This location serves as an important resting area for migratory birds and is a nesting area for approximately 50 species of resident birds (SFRPD 2006). Almost 70 species of birds have been documented nesting within the Lake Merced area, and several of these are of special concern or locally rare or are neotropical migrants.

Among the Natural Areas, India Basin is the only one that borders San Francisco Bay and provides the only habitat for migratory shorebirds. There are ten species of birds that are considered locally sensitive that have been observed at India Basin, and several of these are not found at other Natural Areas: black oystercatcher (*Haematopus bachmani*), pelagic cormorant (*Phalacrocorax pelagicus*), Brandt's cormorant (*P. penicillatus*), and pigeon guillemot (*Cepphus columba*). None of the locally significant species that have been observed are known to breed at India Basin. The restored wetlands and mudflats support nesting American avocet (*Recurvirostra americana*) and killdeer (*Charadrius vociferus*). If restored, the more extensive saltgrass/pickleweed area could provide habitat for California black rail (*Laterallus jamaicensis coturniculus*) and California clapper rail (*Rallus longirostris obsoletus*), both protected under the state and federal Endangered Species Acts.

Smaller Natural Areas, such as Hawk Hill and Grandview Park, may provide suitable nesting and foraging habitat for small songbirds and may support a prey base for foraging raptors.

Wildlife Corridors

Overall, the Natural Areas provide a mosaic of habitats that are accessible to mobile wildlife species, particularly birds. They offer foraging, nesting, and roosting habitats for many species as they travel within San Francisco and beyond.

Lake Merced is the largest freshwater coastal lake and wetland system between the Pescadero Marsh in south San Mateo County and the Point Reyes Peninsula in Marin County. As such, it provides refuge for many migratory birds, as described previously.

Sharp Park is bordered in part by undeveloped areas, including Sweeny Open Space and Milagra Ridge, which allows it to serve as a relatively undisturbed corridor for wildlife, particularly birds. Sharp Park's connectivity to high-quality natural habitats also allows it to support medium size and large mammals, including numerous general wildlife species, such as the black-tailed deer (*Odocoileus hemionus columbianus*), bobcat (*Lynx rufus californicus*), common porcupine (*Erethizon dorsatum epixanthum*), coyote (*Canis latrans*), and mountain lion (*Puma concolor californicus*).

Glen Canyon Park, Twin Peaks, and the Interior Greenbelt also serve as important wildlife corridors.

Native Wildlife Nursery Sites

All of the Natural Areas support potential or confirmed native bird nesting habitat and potential breeding habitat for other wildlife species. Native birds that may nest within the Natural Areas are shorebirds, songbirds, and raptors and include such habitats as nonnative forests, grasslands, riparian scrub, and mudflats.

V.G.3 Impacts

Significance Thresholds

As stated in Appendix G, the Environmental Checklist Form, of the CEQA Guidelines, a proposed project would have a significant biological resources impact if it were to result in any of the following:

- A substantial adverse effect, either directly or indirectly through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the CDFG or USFWS;
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;

- A substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, and coastal wetlands), through direct removal, filling, hydrological interruption, or other means;
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites; or
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

For the purpose of this EIR, the definition of "substantial," as used in the significance criteria threshold above, has three principal components, each of which contributes to the determination of impacts on biological resources and their significance:

- Magnitude and duration of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resource (rarity); and
- Susceptibility of the affected resource to disturbance

The evaluation of significance must also include the interrelationship of these three components. For example, a relatively small-magnitude of impact on a protected species could be considered significant because the species is rare and believed to be very susceptible to disturbance. Conversely, a natural community such as California annual grassland is not necessarily rare or sensitive to disturbance, and thus a much larger magnitude of impact might be required to result in a significant impact. Impacts on biological resources are considered significant when project-related habitat modifications (e.g., trail modification, erosion control measures, or large-scale vegetation removal) could reduce special status species populations to the extent that they become locally less numerous; impacts on habitats are considered significant where the habitats could not continue to support viable populations of associated plant and animal species as a result of project implementation. Impacts may also be considered significant where they would result in the direct injury or mortality of protected species. Potentially significant impacts are those that might not be sufficiently reduced through nondiscretionary regulatory requirements. For impacts determined to be either significant or potentially significant, the SFRPD would need to implement mitigation measures to reduce the potential level of an impact to less than significant.

Impacts Addressed in the Initial Study

In the Initial Study (Appendix A), no significant impacts related to the following criteria were identified:

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As a result, this CEQA significance criterion is not evaluated further in this EIR.

Significant Natural Resource Areas Management Plan Impacts

Most project activities would benefit biological resources over the long term, as project management actions aim to achieve the following:

- Maintain viable populations of all special status species;
- Maintain and enhance native plant and animal communities;
- Maintain and enhance local biodiversity;
- Reestablish native community diversity, structure, and ecosystem function where degraded;
- Improve natural area connectivity; and
- Decrease the extent of invasive exotic species cover.

Overall, project activities would protect and enhance special status species habitat, riparian habitat, wetlands, migratory wildlife habitat, nursery sites, and other sensitive habitats in the Natural Areas.

Projects implemented under the SNRAMP can be categorized as either routine maintenance or programmatic projects involving large-scale weed removal, large-scale erosion control projects, trail modification, or other projects involving an increased use of an area. Trail modification projects may include the creation of new trails, the rerouting of existing trails, or the decommissioning of trails. For this analysis, programmatic projects are considered to be those that are greater than half an acre, whereas routine maintenance projects are considered to be those under half an acre. Routine maintenance activities are similar to those daily maintenance activities currently being conducted by the SFRPD. Impacts associated with programmatic projects are analyzed at the programmatic level. Additional environmental review of those projects would be undertaken, in accordance with CEQA requirements, once funding is available and preliminary design of specific projects has been completed or other additional project level details are developed. In addition, programmatic impacts of the SNRAMP (e.g., use of the Natural Areas) are also addressed in the programmatic

analysis. Impacts associated with routine maintenance and the Sharp Park restoration project are analyzed at the project level.

The purpose of the Sharp Park restoration project is to enhance the Laguna Salada wetland complex in a manner that provides higher quality habitat for the San Francisco garter snake and one of its primary food sources, the California red-legged frog. As such, the Sharp Park restoration project, consistent with the California Fish and Game Code, is intended as a recovery action for the San Francisco garter snake.

All routine maintenance activities proposed in the Laguna Salada wetland complex are discussed below in the sections addressing the Sharp Park restoration project.

Before implementing the proposed Sharp Park restoration, the SFRPD would be required to undertake the following, consistent with state and federal laws:

- Prepare a Biological Assessment and consult with the USFWS to obtain a Biological Opinion and incidental take permit in accordance with the ESA;
- Coordinate with CDFG for a consistency determination for federally and state protected species (San Francisco garter snake and California red legged frog)
- Apply for a take permit for state-only listed species (western pond turtle) pursuant to Section 2081(b) of the CESA;
- Obtain a permit from the US Army Corps of Engineers under Section 404 of the Clean Water Act;
- Obtain a water quality certification from the SFBRWQCB under Section 401 of the Clean Water Act;
- Obtain a Streambed Alteration Agreement from the CDFG under Section 1602 of the California Fish and Game Code; and
- Obtain a Coastal Development Permit, as required by the CCC.

These regulatory requirements may also apply to other programmatic activities in the SNRAMP. At the time a specific project is proposed, the SFRPD would determine the appropriate regulatory requirements.

Special Status Species

Programmatic Impacts

Impact BI-1: The SNRAMP and implementation of programmatic projects proposed under the SNRAMP would have a substantial adverse effect on special status plant species. (Less than Significant with Mitigation)

Programmatic project activities include invasive weed and tree removal, trail modification, and large-scale erosion control measures. Vegetation removal and ground disturbance associated with heavy equipment use as part of these activities have the potential to inadvertently remove special status plant species that may occur in the Natural Areas and could directly impact habitat for protected and locally significant plant species. In addition, the use of herbicides and pesticides for vegetation removal could directly impact protected and locally significant plant species in the area. Operational impacts associated with the SNRAMP include increased foot traffic in areas of new trail creation, which could increase trampling of any protected and locally significant plant species if present next to new trails. The continued use of DPAs may impact protected and locally significant species by trampling, erosion, or defecation. Table 9 above lists the protected species (CNPS List 1B and 1A) and the Natural Areas they occur in or where they may potentially occur. The following protected plant species have been identified as occurring in the Natural Areas: California seablite (*Suaeda californica*) at India Basin; coastal triquetrella (*Triquetrella californica*) at Tank Hill; dune gilia (*Gilia capitata* ssp. *chamissonis*) at Hawk Hill and Lake Merced; fragrant fritillary (*Fritillaria liliacea*) at Bernal Heights; San Francisco Bay spineflower (*Chorizanthe cuspidate* var. *cuspidate*) at Golden Gate Heights and Lake Merced; San Francisco campion (*Silene verecunda* ssp. *verecunda*) at Mount Davidson and Rock Outcrop; San Francisco collinsia (*Collinsia multicolor*) at Bayview Park; and San Francisco gumplant (*Grindelia hirsutula* var. *maritima*) at Mount Davidson, Twin Peaks, Corona Heights and Balboa. Other Natural Areas may contain suitable habitat for other protected plant species and may have historically supported protected plant species. The SFRPD maintains a GIS database with all recorded locations of protected and special status plants within the Natural Areas.

In addition, the SNRAMP identifies other plant species that may be classified as locally significant. Appendix D includes a list of locally significant plant species and the Natural Areas they occur in.

Protected Species

Invasive Vegetation Removal. Removing invasive vegetation under programmatic projects could result in the inadvertent removal of protected species that may occur in the Natural Areas. Disturbance

associated with the removal of invasive species at or near the locations of protected plant species habitat, could directly impact those species through removal or crushing. As a result of the potential injury or mortality to protected species, vegetation removal as part of programmatic projects could have significant adverse impacts on protected species. The SFRPD would avoid significant impacts to protected plant species by implementing Mitigation Measure M-BI-1a, which requires pre-activity surveys for protected plant species during the proper blooming period to confirm their presence or absence in a project area. If a population of a protected species were present in the disturbance footprint, Mitigation Measure M-BI-1a requires the SFRPD to avoid impacts to these species wherever feasible. Where avoidance is not feasible, Mitigation Measure M-BI-1a requires that the SFRPD would adhere to the following procedures: 1) minimize impacts on protected plant species by, for example, installing exclusion fencing or other appropriate minimization measures; 2) restore impacted areas, which for plants, may include collecting seed from the species affected and replanting the site after disturbance; or 3) compensate for loss of these plant species; this may be accomplished by enhancing the habitat or planting seeds at other locations within or outside of the Natural Areas. This measure would reduce impacts to protected plant species by avoiding and minimizing impacts to the degree feasible and mitigating for any loss of protected plant species either through habitat restoration and enhancement or compensation. By implementing Mitigation Measure M-BI-1a, short-term programmatic project impacts from vegetation removal on protected plant species would be ***less than significant***.

Of the Natural Areas where known populations of protected plant species occur, invasive trees are proposed to be removed from Lake Merced, Mount Davidson, Bayview Park, Twin Peaks, and Corona Heights. Tree removal could impact the protected dune gilia, San Francisco spineflower, San Francisco campion, San Francisco gumplant, and San Francisco collinsia. Impacts from removing invasive trees from these Natural Areas are the same as those described in the previous paragraph. With implementation of Mitigation Measure M-BI-1a, short-term programmatic project impacts to protected plant species from the removal of invasive trees also would be ***less than significant***.

The use of herbicides and pesticides for invasive vegetation removal projects could directly impact protected plant species in the area by direct mortality through inadvertent exposure. Chemicals are intended to be used on invasive nonnative vegetation and not on special status species. The SFRPD staff, knowledgeable in the location of all special status species, would apply the herbicides and pesticides, the toxicity of which is further discussed in Section V.I.3 (page 388). Because these treatment methods would be used only to prevent the spread of nonnative invasive species and other pests, impacts would ultimately benefit protected species by removing competing vegetation, thereby providing a higher quality habitat. The elimination of nonnative species would provide a

greater area of suitable habitat for native species to naturally recruit and thrive. To minimize the potential impacts of herbicide application, the SFRPD would adhere to the City's IPM Program, in which pesticide use in the Natural Areas would be as little as possible to achieve the desired results and carefully monitored. The SFRPD would use the least toxic methods and materials that are appropriate for the environment in which they are applied (this is detailed in Section III.E.5 on page 90). As a result, short-term impacts to protected plant species by the use of herbicides and pesticides as part of programmatic projects would be ***less than significant***.

Invasive species removal projects would replace the removed invasive trees and other vegetation with native plants, thus improving native habitats and reducing competition from invasive species. Additionally, one of the primary goals of the SNRAMP is to protect and restore sensitive habitats; to this end, the SNRAMP includes recommended actions for augmenting special status plant populations, such as VP-1d[2] and EM-1d[3], which recommends augmenting sensitive plant populations to prevent extinction of rare or uncommon plants, and CH-1c,[4] which recommends reintroducing populations of rare plant species. As a result, protected plant species populations may increase, so long-term impacts on protected plant species from vegetation removal are anticipated to be beneficial.

Trail Modification. Of the Natural Areas where known populations of protected plant species occur, new trail creation is proposed at Lake Merced, Bernal Heights, Golden Gate Heights, and Bayview Park. Trail creation at these Natural Areas could impact the following protected plant species: dune gilia, San Francisco Bay spineflower, fragrant fritillary, and San Francisco collinsia. Ground-disturbing activities associated with the use of heavy equipment to reroute trails and construct new trails could directly impact habitat for protected plant species; this could result in the inadvertent removal of these species. Indirect impacts to protected species could occur through the creation of new trails; this would increase foot traffic in an area, thus increasing the instances of these plant species located next to new trails being trampled. However, as stated in Section III.E.5 (page 92), as part of the BMPs used by the SFRPD, new trail placement and construction access routes would be designed to avoid sensitive vegetation and habitats, thus avoiding short-term construction and long-term operational impacts on protected plant species. Furthermore, M-BI-1a, as discussed above, requires that plant surveys be conducted and that avoidance and minimization measures be employed that include the installation of exclusion fencing or other appropriate minimization

[2]VP-1d—Augment existing sensitive plant populations

[3]EM-1d—Augment existing sensitive plants to prevent extinction of rare or uncommon plant species

[4]CH-1c—Reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco

measures, the restoration of impacted areas (which may include collecting seed from protected plant species affected, salvaging affected plants, and replanting the site after disturbance), or compensating for the loss of protected species (this may be accomplished by enhancing the habitat and/or planting protected plant seeds at other locations in or outside of the Natural Areas). With the SNRAMP's proposed avoidance and minimization measures for trail creation and mitigation measures outlined in M-BI-1a, impacts to protected species from trail modification would be ***less than significant***.

Erosion Control. Large-scale erosion control projects may result in ground disturbance, which could directly impact habitat for protected plant species and could inadvertently remove protected plant species in the Natural Areas. Erosion control projects identified in the SNRAMP are to occur at Bayview Park, Glen Canyon/O'Shaughnessy Hollow, and Sharp Park. Of these, Bayview Park is the only Natural Area with the recorded presence of a protected plant species, San Francisco collinsia, which is found in closed-cone coniferous forest and coastal scrub habitat. Habitat for other protected plant species may occur at the other Natural Areas. As a result, large-scale erosion control projects may significantly impact protected plant species. Implementing Mitigation Measure M-BI-1a would require the SFRPD to take measures to avoid, minimize, restore, or compensate for impacts to special status plants from large-scale erosion control projects. With implementation of Mitigation Measure M-BI-1a, programmatic project impacts on protected plant species from large-scale erosion control projects would be ***less than significant***.

Other Impacts to Protected Species

Continued use of existing trails could directly impact protected plant species through trampling and could introduce invasive plant species. This could result in an indirect impact on protected plant species through the degradation of habitat quality. As a result, implementation of the SNRAMP would have potentially significant impacts on these species. Implementing Mitigation Measure M-BI-1a requires that SFRPD post signs or install fences along trails in sensitive habitat areas if impacts on vegetation are observed as a result of visitors straying from trails. Additionally, Mitigation Measure M-BI-1a also requires that the SFRPD consider rerouting trails if necessary to avoid impacts on protected species. With implementation of Mitigation Measure M-BI-1a, impacts from the continued use of trails on protected plant species would be ***less than significant***.

DPAs in certain Natural Areas may be impacting protected plant species by trampling, erosion, or defecation. DPAs in Natural Areas that contain known populations of protected plant species include Bernal Hill and Lake Merced. Protected plant species at these Natural Areas that could be

impacted by dogs are fragrant fritillary, dune gilia and San Francisco Bay spineflower. Dog activity in DPAs is an existing use, and the SNRAMP does not propose increasing this activity; however, closing or reducing DPAs under the SNRAMP could intensify dog use in the remaining DPAs. In addition, because resources to enforce leash laws are limited, dogs would likely continue to be let off leash in parts of Natural Areas outside of DPAs, even though that activity is prohibited. As a result, dogs may currently be impacting and may continue to impact protected plant species in or near DPAs. Pet owners may contribute to disturbance via trampling. As a result, implementation of the SNRAMP could have significant adverse impacts on these species. The dune gilia and San Francisco Bay spineflower are only located at Lake Merced; under LM-7a,[5], the SNRAMP proposes to close this DPA. Due to the current restrictions on new DPAs, the DPA at Lake Merced would not be relocated as stated in recommended management action LM-7a, in which case it would be removed, restoration of the site would continue following removal, and these two protected species would not be impacted. With implementation of Mitigation Measure M-BI-1a, which requires fencing or decommissioning DPAs, programmatic impacts of dog use on protected plant species would be ***less than significant***.

Locally Significant Species. Impacts on locally significant species from programmatic project activities would be similar to those described for protected species. Impacts to these special status species could also be significant. If a significant population of a locally significant plant species were present in the disturbance footprint, Mitigation Measure M-BI-1b requires the SFRPD to avoid impacts on these species wherever feasible. Where avoidance is not feasible, Mitigation Measure M-BI-1b requires that SFRPD minimize impacts and restore the habitat in impacted areas. With implementation of Mitigation Measure M-BI-1b, impacts from programmatic project activities on locally significant plant species would be ***less than significant***.

M-BI-1a: Protection of Protected Species and Riparian and Wetland Habitat

Where there is potential for protected species or their habitats (plants, birds, terrestrial, and aquatic species) or other protected habitats, namely riparian and wetland habitat (as protected by CDFG, CCC, SFBRWQCB and/or USACE) to be affected directly or indirectly by a programmatic project, the SFRPD will prepare and provide for ERO review a compliance plan that details the proposed project, whether any protected species, protected species habitat, riparian habitat, or wetland habitat exists, the appropriate life histories of such resources (as applicable to special status species), and how the project will achieve compliance with this mitigation measure, including details as to how the SFRPD will first avoid, then minimize and if necessary restore, and/or compensate for any

[5]LM-7a—Relocate the DPA to a different area to avoid disturbing breeding birds in the current location

impacts to protected species and/or their habitats or other regulated habitats. Where there is potential for impacts to protected species and/or riparian and wetland habitats that are regulated by state, federal and/or local agencies, the compliance plan shall identify those agencies, and the SFRPD shall coordinate with all applicable resource agencies to obtain the appropriate permits and/or consultation as required by state or federal law. This mitigation measure requires SFRPD to implement the following, subject to modification through the regulatory approval processes required for an individual project:

1. To avoid disturbance to protected species, their habitats, and riparian or wetland habitat, the following measures will be implemented by the SFRPD:

    a. For protected species, a qualified SFRPD biologist[6] shall survey for suitable habitat within the project area before the project begins, according to USFWS and CDFG protocol for the protected species having the potential to occur. If no protocol exists, surveys shall be conducted according to generally accepted survey methods. If individuals were found or if it is determined that the potential exists for protected species to be present, the SFRPD shall redesign the proposed project to avoid impacts on protected species. Avoidance/minimization measures shall include conducting project activities during periods of the species lifecycle when the species would not be affected or may be minimally affected by project activities. If it is infeasible to avoid disturbance of protected species, the SFRPD will contact the USFWS or CDFG and undertake appropriate consultation according to the CESA or ESA (unless an existing Biological Opinion is already in place and the proposed activities fall under the actions of that Biological Opinion, as may be the case for impacts to the mission blue butterfly at Twin Peaks). Any additional requirements agreed to during consultation with the USFWS and CDFG, or other regulatory agencies, to protect the species would be implemented, including restoration and compensation, where required.

    b. Where there is potential for wetland or riparian areas to be affected by programmatic activities, the SFRPD shall coordinate with CDFG, CCC, SFBRWQCB, USACE and/or other applicable agencies to determine the jurisdictional boundaries of protected riparian and wetland habitat. SFRPD shall apply for all appropriate permits for effects to riparian areas and wetlands (including, but not limited to, USACE 404

[6] A SFRPD biologist knowledgeable about protected species occurring within the area proposed for disturbance. If no SFRPD biologists are familiar with the protected species occurring in the area proposed for disturbance, the SFRPD would be required to obtain a qualified biologist to conduct protected species surveys.

permits, CDFG Section 1602 permits, SFBRWQCB 401 Water Quality Certifications, and coastal development permits). Any additional requirements to protect riparian and wetland habitat resulting from the regulatory approval processes would be implemented, including restoration and compensation, where required.

c. As discussed in Section III.E.5 (page 92), new trails would be designed to avoid sensitive species habitat and riparian and wetland habitat. Where habitat for protected species or riparian and wetland habitat cannot be avoided, the programmatic project would be required to restore and/or compensate for habitat losses in accordance with measures 4 and 5 of this mitigation measure. Restoration and/or compensation shall be required at a minimum of a 1:1 ratio of habitat affected to habitat restored and/or compensated.

2. To minimize disturbance to protected species, their habitat, and wetland and riparian habitat, as a result of programmatic projects, the following minimization measures will be implemented by SFRPD, as applicable.

   a. Post signs or install flagging and temporary fencing around protected species habitats and riparian and/or wetland habitats that are not being directly restored. No activities shall be allowed within fenced areas, including moving equipment, storing materials, or temporarily stockpiling soils. All exclusion fencing will be removed when work in the project area is completed.

   b. Where stream crossings are necessary, temporary stream crossings will be located in previously disturbed areas lacking riparian vegetation, pools, side ponds or other sensitive habitats unless otherwise permitted by natural resource agencies for habitat improvement activities or hazard abatement. At a minimum, all temporarily impacted areas shall be restored to their previous condition.

   c. In or near riparian or wetland habitat, programmatic project activities shall be limited to the dry season (generally April 15 to October 15) and include protective practices such as the use of geotextile cushions and other materials if heavy equipment will result in rutting or soil displacement (i.e. timber pads, prefabricated equipment pads, thick vegetative slash, geotextile fabric) and/or vehicles with balloon tires shall be employed.

   d. Where protected species are potentially present, a biological monitor shall be required (as determined after appropriate consultation with USFWS and CDFG) during implementation of the proposed project. The biological monitor shall survey

for protected species to ensure avoidance of those species, wherever feasible; where avoidance is not feasible, the monitor would relocate any species throughout implementation of the programmatic project, as permitted and approved by natural resource agencies. The exact relocation sites and requirements for relocation shall be determined through consultation/coordination with USFWS and/or CDFG.

3. To minimize impacts from the continued use of the Natural Areas on protected species, their habitats, and riparian and wetland habitat, the SFRPD shall undertake the following:

    a. If visitor use of the Natural Areas is resulting in impacts on protected species, their habitat and/or riparian and wetland habitat, the SFRPD shall post signs or install fences along trails to protect those habitats. Fences would allow public access on designated trails but would discourage dogs and people from drifting off-trail. If use continues to adversely impact protected species, their habitats, riparian and/or wetland habitat, the SFRPD shall reroute trails and/or restore affected habitat to avoid continued impacts of human disturbance.

    b. DPAs within the Natural Areas shall continue to be evaluated in accordance with the SFRPD's Dog Policy and shall be monitored for adverse effects to biological resources**.** If substantial adverse impacts to protected species are confirmed, the SFRPD shall take actions to protect those species, which may include installing signs, fencing, or protections including, but not limited to, decommissioning DPAs, in accordance with the SFRPD Dog Policy.

4. Where disturbance of protected species, their habitat, or riparian or wetland habitat cannot be avoided or sufficiently minimized, the SFRPD shall restore the habitat functions and services of areas that are subject to disturbance during programmatic project activities at a minimum of a 1:1 ratio, in accordance with a detailed restoration plan or plans prepared by a qualified restoration ecologist and would be consistent with all required permits. Final restoration plans would include the following:

    a. Detailed work descriptions for the restoration actions; and

    b. Ecologically based criteria that shall be used to determine whether the restoration project(s) were achieving identified performance objectives. A schedule for monitoring and reporting on monitoring results shall be included, as agreed upon in coordination with applicable permitting agencies, and as needed to verify whether the vegetation is fully established. The final restoration plan may include the following:

- Detailed description of restoration activities;
- Restoration goals;
- Restoration work plan;
- Management and maintenance plan;
- Success criteria and performance indicators;
- Monitoring plan; and
- Site protection measures.

5. Where avoidance and minimization measures are not sufficient to prevent a programmatic project from permanently removing protected species habitat, riparian, and/or wetland habitat and on- or off-site restoration or enhancement is not practicable, SFRPD shall provide compensatory mitigation for the impacts created at a minimum of a 1:1 ratio, unless otherwise determined by natural resources agencies. Examples include mitigation banking, in-lieu funds to parks for their restoration, or off-site preservation. Such activities would be evaluated in subsequent environmental reviews.

M-BI-1b: Protection of Locally Significant Plant Species during Implementation of Programmatic Projects

Where there is potential to impact locally significant plant species and SFRPD has not substantially enhanced the habitat for that species through restoration activities implemented by the SNRAMP already, SFRPD shall undertake the following measures to avoid and minimize impacts to locally significant plant species:

- A qualified SFRPD biologist shall survey suitable habitat within the project area before the project begins. If locally significant plant species are found, the SFRPD shall redesign the proposed project to avoid or minimize impacts on locally significant plant species.
- Where impacts to locally significant plant species cannot be avoided, SFRPD shall harvest the seeds of, or salvage, the affected species and use collected plants or seeds to enhance and/or restore similar habitat within the Natural Areas or outside of the Natural Areas, if necessary. To the extent feasible, habitat enhancement or restoration shall take place at sites already planned for other mitigation for the project or as part of other restoration activities carried out by SFRPD; if habitat is not suitable at those sites, habitat enhancement or restoration shall be carried out at appropriate nearby sites through strategies such as transplantation, relocation or seed harvest. Enhancement and/or restoration of locally

significant plant species habitat shall be designed to meet a minimum of a 1:1 ratio of affected plants/habitat to enhanced and/or restored habitat.

Impact BI-2: The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on special status bird species. (Less than Significant with Mitigation)

Similar to impacts on protected and locally significant plant species (Impact BI-1), vegetation removal, trail modification, and the use of herbicides and pesticides have the potential to directly affect nesting birds and habitat for special status bird species that may occur in the Natural Areas or result in direct impacts, such as injury, mortality, or destruction of nests for those species protected by the MBTA and California Fish and Game Code and other protected bird species. Under the proposed project, approximately five percent, or 3,329, of the invasive trees within the MA-1 and MA-2 areas in San Francisco would be removed and replaced with native trees; in Sharp Park, approximately 28 percent, or 15,000, of the invasive trees within the MA-1 and MA-2 management areas would be removed and replaced with other native vegetation; these trees may provide nesting habitat for bird species protected under the MBTA and the California Fish and Game Code.

State and federally listed bird species have been recorded nesting at Sharp Park and Lake Merced. The double-crested cormorant (*Phalacrocorax auritus*) presently nests at Lake Merced and the salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) presently occurs at Lake Merced and Sharp Park. The yellow warbler (*Dendroica petechia*) and bank swallow (*Riparia riparia*) have also been observed at Lake Merced. The double-crested cormorant nests on coastal cliffs and in trees. The salt marsh common yellowthroat requires saltwater or freshwater marsh and dense vegetation for nesting. The yellow warbler requires riparian woodlands and the bank swallow requires vertical cliffs near water bodies. Bird species protected by the MBTA may occur at these and other Natural Areas.

Invasive Vegetation Removal. Removing invasive vegetation under programmatic projects could result in unintended impacts on protected bird species or their nests that may be present in the Natural Areas. Disturbance associated with the removal of invasive weeds and trees could directly impact those species and other bird species through injury, mortality, or destruction of nests. As a result, vegetation removal as part of programmatic projects could have significant adverse impacts on these species. The double-crested cormorant, which nests on coastal cliffs and in trees, and the salt marsh common yellowthroat, which requires dense riparian or wetland vegetation for nesting, are known to nest at Lake Merced. Tree removal activities proposed at Lake Merced include the

removal of 134 invasive trees with 11,866 trees remaining. The small percentage of trees being removed would have a short-term impact through disturbance and potential destruction of nests on the salt marsh common yellowthroat but would not result in any long-term habitat loss for this species. There would be no impacts from vegetation removal on the double-crested cormorant because LM-3a in the SNRAMP calls for avoiding removal of trees used by cormorants and prohibits removing trees within 150 feet of occupied nests. The yellow warbler and bank swallow have been observed foraging over Lake Merced, but have not been observed nesting there and would therefore not be impacted by invasive vegetation removal at Lake Merced. In compliance with the MBTA, the SFRPD would avoid harming or removing the nests of these species and any migratory bird species. Implementation of GR-4b in the SNRAMP (page 109) would ensure that all vegetation management activities would be conducted outside the breeding season for bird species (February 1 through August 31, as designated by CDFG), unless these activities had already begun before the breeding season and had already removed nesting habitat, or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present. If active nests (or large abandoned stick nests) are discovered as part of the breeding bird survey, a 150-foot-radius avoidance buffer would be centered on the nest sites to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest. Measure GR-4b in the SNRAMP would ensure that direct impacts to nesting birds, including special status bird species, would be avoided and minimized. In accordance with Mitigation Measure M-BI-1a, SFRPD would be required to consult with appropriate regulatory agencies when there is potential for protected bird species to be affected by a programmatic project. Additionally, where protected or nesting bird habitat is temporarily or permanently removed, Mitigation Measure M-BI-1a would ensure that measures are taken to restore or compensate for indirect impacts as a result of habitat loss. With implementation of these measures and compliance with the MBTA, short-term impacts from programmatic vegetation removal on protected and nesting bird species would be ***less than significant.***

Invasive vegetation removal projects would replace the removed invasive trees and other vegetation with native plants, thus improving native habitat conditions and reducing competition from invasive species. As a result of habitat enhancement, the populations of protected bird species may increase. As such, the long-term programmatic project impacts from vegetation removal on protected bird species are expected to be beneficial.

The use of herbicides and pesticides for large-scale weed removal projects could potentially impact protected bird species in the area over the short-term through the inadvertent removal of habitat. Due to the low toxicity of the herbicides and pesticides that would be applied, accumulation in the

environment would not likely result in adverse impacts to protected bird species. Because these treatment methods would be used only to control undesirable weeds and pests in order to prevent the spread of nonnative invasive species and other pests, their use would have limited impacts on habitat for protected bird species. Due to the selective application of these treatment methods, birds could use other suitable vegetation that would be preserved adjacent to the treatment areas. The removed vegetation would be replaced with native vegetation, which would tend to provide higher quality habitat. The elimination of nonnative species would provide a greater area of suitable habitat for native species to naturally recruit and thrive, thus impacts to protected birds are expected to be beneficial over the long-term. To minimize impacts, the IPM Program (page 90) would employ the least-toxic decision-making model in its vegetation management and thus would only impact target invasive plant species, leaving viable habitat intact and avoiding direct impacts to birds from pesticide and herbicide use. Therefore with the implementation of the IPM Program and native species revegetation as part of the SNRAMP, impacts from herbicide and pesticide use on protected and nesting bird species would be ***less than significant***.

Trail Modification. The creation of new trails may require ground disturbing activities and the use of heavy equipment, and could increase foot traffic in an area, which could result in an increase in noise and disturbance to protected bird species as well. In compliance with the MBTA, the SFRPD would avoid harming or removing the nests of these species and any migratory bird species. Measure GR-4b (page 109) in the SNRAMP requires that vegetation management activities be conducted outside the breeding season (February 1 to August 31), unless these activities had already begun before the breeding season and had already removed nesting habitat or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot-radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest. This measure ensures that direct impacts to nesting birds, including special status bird species, would be avoided. With the implementation of Measure GR-4b and compliance with the MBTA, impacts from programmatic trail modification projects on special status bird species would be ***less than significant.***

Dog Play Areas. The DPA located at Lake Merced may be impacting special status bird species by the disturbance to nesting birds that may occur from the presence of dogs. Protected bird species that presently occur at Lake Merced include the double-crested cormorant, salt marsh common yellowthroat, yellow warbler, and bank swallow. The double-crested cormorants are known to nest next to the mesa, which is where the existing Lake Merced DPA is located. DPAs are an existing use,

and the SNRAMP does not propose increasing this activity. As a result, dogs may currently be impacting and may continue to impact protected or nesting birds within the DPA. However, recommended management action LM-7a of the SNRAMP requires the relocation of the DPA to a different area to avoid disturbing breeding birds in the current location. The Lake Merced DPA would not be relocated at this time due to the current restrictions on new DPAs, in which case it would be removed and restoration of the site would continue following removal. With implementation of this measure, impacts to protected or nesting birds at Lake Merced would be beneficial and ***less than significant***. Other Natural Areas may similarly experience impacts to biological resources as a result of continued dog use. These impacts may be potentially significant if, for example, dog use results in direct impacts to breeding birds (i.e., mortality, harassment, etc.). However, with implementation of Mitigation Measure M-BI-1a, which requires measures to reduce impacts of DPAs on special status species, programmatic impacts of dog use on special status bird species at all other Natural Areas would be ***less than significant***.

Locally Significant Species. Locally significant bird species occurring in the Natural Areas may be impacted by the above programmatic project activities. Some habitat loss may occur as a result of project activities. However, the goal of the SNRAMP is to improve habitat quality for all native wildlife within the Natural Areas and given the amount of habitat that would remain and be restored, ***no impacts*** would occur to locally significant bird species. If nesting locally significant bird species are present, in compliance with the MBTA, the SFRPD would avoid damaging or removing the nests of these species and any migratory bird species. Additionally, GR-4b in the SNRAMP (page 109), as described above, would ensure that impacts from programmatic project activities to nesting locally significant birds would be ***less than significant***.

Impact BI-3: The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on other protected terrestrial wildlife species (other than bird species). (Less than Significant with Mitigation)

Similar to impacts on special status bird species (Impact BI-2), invasive weed and tree removal, trail modification, and implementation of large-scale erosion control measures have the potential to directly affect habitat for other protected terrestrial species (e.g., invertebrates and mammals) that may occur in the Natural Areas or result in direct impacts, such as injury or mortality to protected terrestrial species.

Mission Blue Butterfly. Impacts to protected butterfly species could occur from disturbances to their host plants through invasive vegetation removal and trail modification activities. While the Bay

checkerspot butterfly, mission blue butterfly, and San Francisco silverspot butterfly have historically occurred within the Natural Areas, the mission blue butterfly is the only protected butterfly species that has been recorded in the Natural Areas in recent years. This butterfly is known to breed at Twin Peaks and has been recorded in the upper canyon at Sharp Park, and its host plants include *L. albifrons*, *L. varicolor*, and *L. fomosus*. Programmatic project activities at Twin Peaks include the removal of 83 invasive trees as well as the closure of 2,303 feet of trail and the creation of 501 feet of trail. These activities would result in vegetation removal and could require the use of heavy equipment that may adversely impact areas containing the host plants, which would result in habitat loss and potential mortality of the mission blue butterfly, a significant adverse impact. Programmatic project activities at Sharp Park that occur within mission blue butterfly habitat include invasive plant removal. These activities could result in significant impacts on protected butterflies at Twin Peaks and Sharp Park. The SFRPD currently operates under the Recovery Action Plan for Mission Blue Butterfly at Twin Peaks Natural Area and the associated Biological Opinion. The SFRPD continues to adhere to the Trail Maintenance and Construction BMPs and conducts annual monitoring of mission blue butterfly eggs and larvae each spring. In addition to current operations, the implementation of Mitigation Measure M-BI-1a would require pre-activity surveys. If a population of protected butterfly species or suitable habitat is present in or adjacent to the disturbance footprint or has the potential to occur within the areas disturbed, Mitigation Measure M-BI-1a requires the SFRPD to consult with the USFWS and to, in the following order, avoid potential impacts to this species, minimize impacts, restore the species' habitat, or, if necessary, compensate for impacts to these species. With the implementation of M-BI-1a, short-term programmatic project impacts on protected butterflies would be ***less than significant.***

The programmatic projects at Twin Peaks would replace the removed invasive trees and other vegetation with native plants, thus improving native habitat conditions and reducing competition from invasive species. Recommended management actions TP-2a[7] and TP-2b[8] call for the population of mission blue butterflies to be monitored as well as for augmenting host plant populations whenever possible. As a result of habitat improvements, the populations of protected butterfly species may increase. Additionally, the SFRPD will continue to adhere to the maintenance and monitoring strategies as stated in the Mission Blue Butterfly Recovery Action Plan. As such, the long-term programmatic project impacts on protected butterflies are anticipated to be beneficial.

[7]TP-2a—Continue to monitor the mission blue butterfly population
[8]TP-2b—Augment host plant populations whenever possible

San Francisco Dusky-Footed Woodrat. The San Francisco dusky-footed woodrat, which inhabits forests with moderate canopy and moderate to dense understory, has been recorded in the upper canyon at Sharp Park. Under the proposed programmatic project, invasive vegetation removal at Sharp Park would include the removal of invasive trees and vegetation within the MA-1 and MA-2 management areas. Sharp Park programmatic project activities also include the closure of 653 feet of trail and the creation of 1,792 feet of trail. Tree removal, trail modification and large-scale erosion control measures that require the use of heavy equipment could result in habitat loss and potential mortality of this species, which would be a significant impact. With implementation of Mitigation Measure M-BI-1a, pre-activity surveys would be required. If woodrats or woodrat middens are present in the disturbance footprint, Mitigation Measure M-BI-1a requires the SFRPD to avoid impacts to this species to the greatest degree practicable. If avoidance is not feasible, M-BI-1a requires SFRPD to minimize impacts to woodrats, restore woodrat habitat, and if necessary compensate for loss of woodrats and/or their habitat. With the implementation of M-BI-1a, programmatic project impacts on the San Francisco dusky-footed woodrat would be ***less than significant.***

Western Red Bat. The western red bat has been recorded at Golden Gate Park, Mount Davidson, Twin Peaks, Pine Lake, and McLaren Park. Western red bats roost primarily in the foliage of large shrubs and trees. Bat mortality or habitat destruction could result from removing invasive trees and other vegetation. Tree removal in the winter or spring and early summer could affect winter hibernacula or maternity roosts for the western red bat. With implementation of Mitigation Measure M-BI-1a, pre-activity surveys would be required. If western red bats or roosting trees are present in the disturbance footprint, Mitigation Measure M-BI-1a requires the SFRPD to avoid, minimize, restore, or compensate for impacts to these species. With the implementation of M-BI-1a, programmatic project impacts on the western red bat would be ***less than significant***.

Impact BI-4: The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on protected aquatic species. (Less than Significant with Mitigation)

Invasive vegetation removal, use of heavy equipment or installation of permanent structures within aquatic habitat (including riparian areas and wetlands), and the use of herbicides and pesticides have the potential to impact habitat for protected aquatic species and/or to injure or kill protected aquatic species expected to occur in those areas (e.g., San Francisco garter snake, California red-legged frog, western pond turtle). These activities could also adversely impact water quality, by increasing the rate of sedimentation and turbidity, which could affect aquatic species and their

habitat by limiting the amount of oxygen in the water as well as reducing visibility. No protected species beyond those listed below are expected to be affected by project activities at Sharp Park, including common newts or other species that may inhabit Arrowhead Lake in the eastern portion of Sharp Park. Specific impacts on these species associated with the Sharp Park restoration project are assessed under Impact BI-6.

California Red-Legged Frog. California red-legged frogs have been identified at Sharp Park and historically at Lake Merced; the population at Lake Merced is presumed to be extirpated (EIP Associates 2000**)**. This species requires habitat near permanent sources of deep water, with dense, shrubby or emergent vegetation. California red-legged frogs have been identified within Sharp Park at both Laguna Salada and the upper canyon. Impacts to California red-legged frogs associated with the Laguna Salada restoration project are addressed under Impact BI-6. Programmatic project activities in the upper canyon at Sharp Park that would impact California red-legged frogs include the removal of invasive trees, large-scale erosion control projects, and the use of herbicides and pesticides. While use of herbicides and pesticides could affect water quality when applied near water bodies, the SNRAMP IPM program would apply only aquatic-specific herbicides to wetlands and to areas next to water bodies (page 91), minimizing the effects of this treatment method on water quality and aquatic species. At Sharp Park, the continued mosquito treatments by the San Mateo County Mosquito and Vector Control District (SMCMVCD) would not substantially affect the California red-legged frog because the SMCMVCD employs pesticides for control at the larval stage that are less toxic to the environment, are highly specific to mosquitoes, and are applied to smaller areas. Sharp Park tree removal, erosion control projects, and the use of heavy equipment associated with these activities could result in the crushing of frogs, increased turbidity of water within the wetlands from disturbed soils, and removal of wetland vegetation. These activities could result in the temporary loss of habitat and potential mortality of this species, a significant impact. Implementing Mitigation Measure M-BI-1a would ensure that measures are taken to avoid and minimize direct impacts on California red-legged frogs and their habitat during implementation of programmatic projects by avoiding construction activities during the breeding season, installing flagging and temporary fencing around the frog habitat, and restoring habitat when necessary. Implementing Mitigation Measure M-BI-1a would also ensure that a biological monitor is present during project activities as required by CDFG and USFWS, if there is a potential for California red-legged frogs to occur in the project area. The biological monitor would be responsible for relocating the species out of harm's way, in accordance with direction from the natural resource agencies. Mitigation Measure M-BI-1a would ensure that proper consultations were conducted with the USFWS and CDFG for potential impacts on California red-legged frogs and that any additional

measures required by these agencies were implemented. Therefore, with implementation of Mitigation Measures M-BI-1a, short-term programmatic impacts on California red-legged frogs would be ***less than significant.***

The programmatic projects would replace the removed invasive trees and other vegetation with native plants appropriate to a given habitat, or would otherwise improve aquatic habitat conditions, potentially improving the health of the California red-legged frog populations. As such, the long-term programmatic project impacts on this species are expected to be beneficial.

San Francisco Garter Snake. San Francisco garter snakes have been identified at Sharp Park. The snake's habitat requirements include freshwater marshes, ponds and slow-moving streams with dense cover and water depths of at least one foot. San Francisco garter snakes have been identified within Sharp Park at Laguna Salada and have the potential to occur at the irrigation pond in the upper canyon. Impacts to San Francisco garter snakes associated with the Laguna Salada restoration project are addressed under Impact BI-6. Programmatic project activities at Sharp Park that would impact San Francisco garter snakes include large-scale erosion control projects and the use of herbicides and pesticides. While use of herbicides and pesticides could affect water quality when applied near water bodies, the SNRAMP IPM program would apply only aquatic-specific herbicides to wetlands and to areas next to water bodies (page 91), minimizing the effects of this treatment method on water quality and aquatic species. The heavy equipment associated with erosion control projects could crush snakes, disturb soils and increase the turbidity of water within the wetlands, and remove wetland vegetation. These activities could result in the temporary loss of habitat and potential mortality of this species, a significant impact. Implementing Mitigation Measures M-BI-1a would ensure that measures are taken to avoid and minimize direct impacts on the San Francisco garter snake and its habitat during implementation of programmatic projects. In compliance with M-BI-1a, programmatic projects would be required to avoid impacts to the San Francisco garter snake, which may include conducting activities outside the time in which garter snakes are inactive in their winter burrows, as well as installing flagging and temporary fencing around snake habitat. Following programmatic project activities, Mitigation Measure M-BI-1a also ensures that any temporary or permanent impacts to this species' habitat are restored or compensated for. Mitigation Measure M-BI-1a requires that a biological monitor be present during project activities, as required by CDFG and USFWS, if there is a potential for San Francisco garter snakes to occur in the project area. The biological monitor would be responsible for relocating the species out of harm's way, in accordance with direction from the resource agencies. Mitigation Measure M-BI-1a would require the SFRPD to consult with the USFWS and CDFG prior to implementing any programmatic project with the potential to affect San Francisco garter snakes and that additional measures required by

these agencies be implemented. Therefore, with implementation of Mitigation Measures M-BI-1a, programmatic impacts on San Francisco garter snakes would be ***less than significant.***

The programmatic projects would replace the removed invasive trees and other vegetation with native plants appropriate for a given habitat or would otherwise improve aquatic habitat conditions, thereby improving the health of the San Francisco garter snake population. As such, the long-term programmatic project impacts on this species are anticipated to be beneficial.

Western Pond Turtle. Western pond turtles occur at Sharp Park and Lake Merced. They have been historically reported at Pine Lake. Recommended management action PL-4b[9] proposes to relocate this species to Lake Merced, if found at Pine Lake. Therefore, this species is considered potentially present at Pine Lake. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. Western pond turtle habitat includes ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. This species requires basking sites and upland habitat for egg-laying. Western pond turtles have been identified within Sharp Park at Laguna Salada and have the potential to occur near the irrigation pond in the upper canyon. Impacts to western pond turtles associated with the Laguna Salada restoration project are addressed under Impact BI-6. Programmatic project activities at these Natural Areas that could impact western pond turtles include the removal of invasive vegetation within wetlands at Lake Merced, large-scale erosion control projects at Lake Merced and Sharp Park and the use of herbicides and pesticides. While use of herbicides and pesticides could affect water quality when applied near water bodies, the SNRAMP IPM program would apply only aquatic-specific herbicides to wetlands and to areas next to water bodies (page 91), minimizing the effects of this treatment method on water quality and aquatic species. Programmatic project activities and the heavy equipment associated with these activities could result in the crushing of turtles, increased turbidity of water within the wetlands from disturbed soils, and removal of wetland vegetation. The resulting impact from the temporary loss of habitat and potential mortality of this species would be significant. Implementing Mitigation Measures M-BI-1a would require pre-activity surveys, would ensure that measures are taken to avoid and minimize direct impacts on western pond turtle habitat during implementation of programmatic projects, and require that affected habitat be restored. Implementing Mitigation Measure M-BI-1a would also ensure that a biological monitor is present during project activities as required by CDFG, if there is a potential for western pond turtles to occur in the project area. The biological monitor would be responsible for relocating the species out of harm's way, in accordance with direction from the resource agencies. Mitigation Measure M-BI-1a would ensure that proper

[9] PL-4b—Relocate any western pond turtles to the higher-quality habitat at Lake Merced

consultations were conducted with CDFG for potential impacts on western pond turtles and that additional measures required by these agencies were implemented. Therefore, with implementation of Mitigation Measures M-BI-1a, short-term programmatic impacts on western pond turtles would be ***less than significant***.

The programmatic projects would replace the removed invasive trees and other vegetation with native plants appropriate to a given habitat, or would otherwise improve aquatic habitat conditions, improving the health of the western pond turtle population. As such, the long-term programmatic project impacts on this species are expected to be beneficial.

Project-Level Impacts (Routine Maintenance)

Impact BI-5: Implementation of routine maintenance activities under the SNRAMP would result in a substantial adverse effect on special status species. (Less than Significant with Mitigation)

Routine maintenance activities that could impact special status species include the removal of invasive weeds by hand, the installation of plants, the removal of invasive trees, trail maintenance, and the maintenance of catchment basins and sediment dams. Impacts to special status species as a result of these activities could result from ground disturbance, noise, vegetation removal and trampling. While these types of activities and impacts are similar to those proposed as part of the programmatic projects, the scope of routine maintenance would occur on a much smaller scale. For purposes of this EIR, invasive vegetation removal under routine maintenance would typically occur on less than half an acre and involve removing 20 or fewer trees, while vegetation removal as part of programmatic projects would typically involve areas greater than half an acre or removal of more than 20 trees.

The goals of routine maintenance activities are to maintain trails as well as remove invasive weeds and trees and other vegetation and replant these areas with native plants. Routine maintenance activities are intended to gradually improve native habitat conditions by reducing competition from invasive species. Recommended actions within the SNRAMP include specific actions for the majority of the Natural Areas to augment special status plant species through replanting, the reintroduction of species in areas they are known to have historically occurred, as well as maintaining existing populations. As a result of habitat improvements, the populations of special status species may increase. As such, routine maintenance is anticipated to result in long-term beneficial impacts to biological resources.

Impacts of routine maintenance activities within the Laguna Salada wetland complex are addressed under Impact BI-6.

Plants. Protected plant species occur at India Basin, Tank Hill, Hawk Hill, Lake Merced, Bernal Heights, Golden Gate Heights, Mount Davidson, Bayview Park, Twin Peaks, Corona Heights and the Balboa Natural Area. As described in Section III.F.2 (page 96), the proposed routine maintenance activities include the removal of invasive weeds which would be done by hand in areas of up to half an acre. Ground disturbance from this activity would occur within the top inch of ground around the root zone. Tree removal would occur manually, limb-by-limb, with no more than 20 trees (less than half an acre) being removed at one time. Planting would be done using hand tools with plants in one-gallon containers or smaller. Trail maintenance would include clearing deposited soil from steps, replacing or installing steps or trail edging, and rerouting and benching trails. Ground disturbance for this activity is usually six inches or less. All routine maintenance activities would be conducted by, or overseen by, the Natural Areas Program staff, a division of the SFRPD, which is composed of biologists, ecologists, and natural resource managers who are knowledgeable about both the ecology and presence/locations of special status species within the Natural Areas. Routine maintenance activities that involve removing invasive vegetation, planting, herbicide and pesticide application and trail maintenance activities could result in the inadvertent damage or mortality of the protected and locally significant plants that may occur in the Natural Areas through removal or crushing, resulting in significant impacts. Implementing Mitigation Measure M-BI-5 would reduce impacts to special status plant species by avoiding disturbance to special status plant species through an education program for SFRPD staff and field personnel, avoiding direct impacts to special status plants, and limiting activities in the vicinity of special status plant species to the minimum necessary to achieve the maintenance goals. As a result, the impacts of routine maintenance activities on special status plant species would be ***less than significant***.

Birds. Protected and locally significant bird species may occur at all Natural Areas. As described in Section III.F.2 (page 97), the removal of invasive trees (mostly eucalyptus), as well as overhanging tree limbs, will occur manually and would use minimally invasive limb-by-limb removal techniques. Following removal, stumps would be left in place, resulting in little, if any, ground disturbance. Typically, no more than 20 trees (or half an acre) are treated at one time. Tree removal as part of routine maintenance would include removal of saplings and any tree over 15 feet high. Trees over six inches dbh would be removed by tree crews at a rate of one to a few trees at a time. Routine maintenance activities that involve the removal of invasive weeds and trees could also result in the inadvertent damage or mortality of nesting birds that may occur in the Natural Areas. Measure GR-4b proposed in the SNRAMP (page 109) would require that vegetation management

activities be conducted outside the breeding season (February 1 to August 31), unless a nesting bird survey was conducted prior to maintenance activities and confirmed that no active nests were present within the maintenance area. If active nests (or large abandoned stick nests) are discovered, maintenance activities would be limited to removal of vegetation by hand no closer than 50 feet from the nest. Measure GR-4b in the SNRAMP would ensure that direct impacts to nesting birds, including special status bird species, would be avoided. As a result, the impacts of routine maintenance activities on protected or locally significant bird species would be ***less than significant***.

Terrestrial Wildlife. Protected terrestrial wildlife includes the mission blue butterfly, which occurs at Twin Peaks and in the upper canyon of Sharp Park, and the western red bat which occurs at Golden Gate Park, Mount Davidson, Twin Peaks, Pine Lake and McLaren Park. The dusky-footed woodrat also occurs in the upper canyon of the Sharp Park Natural Area. Routine maintenance activities that involve the removal of invasive trees and trail maintenance could result in the inadvertent injury or mortality of protected terrestrial wildlife that may occur in these Natural Areas. As a result, routine maintenance activities could have significant adverse impacts on these species. Implementing Mitigation Measure M-BI-5 would reduce impacts to wildlife by avoiding impacts to protected wildlife species. Mitigation Measure M-BI-5 requires that SFRPD conduct an annual training program for SFRPD's Natural Areas Program staff and Natural Areas Program staff conduct an education program for field personnel. The education program would ensure that all field personnel are properly trained on the proper protocol should a protected species be encountered. Mitigation Measure M-BI-5 further limits activities where there is the potential to impact special status wildlife species to the minimum necessary to achieve the goals of individual maintenance actions. In addition, long-term vegetation management and maintenance strategies are outlined in the Mission Blue Butterfly Recovery Action Plan. Implementation of Mitigation Measure M-BI-5 requires continued compliance with the Mission Blue Butterfly Recovery Action Plan's measures to avoid and minimize impacts to this species as a result of routine maintenance activities. Avoidance and minimization measures include habitat restoration from seeding and planting, the removal of invasive vegetation surrounding lupines and trail closures in which maintenance activities would not occur during overwintering periods. Mitigation Measure M-BI-5 also includes measures to avoid impacts to western red bats from maintenance activities by avoiding work within a 150 foot buffer of trees in which roosting western red bats have been encountered. Mitigation Measure M-BI-5 also requires measures to avoid impacts to San Francisco dusky-footed woodrats by avoiding maintenance work within a 10-foot buffer of active or potentially active woodrat middens. As a result, the impacts of routine maintenance activities on protected terrestrial wildlife species would be ***less than significant***.

Aquatic Species. Protected aquatic species include the California red legged frog, which occurs at Sharp Park, including the upper canyon, and has historically been recorded at Lake Merced, but is thought to be extirpated from that site (EIP Associates 2000); the western pond turtle, which occurs at Sharp Park and Lake Merced; and the San Francisco garter snake, which occur only at Sharp Park, including the upper canyon. The western pond turtle has historically been documented at Pine Lake, although it is believed to be extirpated at that site. If found at Pine Lake, the SNRAMP proposes that the SFRPD relocate this species to Lake Merced. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. Therefore, western pond turtle is considered potentially present at Pine Lake. Impacts to California red-legged frog, western pond turtle and San Francisco garter snake as a result of maintenance activities following completion of the restoration activities at Laguna Salada are addressed under Impact-BI-6. Routine maintenance activities that involve the maintenance of catchment dams and sediment basins would occur at Glen Canyon and McLaren Park. These Natural Areas do not contain protected aquatic species, so these activities would have no impact on protected aquatic species.

Some weed removal activities may occur within aquatic habitat and this disturbance has the potential to impact habitat for protected aquatic species and/or to injure or kill protected aquatic species expected to occur in those areas, resulting in potentially significant impacts. Implementing Mitigation Measure M-BI-5 would avoid impacts to aquatic species by avoiding and minimizing disturbance through an education program for field personnel and limiting activities where there is the potential to impact protected aquatic species to the minimum necessary to achieve the goals of individual maintenance actions. Mitigation Measure M-BI-5 requires that work take place outside of the designated breeding/nesting season for protected aquatic species. If this is not feasible, pre-activity reconnaissance surveys would be required to determine the presence or absence of protected aquatic species within the work zone. In the event a protected aquatic species is encountered during work activities, Mitigation Measure M-BI-5 requires field work to stop immediately and the onsite SFRPD staff member be notified. SFRPD would confirm that the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species. Additionally, SFRPD staff would be required to provide verbal notification to the USFWS and/or to the local CDFG warden or biologist within 24 hours of the sighting. As a result, the impacts of routine maintenance activities on protected aquatic species would be ***less than significant***.

M-BI-5: Protection of Special Status Species during Routine Maintenance

The SFRPD shall avoid disturbance to biological resources by undertaking the following measures during routine maintenance activities:

- Natural Areas Program staff and/or SFRPD staff engaged in routine maintenance activities as part of the SNRAMP shall receive annual training on the special status species that occur within the Natural Areas. The training shall identify the special status species that occur within the Natural Areas, their life history, measures to be implemented to avoid impacts to those species, and the proper protocol for encountering special status species. The SFRPD shall confirm that all SFRPD staff engaged in routine maintenance activities as part of the SNRAMP has been trained appropriately.
- An education program for other field personnel (e.g. volunteers) shall be conducted by the SFRPD staff before field activities begin at a new site that has the potential to contain special status species. The field education program will consist of a brief presentation by persons knowledgeable in the applicable special status species and will include identifying the locations of protected species and locally significant plant species and an explanation of the measures being taken to avoid these species. The SFRPD shall confirm that all workers and volunteers have been trained appropriately.
- Disturbance of special status plant species shall be avoided. SFRPD staff shall conduct a reconnaissance survey of maintenance areas prior to undertaking routine maintenance activities to ensure that no special status plant species are present. If such species are found to be present, activities in those areas would be relocated or modified so as to avoid potentially affecting those species. SFRPD staff shall ensure that all volunteers and others involved in maintenance or restoration activities follow protection protocols.
- Vehicle operators shall use existing access roads and would remain outside of habitat supporting protected species to the extent feasible.
- All vehicles shall be brought in clean and free of weeds to prevent the spread or introduction of invasive plant species.
- Protected terrestrial and aquatic species impacts shall be avoided during routine maintenance activities by implementing the following measures:
    - **California Red-Legged Frog and San Francisco Garter Snake:** These species both potentially occur at the Sharp Park upper canyon. The following measures shall apply to this Natural Area:
        - To avoid disturbance of these species, maintenance work shall not occur in the vicinity of ponds and wetlands between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows.

- If maintenance cannot be avoided during the abovementioned time period, the SFRPD staff will conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to ensure that no California red-legged frogs or San Francisco garter snakes are present.
- Vegetation in all maintenance areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of snakes prior to disturbance and prior to equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake and California red-legged frog shall be conducted in the maintenance area.
- In the event that a California red-legged frog or San Francisco garter snake is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species.
- SFRPD staff shall provide verbal notification to the USFWS and/or to the local CDFG warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to the USFWS and/or CDFG (as applicable) within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with USFWS and/or CDFG. Field personnel shall submit all observations of protected species to the California Natural Diversity Database (CNDDB).

o **Western Pond Turtle:** This species occurs at Lake Merced and Sharp Park and may occur at Pine Lake. The following measures shall apply to these Natural Areas:

- To avoid disturbance of this species, routine maintenance work shall be avoided within wetlands, ponds and adjacent uplands, between May 15 and July 15, the nesting season for western pond turtles.
- If maintenance work cannot be avoided during the abovementioned time period, the SFRPD staff shall conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to ensure that no western pond turtles or their nests are present.

- In the event that a western pond turtle is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species.
- SFRPD staff shall provide verbal notification to the local CDFG warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to CDFG within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with CDFG. Field personnel shall submit all observations of protected species to the CNDDB.

o **San Francisco Dusky-Footed Woodrat:** This species occurs in the Sharp Park upper canyon. The following measure shall apply to this Natural Area:

- SFRPD staff will conduct reconnaissance surveys of maintenance areas prior to undertaking maintenance work to identify locations of woodrat middens.
- To avoid disturbance of the San Francisco dusky-footed woodrat, no vegetation shall be cleared within a 10-foot buffer of an active or potentially active woodrat middens.

o **Western Red Bat:** If an occupied or active roost is identified during maintenance activities, the roost shall not be disturbed. No maintenance work within 150 feet of the potentially occupied roost shall occur until it has been determined that bats are no longer using the site.

- In the event that a western red bat is encountered, all field work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who shall confirm that the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species.
- SFRPD staff shall provide verbal notification to the local CDFG warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to CDFG within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with CDFG. Field personnel shall submit all observations of protected species to the CNDDB.

- **Mission Blue Butterfly:** This species occurs at Twin Peaks and Sharp Park. The following measures shall apply to these Natural Areas:
  - To avoid impacts to this species, SFRPD shall adhere to the long-term management and monitoring guidelines as described in the Recovery Action Plan for the Mission Blue Butterfly at Twin Peaks Natural Area and the corresponding Biological Opinion and as agreed to with the USFWS. These guidelines include conducting vegetation removal by manual, mechanical and chemical treatments that would be applied consistent with the SFRPD IPM program, such as hand pulling, cutting and grubbing. To avoid impacts from trampling of host plants by recreational users, the SFRPD shall continue to conduct regular maintenance on the existing trail network including trimming trailside vegetation and replacing trail base materials.

Project-Level Impacts (Sharp Park Restoration)

Impact BI-6: Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on special status species. (Less Than Significant with Mitigation)

The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. Restoration of the Laguna Salada wetland complex would occur during the dry season. Summarized below are the main features of the project to restore the Laguna Salada wetland complex and associated uplands at Sharp Park (these are further detailed in Section III.F.2):

The main components of the restoration are as follows:

- Dredging up to 60,000 cubic yards of material to remove sediment and decaying vegetation in Laguna Salada, Horse Stable Pond, and the channel that connects the two water bodies, resulting in the conversion of freshwater marsh, willow scrub, and wet meadow wetland habitat to open water, achieving no net loss of Waters of the US (as defined by the Clean Water Act);
- Recontouring freshwater marsh wetland and ruderal (disturbed) habitat along the Laguna Salada, Horse Stable Pond, and channel shorelines to create shallow water habitat; this recontouring would achieve no net loss of Waters of the US (as defined by the Clean Water Act);

- Creating an upland and wetland habitat corridor between Horse Stable Pond and Laguna Salada in the area currently occupied by the Sharp Park Golf Course;
- Converting about half an acre of wet meadow/freshwater marsh wetland to an upland refuge in the middle of the lagoon to provide snakes and frogs with refugia from feral cats and other predators; creating about an acre of replacement wet meadow wetland along the northern and western edges of the lagoon in place of coastal scrub habitat, achieving no net loss of wetland habitat; and
- Constructing up to four acres of upland mounds on landscaped grass on the east side of the lagoon and between Laguna Salada and Horse Stable Pond**.** These mounds would be placed in the area currently occupied by the Hole 13 fairway, which would be narrowed and reconfigured.

During the restoration activities, temporary equipment staging and materials storage would occur on about an acre at the northwest corner of Sharp Park, at or near Hole 17 of the golf course. Equipment access to the project area from the north would be from Clarendon Street, which runs along the north side of Sharp Park. Access to the southern part of the project area would be from the sea wall levee road and the dirt road near the Horse Stable Pond pump house (see Figure 2 in Chapter III).

To facilitate deepening of Laguna Salada and Horse Stable Pond, and the channel that connects them, the water levels would be lowered temporarily to allow equipment to access the shoreline. Following lowering of the water levels, a qualified USFWS-approved biologist would survey the entire project area for California red-legged frogs, San Francisco garter snakes, and western pond turtles. If individuals are found during the survey, the biologist would relocate them to appropriate aquatic habitat, such as that near Mori Point, located south of Horse Stable Pond; these activities would be conducted in coordination with the USFWS and CDFG to minimize any adverse effects.

An upland and wetland habitat corridor between the lagoon and the pond would be constructed with upland features designed to support the San Francisco garter snake. Sediment basins would be installed in two locations, one where Sanchez Creek enters a culvert to pass under Highway 1 and the other located at the northern boundary of Sharp Park; the former sediment basin would be developed on about half an acre of the golf course (primarily upland Monterey pine habitat), and the latter sediment basin would be expanded onto about half an acre of ruderal and upland Monterey pine habitat. A fence would also be installed along the seawall to the west of the lagoon,

with additional fencing around the wetland complex, to discourage human and pet intrusion into the restored habitat area.

The majority of the restoration footprint shown in Figure 2 is subject to temporary disturbance during the restoration activities. Following completion of restoration activities, those areas that are not permanently modified would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

The restoration goals and actions are presented in Section III.F.2 and further detailed in the Sharp Park Conceptual Restoration Alternatives Report (SFRPD 2009a), included in Appendix I. Heavy equipment and ground-disturbing activities associated with the project activities listed above could injure or kill the San Francisco garter snake, California red-legged frog, and western pond turtle, which have been observed in and near aquatic habitat at Sharp Park (SFRPD 2008b). In addition, an increase in noise and human presence during restoration may also adversely impact these species. Limited tree removal at Sharp Park may adversely impact special status bird species. The San Francisco dusky-footed woodrat occurs at Sharp Park, but is limited to the upper canyon and would not be impacted by the restoration activities. Implementing the Sharp Park restoration project would alter the hydrology of the wetland system over the long term, which would improve habitat quality for special status aquatic species. These alterations are intended to benefit special status species (California red-legged frog, western pond turtle and San Francisco garter snake) by restoring and increasing their habitat and providing better connectivity to adjacent habitat. Temporary impacts have the potential to occur within the entire project footprint (see Figure 2). Impacts that could occur during restoration include temporary habitat loss and disturbance as well as an increase in the potential for direct injury or mortality. Over the long-term, impacts to these species at Sharp Park are expected to be beneficial. Permanent impacts would occur through the loss of 5.5 acres of freshwater marsh and 0.5 acres of willow scrub. These losses will be compensated by the increase of 5.5 acres of open water and the addition of one acre of wet meadow.

Following completion of the restoration activities, the SFRPD would conduct maintenance to ensure the success of those activities. The scope of the maintenance is subject to modification during consultation with the USFWS pursuant to the ESA. Temporary impacts from maintenance would occur from weeding and maintaining the restored areas. Maintenance of the wetland areas may include removal of invasive and encroaching plant species and additional planting of wetland plant species. As needed, the SFRPD also would conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe or similar equipment. Maintaining the sediment basins would involve the periodic removal of accumulated sediment. Temporary impacts to California red-legged

frog, San Francisco garter snake and western pond turtle may occur as result of maintenance activities.

Prior to implementing the proposed Sharp Park restoration activities, the SFRPD would consult with CDFG and USFWS and prepare a Biological Assessment and obtain a Biological Opinion and incidental take permit from the USFWS pursuant to the ESA.

Due to their occurrence within the Laguna Salada wetland complex, the only protected species expected to be affected by the restoration project are the San Francisco garter snake, California red-legged frog, western pond turtle, and salt marsh common yellowthroat.

San Francisco Garter Snake. During the restoration activities, impacts to San Francisco garter snakes could occur from construction activities, including the dredging and recontouring of wetlands, which could result in the temporary loss of both basking and foraging habitat for the San Francisco garter snake. Temporary impacts and possible mortality of individuals would also occur from the conversion of approximately half an acre of wet meadow wetlands to an upland refuge in the middle of the lagoon. Temporary impacts of the restoration activities would result in disturbance to feeding, dispersal and breeding behavior and may affect snake burrows. Noise and vibration may also disturb San Francisco garter snakes. The removal of large vegetation may disturb or harm the snakes by causing them to move out of their resident habitat, possibly causing injury or mortality due to lack of adequate forage or cover. To compensate for this disturbance and conversion of habitat, in-kind creation of approximately one acre of wetlands, which would serve as San Francisco garter snake habitat, would occur in several upland locations around the northern and western edges of the lagoon. The goal of converting some wetland habitat to uplands is to increase the currently limited basking, foraging, and refugia habitat for the San Francisco garter snake. Impacts to San Francisco garter snakes could occur from construction activities involving vehicle traffic and the use of heavy equipment which could result in direct mortality of individuals. The habitat disturbance and injury and mortality described above would be a significant impact on San Francisco garter snakes.

Implementing Mitigation Measure M-BI-6a requires a pre-activity survey to identify snakes and snake habitat. It also includes a worker education program to train all workers on how to identify and avoid harm to San Francisco garter snakes. Prior to construction equipment or vehicles entering the site, vegetation will be cleared by hand equipment to a height of 4 inches and checked for the presence of snakes. Additionally, prior to construction near wetlands and ponds, rodent burrows in the construction areas will be hand excavated in order to ensure absence of snakes. No restoration

activities would occur between November 15 and April 15, and a biological monitor would be present during construction activities, in addition to an on-call specialty environmental monitor with a valid 10(a)(1)(A) permit to handle San Francisco garter snakes and relocate them to an area consisting of suitable habitat if needed. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. Mitigation Measure M-BI-6a would ensure that measures are taken to avoid impacts to San Francisco garter snakes during construction by the use of silt fencing or exclusion fencing around the project and staging areas and all onsite restoration. This measure would reduce temporary construction impacts by avoiding and minimizing impacts to San Francisco garter snakes to a degree sufficient to ensure no injury or mortality of individuals to the maximum extent feasible. With implementation of M-BI-6a, the short-term impacts of Sharp Park restoration on the San Francisco garter snake would be ***less than significant***.

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to San Francisco garter snake by creating upland sites adjacent to aquatic sites that will provide basking habitat and refugia for the snakes near their foraging habitat. The enhancements to the wetland areas would increase breeding and foraging habitat for the San Francisco garter snakes. The conversion of freshwater marsh habitat to open water would discourage the growth of dense stands of bulrush and cattails which overgrow the wetlands thus diminishing habitat quality for the California red legged frog, the primary food source for the San Francisco garter snake.

California Red-Legged Frog. During restoration, impacts to California red-legged frogs from the Sharp Park restoration project would be similar to those described above for San Francisco garter snakes. Temporary impacts from construction activities would result in the disturbance of feeding, breeding, and dispersal behaviors. The removal of encroaching vegetation may disturb California red-legged frogs sheltering within the plants. Project activities that may cause California red-legged frogs to move out of their resident habitat may cause injury or mortality due to lack of adequate forage or cover. Impacts also would occur from construction activities involving vehicle traffic and the use of heavy equipment which could result in direct mortality of individuals. Short-term impacts of construction activities that result in injury, mortality and habitat disturbance would result in significant impacts on the frog. Implementing Mitigation Measure M-BI-6a includes pre-activity surveys, a worker education program, a biological monitor during construction activities, in addition to an on-call specialty environmental monitor with a valid 10(a)(1)(A) permit to handle California red-legged frogs and relocate as needed, and additional avoidance and minimization measures which include vegetation being cleared by hand equipment to a height of 4 inches and checked for the presence of frogs prior to construction and vehicles entering the site. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. These

measures would reduce impacts to California red-legged frogs from restoration activities. As described above, Mitigation Measure M-BI-6a would ensure that measures are taken to effectively move individuals out of harm's way. This measure would reduce the impact to California red-legged frogs by avoiding and minimizing impacts sufficiently to ensure no injury or mortality of individual frogs to the maximum extent feasible.

Additionally, California red-legged frogs may be adversely affected by increased sedimentation caused by runoff associated with the project activities. Erosion control measures such as straw mulch, sediment traps, and wattles would be installed to eliminate the potential for sediment discharge in to the wetlands during the construction process, as described under Mitigation Measure M-HY-1. Implementing Mitigation Measures M-HY-1 and M-BI-6a, which includes measures to install silt fencing would reduce impacts to California red-legged frogs from sedimentation during restoration by avoiding and minimizing impacts to the California red-legged frog and its habitat to sufficiently avoid injury or mortality of the frog. With implementation of M-BI-6a and M-HY-1, the short-term impacts of Sharp Park restoration activities on the California red-legged frog would be ***less than significant.***

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to California red-legged frogs by converting freshwater marsh, where tadpoles are often unable to penetrate the dense vegetation and where female frogs may lay their eggs only to be left stranded above water, to open water habitat. The removal of dense emergent vegetation will allow for a higher quality of breeding habitat for the frogs which will result in an increased survival of egg masses and tadpoles. The conversion of freshwater marsh habitat to open water would discourage the growth of dense stands of bulrush and cattails that have overgrown the wetlands and reduced the quality of habitat for California red-legged frogs.

Western Pond Turtle. During the restoration activities, impacts to the western pond turtle from the Sharp Park restoration project would be similar to those described above for California red-legged frog. However, because the restoration activities may occur during the western pond turtle nesting season, the magnitude of those impacts would be greater for this species. Temporary impacts from construction activities would result in the disturbance of feeding, breeding, aestivation sites and dispersal behaviors. The removal of nonnative vegetation may disturb western pond turtles sheltering within the plants as well as remove basking sites along the wetland banks. Increased sedimentation could adversely affect shallow water habitat for hatchlings as well as basking sites along the banks. These would result in significant impacts to western pond turtles. Implementing Mitigation Measures M-HY-1 (erosion control measures) and M-BI-6a, which includes a worker

education program, pre-activity surveys, a biological monitor during construction activities and avoidance and minimization measures, including the use of silt or exclusion fencing around project and staging areas and the hand clearing of upland vegetation prior to vehicles entering the site, would reduce short-term impacts to western pond turtles from Sharp Park restoration activities to ***less than significant.***

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to western pond turtles. The removal of dense emergent vegetation would allow for a higher quality of breeding habitat for the turtles. Additional upland mounds would improve habitat quality by providing suitable basking sites. The conversion of freshwater marsh habitat to open water would discourage the growth of dense stands of bulrush and cattails that have overgrown the wetlands and reduced the quality of habitat for western pond turtles.

Salt Marsh Common Yellowthroat. Construction activities associated with the restoration project could result in the temporary disturbance of the salt marsh common yellowthroat as a result of vegetation removal and an increase in noise, vehicle traffic, and human presence. This is the only protected bird species known to nest at Sharp Park. The salt marsh common yellowthroat requires saltwater or freshwater marsh habitat with dense vegetation for nesting. The Laguna Salada restoration project may result in temporary impacts to this species through the disturbance and loss of nesting habitat from construction activities. Of the existing 19.5 acres of freshwater marsh, 14 acres would remain following restoration. While some habitat would be lost as a result of project activities, the majority of the freshwater marsh habitat would not be impacted, and sufficient saltmarsh common yellowthroat habitat would remain undisturbed. Limited tree removal would also occur as part of the restoration project, but is not expected to significantly impact this species because this species is not known to nest in the vegetation that is proposed for removal (Monterey pine). These impacts would be temporary and would not result in a substantial loss of salt marsh common yellowthroat habitat. Implementing GR-4b of the SNRAMP requires that all vegetation management activities be conducted outside the breeding season for bird species (February 1 through August 31, as designated by CDFG), unless these activities had already begun before the breeding season and had already removed nesting habitat or a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present. If active nests (or large abandoned stick nests) are discovered as part of the breeding bird survey, a 150-foot-radius avoidance buffer would be centered on the nest sites to prevent the nesting birds from being disturbed by construction activities. As a result, the Sharp Park restoration would result in ***less than significant*** impacts to the salt marsh common yellowthroat.

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to the salt marsh common yellowthroat. The removal of dense stands of cattails and bulrush would temporarily impact salt marsh common yellowthroat habitat. However, following restoration, biodiversity surrounding the wetland complex is anticipated to increase, creating a higher quality nesting habitat for the salt marsh common yellowthroat.

Maintenance Activities. As described in more detail beginning on page 98, the restoration project is a recovery action for the San Francisco garter snake. Maintenance would occur following completion of the Sharp Park restoration project. The scope of the maintenance is subject to some modification during consultation with the USFWS pursuant to the ESA. Maintenance would include weeding and maintaining the restored areas. Maintenance of the wetland areas may include removal of invasive and encroaching plant species and additional planting of wetland plant species. As needed, the SFRPD also would conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe. Maintaining the sediment basins would involve the periodic removal of accumulated sediment. Impacts to special status species associated with maintenance activities would be potentially significant and similar to routine maintenance impacts. Significant impacts to protected species could occur from ground disturbance through trampling, vegetation removal, and sediment removal. Implementing Mitigation Measure M-BI-6b, designed to avoid disturbance caused by maintenance activities performed by the Natural Areas Program staff to the maximum extent feasible, would ensure that impacts from and maintenance of the Sharp Park restoration project are avoided or minimized, resulting in ***less than significant*** impacts**.**

M-BI-6a: Protection of Protected Species during Implementation of the Sharp Park Restoration Project

The SFRPD shall implement the following, subject to modification during the required regulatory approval processes:

Avoidance Measures:

- The number of access routes, the size of staging areas, and the total area of activity would be the minimum necessary to achieve the project goals and to the extent feasible access routes shall be located in upland areas;
- Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project;
- After surveying the construction site for special status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and

staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no snakes, frogs, or turtles enter the area; fencing will meet CDFG specifications so as to avoid impacts to species potentially getting trapped in the fence.

- No restoration and construction shall occur between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows, although shrubs and willow posts may be planted by hand after the first rains, and weeds may be removed within 15 feet of aquatic areas during these times;
- Before moving any vehicles that remain stationary for longer than 30 minutes, the biological monitor would inspect those vehicles to ensure that no animals had crawled beneath them for cover;
- During project activities, all trash that could attract predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

Pre-Construction Activities:

- A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and the proper protocol should a protected species be encountered. The training shall include a discussion of the importance of maintaining speed limits and respecting exclusion zones. The SFRPD and its construction contractor shall confirm that all workers have been trained appropriately.
- Two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the USFWS and/or CDFG to determine whether relocating any life stages is appropriate. Collection of frogs, snakes, and turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat;
- Upland vegetation in all construction areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of protected species prior to disturbance and prior to construction equipment or vehicles entering the sites. Once vegetation is

cleared, an additional pre-activity survey for the San Francisco garter snake, western pond turtles, and California red-legged frogs will be conducted in the impact area.

- Prior to construction near wetlands or ponds, all rodent burrows in the construction area will be hand excavated until the burrows terminate or to a maximum depth of 30 centimeters in areas where soil or fill will be removed or placed.

Biological Monitor:

- A biological monitor familiar with the identification and life history of California red-legged frog, San Francisco garter snake, western pond turtle, and other potentially present protected species, and with the appropriate agency authorization, shall be designated to periodically inspect onsite compliance with all mitigation measures.
- The biological monitor shall perform a daily survey of the entire project area during construction activities. During these surveys, the monitor shall inspect the exclusion fencing for individuals trapped within the fence and determine the need for fence repair. Throughout the duration of the project, the monitor shall continue to perform daily fence surveys and compliance reviews at the project site. The monitor shall be designated prior to project implementation and shall have at least one specialty environmental monitor on call, with a valid 10(a)(1)(A) permit to handle listed species. The specialty monitor shall direct all personnel in regards to interactions with protected species, perform authorized species relocations, and supervise all reporting on such species.
- Bullfrog monitoring will occur and egg masses detected shall be removed.

M-BI-6b: Protection of Protected Species during Maintenance of the Sharp Park Restoration Project

The SFRPD shall implement the following, subject to modification during the required regulatory approval processes:

- To avoid disturbance of the San Francisco garter snake, California red-legged frog and western pond turtle, maintenance work shall not occur in the vicinity of ponds and wetlands between November 15 and April 15, the breeding/nesting season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows.
- If maintenance cannot be avoided during the abovementioned time period, the Natural Areas Program will conduct reconnaissance surveys of maintenance areas prior to

undertaking maintenance work to ensure that no California red-legged frogs, western pond turtles or San Francisco garter snakes are present.

- Heavy equipment would remain outside of wetlands to the extent feasible. If it is infeasible to avoid wetlands, no heavy equipment shall be used within wetlands between October 15 and April 15.
- In the event that a California red-legged frog, western pond turtle or San Francisco garter snake is encountered, all work shall immediately stop. Field personnel shall notify the onsite SFRPD staff member who will confirm that the species has moved outside of the work zone, or the work zone shall be adjusted to avoid the species.
- SFRPD staff shall provide verbal notification to the USFWS and/or to the local CDFG warden or biologist (as applicable) within one working day of the encounter. The SFRPD shall follow up with written notification to the USFWS and/or CDFG (as applicable) within five working days. Maintenance activities in the location of the encounter would be prohibited until SFRPD has contacted and properly consulted with USFWS and/or CDFG. Field personnel shall submit all observations of protected species to the CNDDB.

Sensitive Natural Communities

The sensitive natural communities identified in Table 9 are important biological resources because they and the plants and wildlife they support have been identified as complexes that are worthy of protection in the SNRAMP. As discussed on page 85, the SNRAMP project management actions related to sensitive natural communities aim to 1) maintain and enhance local biodiversity, 2) reestablish native community diversity, structure, and ecosystem function where degraded, and 3) decrease the extent of invasive exotic species cover, achieving long-term beneficial impacts to sensitive natural communities.

Programmatic Impacts

Impact BI-7: The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on sensitive natural communities. (Less than Significant with Mitigation)

For purposes of this EIR, sensitive natural communities in the Natural Areas consist of riparian, native grassland, oak woodland, coastal dune and scrub, and wetland habitats. The habitat types in the Natural Areas are listed in Table 9. Impacts to wetland habitat are analyzed separately under Impact BI-10. The impacts of implementing programmatic projects are similar to those discussed under Impacts BI-1 through BI-4, with respect to changes in vegetation. Any construction (e.g., use

of heavy equipment) or installation of permanent structures within these sensitive habitats, or the use of herbicides and pesticides near these areas, have the potential to impact sensitive natural communities. Large-scale invasive vegetation removal (either by hand or though herbicide application) may also result in incidental impacts to sensitive natural communities. As discussed under Impact BI-1, herbicides are intended to be used on invasive, nonnative vegetation, and are not intended for use on special status plants or sensitive natural communities. One of the purposes of invasive vegetation removal is to promote conditions that support native plants and the sensitive natural communities they thrive within. One of the goals of the SNRAMP is to restore natural community diversity. This includes recommended actions to replant native vegetation, as well as sensitive and rare species in order to increase their populations within the Natural Areas. Therefore, although there may be short term temporary impacts to native plant species, encroaching vegetation removal is expected to result in a net benefit to sensitive natural communities.

Riparian Habitat. Impacts to riparian habitat within the Natural Areas would occur from ground-disturbing activities and the use of heavy equipment during invasive vegetation removal, trail modification, and large-scale erosion control measures. Potential impacts include the loss of riparian vegetation due to direct removal or damage from heavy equipment. Heavy equipment use may also cause soil compaction, thus reducing the quality of riparian habitat. Where vegetation is removed or crushed as a result of project activities in or near riparian habitat, invasive plant species could become established. However, as discussed above, a goal of invasive vegetation removal is to provide more suitable habitat for native plants, therefore invasive vegetation removal is anticipated to result in a net benefit to native plants and the sensitive natural communities within which they live. Riparian habitat has been identified at the following Natural Areas: Lake Merced, Glen Canyon, Sharp Park, McLaren Park, Hawk Hill, Rock Outcrop, Bayview Park, Bernal Hill and Pine Lake. Of these Natural Areas, tree removal would occur at Lake Merced and Bayview Park**.** Large-scale erosion control projects could impact riparian habitat at Sharp Park, Bayview Park and Glen Canyon Park. The creation of new trails is proposed at all of the above-listed Natural Areas, with the exception of Rock Outcrop. As described in Section III.E.5 (page 92), the SFRPD would design new trails to avoid sensitive vegetation and habitat to the extent possible, including riparian habitat.

While the goals of the SNRAMP are to protect sensitive habitats, impacts from large-scale erosion control projects could affect riparian habitat by reducing it in quality and functionality. The impacts of programmatic projects on riparian habitat that is considered protected by USACE, RWQCB or CCC regulations could be significant depending on the degree and severity of the impact. Implementing Mitigation Measure M-BI-1a requires SFRPD to avoid riparian habitat to the extent

feasible. If avoidance is infeasible, Mitigation Measure M-BI-1a requires the installation of flagging and temporary fencing around riparian habitat that is not being directly restored, or worked within, in order to avoid damage or further disturbance. Where impacts to riparian habitat as a result of large-scale erosion control projects would occur, Mitigation Measure M-BI-1a would require coordination with the applicable regulatory agencies (for example, CCC, RWQCB and USACE) to determine the jurisdictional boundaries of protected riparian habitat and that the SFRPD apply for all appropriate permits. Additionally, riparian restoration and compensation would occur where needed. Mitigation Measure M-BI-1a also requires that fences be installed along existing trails in sensitive habitat areas if impacts on sensitive habitat were observed as a result from visitors straying from the trails. Additionally, the SFRPD would consider rerouting those trails. Implementing Mitigation Measure M-BI-1a would ensure that measures are taken to avoid and minimize impacts on riparian habitat to the greatest degree practicable, and that SFRPD restore riparian habitat when minimization is not sufficient, resulting in a ***less than significant*** impact.

Native Grassland Habitat. Impacts to native grassland habitat within the Natural Areas could occur from ground-disturbing activities, such as the use of heavy equipment for large-scale erosion control projects. As discussed under Section III.E.5, the SFRPD would design new trails to avoid sensitive vegetation and habitat to the extent possible. Any impacts to native grasslands as a result of trail creation would be short-term, temporary, and limited in extent. Therefore, trail creation is not anticipated to result in a significant impact to native grasslands. The SNRAMP includes the restoration of decommissioned trails, which would result in long-term net benefits to native grassland habitat throughout the Natural Areas. Additionally, as described above under Riparian Habitat, invasive vegetation removal is anticipated to result in beneficial impacts to sensitive natural communities. Therefore, the following analysis focuses on impacts to native grasslands that could result from large-scale erosion control projects.

Potential impacts to native grasslands, as a result of large-scale erosion control projects include the loss of native grassland habitat if plants are directly removed, as well as the reduction in quality and functionality if damaged during project activities. Although incidental temporary disturbance to native grassland habitat may result from erosion control activities, as part of the SNRAMP, these activities would be followed by the replanting of native vegetation, resulting in long-term beneficial impacts. For example, large scale erosion control is proposed within native grasslands at Bayview Park. Under the SNRAMP recommended management action VP-9a,[10] following construction

[10] VP-9a—Create a detailed and complete erosion control plan before beginning work on the large gully near the summit

activities associated with the erosion control project, the site would be seeded with native grasses. In addition, many actions identified in the SNRAMP are directed at restoring native grasslands. Therefore, should implementation of an individual programmatic project result in temporary disturbances or even a loss in native grassland habitat, on the whole, the actions in the SNRAMP are designed to protect native grasslands and would result in an overall increase of native grassland habitat. Therefore, programmatic project impacts on native grasslands would be offset by restoration activities in the SNRAMP and the resulting impacts to native grasslands would be ***less than significant***.

Oak Woodland Habitat. While oak trees would not be removed as part of the programmatic projects, invasive vegetation removal within oak woodland understory would occur. The manual removal of invasive vegetation surrounding oak trees would not be sufficient to cause oak tree damage or death or result in habitat conversion. The removal of invasive vegetation would ultimately benefit oak woodland habitat by eliminating competition from nonnative species. Additionally, many of the recommended management actions of the SNRAMP include oak woodland restoration. Therefore, ***no impact*** to oak woodlands resulting from programmatic project activities would occur.

Coastal Dune and Scrub Habitat. Coastal dune habitat has been identified at the following Natural Areas: Lake Merced, Hawk Hill, Oak Woodlands, Balboa, Strawberry Hill, and Rock Outcrop. Coastal scrub habitat has been identified at the following Natural Areas: Lake Merced, Glen Canyon Park, Sharp Park, McLaren Park, O'Shaughnessy Hollow, Twin Peaks, Oak Woodlands, Corona Heights, 15th Avenue Steps, Mount Davidson, Brooks Park, Bayview Park, and Pine Lake. Impacts to coastal dune and scrub habitat within the Natural Areas could occur from ground-disturbing activities, such as invasive weed and tree removal, trail modification and the use of heavy equipment.

As discussed above the SFRPD would design new trails to avoid sensitive vegetation and habitat. Therefore, trail creation is not anticipated to result in a significant impact to dune and scrub habitat. Any impacts to these habitats as a result of trail modification would be short-term, temporary, and limited in extent. Trailside planting of native vegetation would occur following the creation of new trails. The SNRAMP includes the restoration of about ten miles of decommissioned social trails, which would result in a net benefit to coastal scrub habitat to the extent that those trails are located in such habitat. Additionally, as described above, invasive vegetation removal is anticipated to result in beneficial impacts to sensitive natural communities.

Management actions in the SNRAMP are designed to maintain and enhance coastal dune and scrub habitat. Therefore, should implementation of an individual programmatic project result in temporary disturbances or even a loss in dune or scrub habitat, on the whole as with impacts to native grasslands, the actions in the SNRAMP are designed to protect these habitats and would result in an overall increase coastal dune and scrub habitat. Therefore, programmatic project impacts on coastal dune and scrub would be offset by restoration activities and the resulting impacts to coastal dune and scrub habitats would be ***less than significant.***

Project-Level Impacts (Routine Maintenance)

Impact BI-8: Implementation of routine maintenance under the SNRAMP would not result in a substantial adverse effect on sensitive natural communities. (Less than Significant)

Routine maintenance impacts for wetlands are analyzed under Impact BI-11. Routine maintenance activities that could impact sensitive natural communities include the removal of invasive weeds by hand in areas of less than a half an acre, the installation of plants, the removal of invasive trees, trail maintenance, and the maintenance of catchment basins and sediment dams. Impacts to sensitive natural communities as a result of these activities could result from ground disturbance, vegetation removal, and trampling. Ground disturbance from hand-weeding would occur within the top inch of ground around the root zone and is not anticipated to result in substantial impacts to sensitive natural communities. Tree removal would be minimally invasive, occurring manually, limb-by-limb, with no more than 20 trees (less than half an acre) being removed at one time. Planting would be done using hand tools with plants in one-gallon containers or smaller. Trail maintenance would include clearing deposited soil from steps, replacing or installing steps or trail edging, and rerouting and benching trails. Ground disturbance from these activities are usually six inches and up to twelve inches. Maintenance of catchment basins could result in incidental trampling of riparian vegetation. However, any impacts to individual plants would be minimal and would not be anticipated to substantially affect sensitive natural communities. Recommended actions within the SNRAMP include revegetation with native species, which would ultimately benefit sensitive natural communities throughout the Natural Areas.

Furthermore, all routine maintenance activities will be conducted or overseen by the Natural Areas Program staff which is composed of biologists, ecologists, and natural resource managers who are knowledgeable about both the ecology and presence/locations of sensitive natural communities within the Natural Areas. Due to the small scale and manual nature of the routine maintenance activities, any impacts to individual plant species are expected to have minimal short-term effects on the sensitive communities in which they occur. Long-term beneficial impacts to the sensitive natural

communities would be expected as a result of these maintenance activities, which include the removal of invasive vegetation and replacement with native vegetation. As a result, the impacts of routine maintenance activities on sensitive natural communities would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact BI-9: Implementation of the Sharp Park restoration activities under the SNRAMP would not have a substantial adverse effect on sensitive natural communities. (Less than Significant)

The only sensitive natural communities in the Sharp Park restoration area are coastal scrub, riparian and wetland habitats. Impacts on protected wetland habitats from Sharp Park restoration activities are analyzed under Impact BI-12. The restoration goals and actions are described in detail in Section III.F.2 (Page 97) and in the Sharp Park Conceptual Restoration Alternatives Report (SFRPD 2009a), included in Appendix I. Sharp Park restoration would not adversely impact any sensitive riparian habitat because project activities would occur outside the riparian zone.

Short-term, temporary impacts to coastal scrub habitat would occur from ground disturbance as a result of vehicle traffic and heavy equipment use. Permanent impacts to coastal scrub habitat would occur from restoration activities that include the conversion of up to one acre of habitat to wetlands on the west side of the lagoon; this loss would be more than offset by the creation of 19.5 acres of additional scrub habitat within the restoration footprint, in particular scrub habitat proposed for the corridor between Laguna Salada and Horse Stable Pond and on the southwest side of Laguna Salada. Following restoration of the Laguna Salada wetland complex, temporarily impacted coastal scrub habitat to the west of the lagoon would be restored. Therefore, impacts of the Sharp Park restoration on sensitive natural communities would be ***less than significant***.

Maintenance would also occur following the Sharp Park restoration project Maintenance would include weeding and maintaining the restored areas. Maintenance of the wetland areas may include removal of invasive plant species and additional planting of wetland plant species. As needed, the SFRPD would also conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe. Maintaining the sediment basins would involve the periodic removal of sediment. These activities would not result in the removal of or damage to coastal scrub habitat. As a result, maintenance activities would have ***no impact*** on sensitive natural communities**.**

Wetlands

Programmatic Impacts

Impact BI-10: The SNRAMP and implementation of programmatic projects under the SNRAMP would have a substantial adverse effect on wetlands. (Less than Significant with Mitigation)

Vegetation removal and ground-disturbing activities associated with the project could result in direct and indirect impacts on wetlands at Lake Merced, Glen Canyon/O'Shaughnessy Hollow, Bayview Park, Pine Lake, India Basin, and Sharp Park, the only Natural Areas where they are known to occur. Programmatic project activities that occur within these Natural Areas could adversely impact wetlands as a result of invasive vegetation removal within the wetlands and adjacent uplands. As described in Section III.E.5, the SFRPD would design new trails to avoid sensitive vegetation and habitat to the degree feasible. No trail creation is planned in or adjacent to wetland habitat. However, modifications to existing trails through riparian and wetland habitat could result in temporary or permanent adverse impacts to wetland habitat. Where wetland habitat is impacted by trail modifications, trailside native vegetation would be replanted. Invasive tree removal may occur within wetlands at Lake Merced. Tree removal would result in a temporary adverse impact to wetlands through soil compaction from vehicle equipment, the potential loss of wetland vegetation from the tree removal processes, and increased sedimentation of the wetlands. Large-scale erosion control measures would occur at Glen Canyon/O'Shaughnessy Hollow, Bayview Park and Sharp Park. These construction projects have the potential to impact wetland habitat through disturbance from construction activities, loss of wetland habitat, and increased sedimentation of the wetlands. As such, programmatic projects may have a significant impact on wetlands. Implementing Mitigation Measures M-BI-1a requires that measures are taken avoid and minimize impacts to wetlands from programmatic projects. Implementing Mitigation Measure M-BI-1a requires that construction and vehicle traffic in and around wetlands be limited to the maximum extent possible. Temporary exclusion fencing would be used to protect wetland habitat, and projects would be conducted during the spring and summer to avoid saturated or ponded wetlands and streams. Where wetland disturbance cannot be avoided, Mitigation Measure M-BI-1a requires restoration of the site, which would include the replanting of native vegetation and/or maintaining the hydrologic connections which characterize the wetland. Mitigation M-BI-1a would also require the acquisition of Section 401 and 404 permits from the USACE for those Natural Areas where wetlands may be affected by project activities. Where necessary, restoration, enhancement, or compensatory mitigation would be required to offset any temporary and/or permanent impacts to

wetlands. With implementation of M-BI-1a, impacts on wetlands as a result of programmatic projects would be ***less than significant***.

Project-Level Impacts (Routine Maintenance)

Impact BI-11: Implementation of routine maintenance under the SNRAMP would not result in a substantial adverse effect on wetlands. (Less than Significant)

The potential impacts of routine maintenance on wetlands could result from a small level of ground disturbance from the removal of invasive weeds by hand in areas of less than half an acre, planting, the removal of invasive trees or limbs, trail maintenance and the maintenance of catchment basins and sediment dams. The following Natural Areas have been identified in the SNRAMP as containing wetlands, although no formal USACE wetland delineation has been conducted (with the exception of Sharp Park): Lake Merced, Sharp Park upper canyon, Glen Canyon/O'Shaughnessy Hollow, Bayview Park, Pine Lake and India Basin.

Routine maintenance activities may result in minimal disturbance as a result of invasive vegetation removal and the maintenance of catchment basins and sediment dams. These impacts would be temporary and are not anticipated to result in permanent impacts to the quality and extent of wetlands. Overall, routine maintenance is expected to have a beneficial impact on wetlands by eliminating invasive species, augmenting native wetland communities, and reducing soil erosion by planting native vegetation. Therefore, impacts of routine maintenance activities on wetlands would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact BI-12: Implementation of the Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on wetlands. (Less than Significant with Mitigation)

Restoring the Laguna Salada wetland complex would affect wetland habitat during construction activities, which include the use of heavy equipment for vegetation and sediment removal and other earthmoving activities. These activities would result in the short-term disturbance of wetlands and long-term conversion of wetlands to open water habitat and upland habitat. As shown in Table 11, there would be an overall decrease in the amount of wetlands from the Sharp Park restoration project.

Table 11
Laguna Salada Wetland Habitat Types within the Restoration Footprint

Type of Habitat	Existing Acreage*	Post-Restoration Acreage*
Freshwater Marsh	19.5	14.0
Willow Scrub	1.0	0.5
Wet Meadow	2.5	3.0
Total:	**23**	**17.5**

*Rounded to the half acre

Short-term impacts associated with the Laguna Salada restoration project include soil compaction and vegetation loss as a result of vehicle and heavy equipment use in and around the wetlands. As described in Section III.F.2 (page 104), following completion of each season's restoration activities, these areas would be scarified, recontoured, planted and hydroseeded with native vegetation to approximate their pre-disturbance condition, as needed based on the level of disturbance.

Long-term impacts to wetlands at Sharp Park would occur as a result of restoration activities that would include dredging existing wetlands and recontouring the shoreline to create optimal habitat for California red-legged frog and San Francisco garter snake. These activities would result in a loss of approximately 5.5 acres of freshwater marsh. Wetland habitat would be altered through the conversion of up to half an acre of wet meadow wetland and freshwater marsh to upland habitat through the creation of an upland refuge in the middle of the lagoon to provide breeding and basking habitat for snakes and frogs. Up to one acre of replacement wet meadow wetland would be created along the northern and western edges of the lagoon (See Table 11).

The project proposes to convert existing vegetated wetland to open water habitat consistent with historical conditions of the Laguna Salada wetland complex, which previously provided productive San Francisco garter snake and California red-legged frog habitat. Over the years, cattails and other vegetation have encroached into the historically open water habitat, converting this habitat to freshwater marsh and/or wet meadow and limiting its value as breeding habitat for the California red-legged frog. Removing accumulated sediments and encroaching vegetation would reverse the effects of a trend that would eventually result in the conversion of the remaining open water to vegetated wetland and ultimately conversion of those wetlands to upland. The project proposes to convert vegetated wetland habitat back to open water, resulting in a permanent loss of vegetated wetland. This conversion of wetland to open water habitat would not result in a loss of waters of the US and would be consistent with the historical conditions of Laguna Salada. Freshwater marsh habitat at Laguna Salada is currently dominated by dense stands of cattails (*Typha angustifolia*) and

bulrush (*Scirpus* sp.). These species tend to form monostands and prevent the growth of other species. By converting these wetlands to open water, not only will a higher quality habitat be created for protected species, but the biodiversity of native wetland vegetation along the periphery of the open water will increase. This condition would be more consistent with historical conditions of the wetland complex that allowed for a productive population of San Francisco garter snake. Overall, there would be no net loss of waters of the US as a result of the restoration activities. Restoration activities would be consistent with the ultimate goals of the Sharp Park restoration, which are to enhance habitat quality for protected species and other native wildlife, in addition to diversifying existing wetlands. The Sharp Park restoration project would restore and enhance the biological functionality of the wetland and upland complex to better support the various species present within that habitat system and would not be considered a substantial adverse effect to the Laguna Salada wetland complex. As a result, the Sharp Park restoration project is expected to result in long-term beneficial impacts to the wetland complex. However, as discussed above, implementation of the Sharp Park restoration would result in short-term construction-related impacts to wetlands, which would be significant. Mitigation Measures M-BI-12a and M-BI-12b have been identified to reduce construction-related impacts to less than significant. These mitigation measures are further described below.

Prior to implementing the proposed Sharp Park restoration activities, the SFRPD would be required to obtain a USFWS Biological Opinion, SFBRWQCB Section 401 water quality certification, a USACE Section 404 permit, and a coastal development permit from the California Coastal Commission; a CDFG streambed alteration agreement may also be required. These resource agencies may require protective wetland measures in addition to Mitigation Measures M-BI-12a and M-BI-12b, as discussed below.

Implementing Mitigation Measure M-BI-12a requires the SFRPD to limit impacts on wetlands and water quality. Mitigation Measure M-BI-12b requires SFRPD to prepare a mitigation plan as part of the application for Section 401 water quality certification. Mitigation Measure M-BI-12a also incorporates requirements of both Sections 401 and 404 of the Clean Water Act and the CCC. Mitigation Measure M-BI-12b requires that the SFRPD prepare a monitoring program which would ensure that success criteria would be established to ensure that restoration of the Laguna Salada wetland complex is achieving the project objectives. Success criteria may include annual goals for the percent cover of native wetland vegetation, limitations on the amount of invasive species cover permissible, and the presence of hydric soils and wetland hydrology. With implementation of Mitigation Measures M-BI-12a and M-BI-12b, the Sharp Park restoration would not have a

substantial adverse effect on wetlands protected under Section 404 of the Clean Water Act, resulting in a ***less than significant*** impact.

Maintenance would occur following the Sharp Park restoration project. Monitoring for wetland functionality would include assessing ecologically based criteria such as the dominance of wetland vegetation, the presence of hydric soils or evidence of hydrology to determine success of the project objectives. Maintenance of the wetland areas may include removal of invasive and encroaching plant species and additional planting of wetland species. Maintaining the sediment basins would involve the periodic removal of accumulated sediment. As needed, the SFRPD would also conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe or similar equipment. These maintenance activities have the potential to impact wetland habitat by disturbing and damaging wetland vegetation, resulting in significant impacts on a regular basis. Implementing Mitigation Measure M-BI-12a requires the SFRPD to limit impacts on wetlands and water quality. With implementation of Mitigation Measures M-BI-12a and M-BI-12b, implementation of the Sharp Park restoration project maintenance activities would be ***less than significant***.

M-BI-12a: Protection of Wetlands during the Sharp Park Restoration Project

The SFRPD shall obtain all applicable permits from SFBRWQCB, CCC, USACE, and CDFG for impacts to wetland habitat. Measures identified in these permits shall be applied, in addition to the following measures, unless otherwise specified by resource agencies:

- Except for those areas directly being restored, a minimum 100-foot buffer surrounding all wetlands, ponds, streams, drainages, and other aquatic habitats located on or within 100 feet of the project site shall be clearly designated on the final project construction plans and marked on the site with orange construction fencing or silt fencing. If the area is on a slope, silt fencing or other comparable management measures will be installed to prevent polluted runoff, as well as equipment, from entering the buffer area. Signs shall be installed every 100 feet on or adjacent to the buffer fence that read, "Environmentally Sensitive Area – Keep Out." Fencing and management measures shall be installed and inspected prior to project implementation and maintained throughout the restoration period. No equipment mobilization, grading, clearing, storage of equipment or machinery, vehicle or equipment washing, or similar activity, may occur until a representative of the SFRPD has inspected and approved the fencing and/or management measures installed around these features;
- Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not directly associated with habitat restoration.

Project construction and staging areas would be delineated with construction fencing and shall avoid wetland habitat to the maximum extent feasible;

- All vehicles would be brought in clean and free of weeds to prevent the spread or introduction of invasive plant species. Vehicles and equipment would be fueled, maintained, and parked at least 100 feet from wetlands. Each morning, operators would inspect all equipment that requires the use of fuel or fluids for leaks;
- Silt barriers, such as sand bags, silt fences/curtains, or basins, would be installed before the project begins;
- Wet sediments taken from the wetlands would be stockpiled so water could drain or evaporate before removal. Stockpiles would be placed in upland areas with the perimeters protected by BMPs to avoid polluted runoff;
- All soil stockpiles shall be protected against wind and rainfall erosion at all times. Plastic sheeting or other similar material shall be used to cover soils and would be securely anchored by sandbags or other suitable means. At no time would any stockpiled materials be allowed to erode into any water body or drainage facility or onto any roadway; and
- Ground disturbing construction and maintenance activities shall be avoided during the rainy season and consistent with Mitigation Measure M-BI-6a.

M-BI-12b: Laguna Salada Restoration Project Wetland Mitigation Plan

Consistent with the requirements for a Section 401 water quality certification permit, the SFRPD shall prepare a mitigation plan. Additionally, because this is a restoration project, the CCC may require an objective performance evaluation to determine project success which would include a monitoring program and methods for evaluating performance, which could be accomplished through implementation of the wetland mitigation plan. The wetland mitigation plan shall include, at a minimum, a description of the following:

- Proposed project's physical and biological impacts;
- Mitigation goals;
- Mitigation work plan;
- Management and maintenance plan;
- Success criteria and performance indicators
- Monitoring plan; and
- Site protection measures.

The components of the above mitigation plan may be altered, supplemented, or deleted during the SFBRWQCB's review process, as the SFBRWQCB has final authority over the terms of the water quality certification.

Fish and Wildlife Movement, Migratory Corridors, and Nursery Sites

Programmatic Impacts

Impact BI-13: The SNRAMP and implementation of programmatic projects under the SNRAMP would not have a substantial adverse effect on fish and wildlife movement, migratory corridors, or nursery sites. (Less than Significant)

Programmatic project activities include vegetation removal consisting of invasive weed or tree removal and ground-disturbing activities associated with the use of heavy equipment for trail modification and implementation of large-scale erosion control measures. These activities have the potential to directly impact wildlife movement, migratory corridors, or nursery sites.

Migratory fish are limited in the Natural Areas. Coho salmon is the only identified migratory fish, recorded in Lake Merced. Lake Merced has been disconnected from the ocean for several decades; therefore, this species is not expected to occur here. Implementation of programmatic projects is not expected to impact migratory or resident fish.

Many migratory birds use the Natural Areas for foraging, nesting, and perching habitat, as the Natural Areas provide habitat in an area that is otherwise highly urbanized. All of the Natural Areas support potential or confirmed native bird nesting and foraging habitat, which includes nonnative forests, grasslands, and riparian scrub. Migratory birds that use the Natural Areas are presented in Appendix D. Removing a large area of vegetation would have a temporary adverse impact on migratory species that may use the habitat, potentially disturbing nesting or foraging behaviors. Following the removal of invasive vegetation, replanting with native vegetation would occur, thus restoring habitat quality for migratory species. While resulting in some ground disturbance and habitat loss, the development of trails would be relatively minor and would not significantly fragment wildlife movement corridors. Long-term beneficial impacts to migratory birds would occur as a result of invasive vegetation removal by creating a higher quality habitat. Measure GR-4b ensures vegetation management activities occur outside the breeding season (February 1 to August 31) if breeding birds could be affected, unless the following specific conditions are met: projects begun before the breeding season have already disturbed the area, or a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered,

a 150-foot-radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest. These measures, combined with the short-term nature of vegetation or ground disturbance incurred by programmatic project activities, would ensure that potential impacts of programmatic projects on wildlife movement and migratory corridors would be ***less than significant***.

Project-Level Impacts (Routine Maintenance)

Impact BI-14: Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on fish and wildlife movement, migratory corridors and nursery sites. (Less than Significant)

Routine maintenance activities include the removal of invasive weeds by hand in areas of less than a half an acre, revegetation, the removal of invasive trees, trail maintenance, and the maintenance of catchment basins and sediment dams. These activities are not expected to interfere with wildlife movement and migratory corridors.

Nursery sites have the potential to be impacted from vegetation removal that is conducted as part of routine maintenance. As part of the project, SFPRD would conduct tree removal activities using previously described minimally invasive techniques. Tree removal would be conducted limb-by-limb and would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance; stumps may be ground to below grade where necessary to avoid tripping hazards. Measure GR-4b ensures vegetation management activities occur outside the breeding season (February 1 to August 31) if breeding birds could be affected, unless the following specific conditions are met: projects begun before the breeding season have already disturbed the area, or a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot-radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest. These measures, combined with the small area of vegetation or ground disturbance incurred by routine maintenance activities, would not significantly alter nursery sites and would not interfere with wildlife movement. Therefore, potential impacts of routine maintenance on fish and wildlife movement, migratory corridors, and nursery sites would be ***less than significant***.

Project-Level Impacts (Sharp Park Restoration)

Impact BI-15: Implementation of Sharp Park restoration activities under the SNRAMP would have a substantial adverse effect on fish and wildlife movement, migratory corridors and nursery sites. (Less than Significant with Mitigation)

Sharp Park is bordered in part by undeveloped areas, including Sweeny Open Space, Mori Point, and Milagra Ridge, which allows it to serve as a relatively undisturbed corridor for wildlife, particularly birds. The potential impacts on fish and wildlife movement, migratory corridors, and nursery sites as a result of the Sharp Park restoration include the temporary disturbance from human presence as well as the disturbance of foraging and nesting habitat from vegetation removal, dredging open water, recontouring the shoreline, and constructing upland mounds.

These Sharp Park activities may result in significant temporary impacts on wildlife movement due to equipment and human presence and the amount of disturbance from earthmoving and dredging activities; however, the restoration project would ultimately result in long-term beneficial impacts on wildlife movement by improving habitat quality for native species and allowing for greater habitat connectivity between Sharp Park and contiguous areas. The project also includes creating an upland and wetland habitat corridor between Laguna Salada and Horse Stable Pond to support the San Francisco garter snake. Additionally, maintenance would also occur following the Sharp Park restoration project. These efforts would ensure achievement of the goals of the restoration project, which include greater wildlife connectivity within Sharp Park and with contiguous areas. Mitigation Measures M-BI-6a, M-BI-6b, M-BI-12a and M-BI-12b would minimize the potential temporary impacts to wildlife movement within the Laguna Salada wetland complex by implementing protection measures to avoid and minimize impacts to protected species as well as wetland and riparian areas. These measures require pre-construction surveys, worker education programs, biological monitoring, exclusion fencing, consultation with the USFWS and CDFG, and a wetland mitigation plan. With implementation of Mitigation Measures M-BI-6a, M-BI-6b, M-BI-12a and M-BI-12b, impacts of Sharp Park restoration activities and associated maintenance activities on fish and wildlife movement, migratory corridors, and nursery sites would be ***less than significant***.

Conflicts with Local Plans and Policies

Programmatic Impacts

Impact BI-16: The SNRAMP and implementation of programmatic projects under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources. (No Impact)

The SFRPD developed the SNRAMP and its management actions in compliance with all applicable local policies and ordinances protecting biological resources; all programmatic projects would also be designed to comply with these protective measures. These include tree protection ordinances, such as the San Francisco Urban Forestry Ordinance. Several Landmark Trees are found in or near the Natural Areas, but would not be disturbed or removed by any of the programmatic projects. These include a blue elderberry tree (*Sambucus mexicana*) within Bernal Hill, a Canary Island Date Palm (*Phoenix canariensis*) near Palou-Phelps, and a New Zealand Christmas Tree (*Metrosideros excelsus*) adjacent to the Interior Greenbelt. Management actions would not conflict with these or other applicable policies or ordinances. As a result, the programmatic projects would have ***no impact*** due to conflicts with local policies or ordinances.

Project-Level Impacts (Routine Maintenance)

Impact BI-17: Implementation of routine maintenance activities under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources. (No Impact)

The SNRAMP management actions were developed in compliance with all applicable local policies and ordinances protecting biological resources; as a result, routine maintenance would have ***no impact*** due to conflicts with local policies or ordinances.

Project-Level Impacts (Sharp Park Restoration)

Impact BI-18: Implementation of Sharp Park restoration activities under the SNRAMP would not conflict with any local policies or ordinances protecting biological resources. (No Impact)

The SNRAMP management actions were developed in compliance with all applicable local policies and ordinances protecting biological resources; as a result, the Sharp Park restoration activities would have ***no impact*** due to conflicts with local policies or ordinances.

Cumulative Impacts

Impact BI-19: The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to biological resources. (Significant and Unavoidable)

Projects that temporarily disturb or permanently remove open space and wildlife habitat include the Candlestick Point-Hunters Point Shipyard Phase II Development and 150 acres of proposed residential development and 85,000 square feet of proposed commercial development in Pacifica. These projects may remove and fragment habitat, possibly resulting in increased use of the Natural Areas by common and special status wildlife, making those areas more critical for biological conservation efforts. Additional recreation facilities also are proposed at McLaren Park and Oak Woodlands in Golden Gate Park. The cumulative projects also include construction and development in the vicinity of such Natural Areas as the 15th Avenue Steps, Corona Heights, and the San Francisco Botanical Garden (Lily Pond and Buena Vista Park). As with all projects that include ground disturbance, development, or vegetation removal, there is potential to adversely impact biological resources. An increase in pedestrian traffic in the Natural Areas over time may result in impacts to special status plant species and sensitive natural communities due to trampling; however, improved trail systems, fencing, and signs would reduce any such impacts. In combination with the SNRAMP, the cumulative regional projects proposed to occur within the vicinity of several Natural Areas would have potentially significant adverse impacts on biological resources over both the short-term and the long-term. The goal of the SNRAMP is to preserve and maintain open space in the region and the mitigation measures identified previously in this section would be implemented to protect biological resources; as a result, the SNRAMP would not result in a cumulatively considerable adverse impact on biological resources.

Implementation of the proposed GGNRA Dog Management Plan may further restrict dog access and off-leash areas within GGNRA land holdings. In addition, the SNRAMP proposes to close the Lake Merced DPA and reduce the size of the DPAs at Bernal Hill and McLaren Park; on-leash dog use would still be allowed at these and all other Natural Areas. The reductions in off-leash areas proposed by the GGNRA could result in an increase in both on-leash and off-leash dog use at the Natural Areas. The actions proposed by the GGNRA and the SNRAMP could result in concentrated dog use within the remaining off-leash areas. Increased use may result in impacts to biological resources within the Natural Areas DPAs, including disturbance of breeding birds and damage to special status plants. The cumulative combination of proposed dog management for the Natural Areas and the GGNRA project could result in indirect significant impacts on biological resources in

the Natural Areas. The comparative contributions of the each project to this potentially significant cumulative impact cannot be determined based on the speculative nature of the behavioral and physical factors contributing to that determination. The potentially significant impact to biological resources as a result of increased use resulting from cumulative actions could be mitigated by adding a new DPA at a nearby Natural Area or other nearby property. However, there is a current moratorium[11] on new DPAs, and the mitigation therefore would not be feasible. As a result, it is conservatively concluded that the proposed project's contribution would be potentially ***significant and unavoidable***.

Overall, potential net cumulative long-term impacts on biological resources associated with the SNRAMP are expected to be beneficial. Implementing the plan's measures would increase the amount of wildlife habitat, would preserve and augment special status species and sensitive habitats, would improve habitat connectivity and biodiversity, would reduce nonnative and invasive vegetation, and would increase native vegetative cover. Other existing and future foreseeable cumulative projects in the area that would add to these beneficial effects include the SFRPD trails program, which would improve trails to protect natural resources and sensitive habitats, and the SFRPD forestry program, which would focus on native tree planting and restoration.

[11] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

V.H HYDROLOGY AND WATER QUALITY

Comments related to hydrology and water quality received during the NOP scoping process included concerns about the following:

- Effects of off-leash dogs on water contamination at Pine Lake, Buena Vista Park, Lake Merced, and McLaren Park;
- Effects of reducing or ceasing irrigation at Sharp Park Golf Course on the salinity of Laguna Salada, Horse Stable Pond, and their associated wetlands;
- Effects of reducing or ceasing irrigation at Sharp Park Golf Course on the strength and integrity of the seawall;
- Effects on drainage patterns and flood hazards in Sharp Park and adjacent residential areas;
- Effects of sea level rise on the western portion of Sharp Park;
- Runoff effects from removing trees at Mount Sutro Forest;
- Effects of herbicides on groundwater;
- Increased water consumption required for the native plantings;
- Effects of tree removal on drainage patterns in all Natural Areas; and
- Drainage from Horse Stable Pond to the beach, including water level of the outflow pipe, pump capacity, pump condition, water level and capacity of the gravity outflow line, and the operational status of the gravity outflow line.

V.H.1 Regulatory Setting

Federal

Clean Water Act

The US Army Corps of Engineers and the EPA regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act (33 USC, Section 1344). Waters of the United States are defined in Title 33 CFR, Part 328.3(a), and include a range of wet environments, such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds. Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (such as dams and levees), infrastructure developments (such as highways and airports), and mining projects. Section 404 requires a federal license or permit before dredged or

fill material may be discharged into waters of the United States, unless the activity is exempt from regulation.

Section 401 of the Clean Water Act (33 USC, Section 1341) applies to any applicant for a federal license or permit to conduct any activity that may discharge a pollutant into waters of the United States. It requires the applicant to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency with jurisdiction over the affected waters where the discharge originates or would originate. This ensures that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for protecting water quality in California rests with the State Water Resources Control Board and its nine RWQCBs. The SFBRWQCB would conduct Section 401 Water Quality Certification for all Corps of Engineers Section 404 permit decisions related to the SNRAMP. This is to ensure consistency with state water quality regulations.

Section 402 of the federal Clean Water Act authorizes the EPA to regulate water quality in California by controlling the discharge of pollutants to water bodies from point sources (a municipal or industrial discharge at a specific location or pipe) and nonpoint sources (diffuse runoff of water from adjacent land uses) through the NPDES. Federal regulations issued in November 1990 and revised in 2003 expanded the authority of the State Water Resources Control Board to permit stormwater discharges from municipal storm sewer systems, industrial processes, and construction sites that disturb areas larger than one acre. Within the San Francisco limits, NPDES permits are administered by the SFBRWQCB.

Construction that disturbs one acre or more of land and construction on smaller sites that are part of a larger project must comply with the California State Water Resources Control Board General Permit for Discharges Associated with Construction Activity (NPDES General Construction Permit), which regulates stormwater leaving construction sites. Site owners must notify the state, prepare and implement a stormwater pollution prevention plan (SWPPP), monitor the effectiveness of the plan, and perform regular reporting to the SFBRWQCB.

State

Porter-Cologne Water Quality Control Act

Article 4 Waste Discharge Requirements of the Porter-Cologne Act (Section 13260) requires that any person discharging waste or proposing to discharge waste that could affect the quality of the waters

of the state, other than into a community sewer system, shall file with the appropriate RWQCB a report of the discharge. The RWQCB determines if a project should be regulated under the Porter-Cologne Act based on the likelihood that it would pose any threat to water quality. Placing clean fill in waters of the state is considered pollution because it could alter water quality, which may adversely affect its beneficial uses.

California Coastal Act of 1976

Section 30233 (Article 4) of the California Coastal Act applies to projects that result in diking, filling, or dredging open coastal waters, wetlands, estuaries, and lakes in the coastal zone. This section limits these activities to certain types of projects (restoration projects, for example) and stipulates criteria under which development is permitted (for example, those disposing of dredge and spoils shall avoid significant disruption to marine and wildlife habitats and water circulation; if carried out in a wetland, they should maintain and enhance the functional capacity of the wetland; and projects should be designed so as not to impede the continued delivery of sediments to the littoral zone [shallow coastal waters]). The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. Those policies applicable to hydrology and water quality are discussed in Section IV.A.12.

Regional/Local

Water Quality Control Plan for the San Francisco Bay Basin

The SFBRWQCB regulates water quality in San Francisco Bay under the Porter-Cologne Water Quality Control Act through regulatory standards and objectives in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan; SFBRWQCB 2009b). The Basin Plan identifies existing and potential beneficial uses and provides numerical and narrative water quality objectives to protect those uses. The Basin Plan identifies the following existing beneficial uses for the San Francisco Bay: ocean, commercial, and sport fishing; estuarine habitat; industrial service apply; fish migration; navigation; preservation of rare and endangered species; water contact recreation; noncontact water recreation; shellfish harvesting; and wildlife habitat.

The beneficial uses of Lake Merced identified in the Basin Plan are cold and warm freshwater habitat, fish spawning, wildlife, and contact and noncontact recreation. Municipal use for emergency

water supply is identified as a potential beneficial use. The SFPUC is implementing a water quality monitoring program at Lake Merced.

The State of California and EPA identify central San Francisco Bay, Islais Creek, and Lake Merced as impaired water bodies. The pollutants impairing the central San Francisco Bay, as they appear on the 2006 Section 303(d) list of impaired water bodies (the latest EPA-approved list), in addition to selenium and exotic species, are chlordane, DDT, dieldrin, dioxin and furan compounds, mercury, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls in sediments (EPA 2007).

The SFBRWQCB has developed total maximum daily loads for polychlorinated biphenyls and mercury. In 2008, the SFBRWQCB recommended adding to the list of water quality impairments trash along the shoreline of San Francisco Bay (SFBRWQCB 2009a). The EPA has not yet approved the 2008 list.

Pollutants identified as impairing water quality in Islais Creek are ammonia, chlordane, dieldrin, hydrogen sulfide, polycyclic aromatic hydrocarbons, and sediment toxicity.

Pollutants contributing to impairment of Lake Merced water quality are low dissolved oxygen and low pH (acidity).

Along the Pacific Coast, a number of San Mateo County streams are identified as impaired due to coliform bacteria; however, Sanchez Creek is not among the streams listed.

San Francisco Public Utilities Commission Municipal Stormwater Permit

Most of San Francisco is served by a combined storm sewer system, where stormwater, along with residential and commercial sewage, is directed to treatment plants before being released to San Francisco Bay or the Pacific Ocean. There are, however, some areas in San Francisco that are served by a separate storm sewer. In these areas, stormwater that goes into street storm drains flows directly to receiving water bodies, such as the bay, ocean, and local lakes. The SFPUC has developed a stormwater management plan (SWMP) to manage stormwater in those areas of San Francisco that are served by separate storm and sewer collection systems. The SWMP describes specific programs that the SFPUC will implement to minimize stormwater pollution in these areas, which account for about 10 percent of San Francisco. The SWMP will be implemented to ensure that San Francisco is in compliance with state water quality mandates. These mandates are commonly referred to as Phase II regulations, which municipalities must comply with in order for stormwater discharges to be covered under California's General Permit for the Discharge of Stormwater from Small Municipal

Separate Storm Sewer Systems Water Quality Objective, No. 2003-0005-DWQ (Small MS4, or Phase II, General Permit). The SFBRWQCB approved San Francisco's SWMP in January 2004.

The SWMP applies only to areas of San Francisco that are served by separate storm and sewer systems; these are areas where the water that goes down storm drains discharges directly into water bodies. The only areas in San Francisco for which the SWMP applies are Lake Merced, Lobos Creek, Pine Lake in Stern Grove, and Stow Lake, Middle Lake, and Elk Glen Lake in Golden Gate Park.

For discharges associated with construction, coverage under the NPDES General Construction Permit is required if the area disturbed is part of the municipal stormwater system and disturbs one or more acres of soil or is part of a larger development that disturbs one or more acres of land.

Coverage under the NPDES General Construction Permit is not required for regular maintenance performed within the original line, grade, or capacity of a facility (for example, slurry sealing a parking lot). Coverage under the NPDES General Construction Permit is also not required for projects in areas of San Francisco that drain to the combined sewer system. However, the SFPUC requires that all construction sites must implement BMPs to prevent illicit discharge into the combined sewer and that all contractors have a sediment and erosion control plan for projects that are within the Combined Sewer System. The expectation is that SNRAMP projects will have to comply with both the state General Construction Permit (for Sharp Park restoration) and the SFPUC's discharge requirements to the combined sewer system.

V.H.2 Environmental Setting

This section describes the hydrology and water quality conditions in the project sites and vicinity and evaluates the potential for the project to result in environmental impacts from surface water and groundwater quality and flooding. The project sites are the 32 Natural Areas identified in the SNRAMP. Thirty-one of these Natural Areas are in San Francisco, and the thirty-second, Sharp Park, is in Pacifica, approximately six miles south of San Francisco along the Pacific Ocean.

Climate

The climate in the San Francisco Bay Area is generally characterized as a Mediterranean pattern of cool and mild temperatures along the coast, with higher temperatures inland, cool wet winters, and relatively warm dry summers. San Francisco receives approximately 21 inches of precipitation a year, mostly between October and April. For precipitation measurements, a "water year" is typically considered to run from October 1 through September 30. Average monthly temperatures range from 50.3 degrees Fahrenheit in January to 62.3 degrees in September (SFRPD 2006). Temperature and

moisture gradients exist within San Francisco, with cooler temperatures and wetter conditions in the western part of the city and warmer temperatures and slightly drier conditions in the eastern part. The temperature and moisture gradients, coupled with diverse topography, result in microclimates throughout San Francisco. The climate in Pacifica is similar to the climate in the western portion of San Francisco.

Regional Hydrology

San Francisco is surrounded on three sides by water, with San Francisco Bay to the east and north and the Pacific Ocean to the west. San Francisco and Pacifica are in the San Francisco Bay watershed, US Geological Survey (USGS) hydrologic unit code 18050004 (EPA 2009a). The California State Water Resources Control Board and the nine RWQCBs manage water quality in California and administer federal water pollution control laws. The state board administers water rights and water pollution control, while the RWQCBs conduct planning, permitting, and enforcement. Within this context, San Francisco and Pacifica are in the San Francisco Bay Basin, which is administered by the SFBRWQCB and covers approximately 4,500 square miles. The SFBRWQCB has developed a water quality control plan (Basin Plan) for the San Francisco Bay region, dividing the basin into several hydrologic planning areas. Most of San Francisco and Pacifica are in the San Mateo Coastal Hydrologic Planning Area, although the northern and western portions of San Francisco are in the Central Hydrologic Planning Area (SFBRWQCB 1995).

Many of the Natural Areas do not contain water bodies; the Natural Areas that have or will have permanent surface water features are Bayview Park (proposed detention basin/seasonal wetland), Lake Merced, Pine Lake, India Basin Shoreline Park (San Francisco Bay), McLaren Park, Glen Canyon Park and O'Shaughnessy Hollow (Islais Creek), and Sharp Park (Sanchez Creek, Arrowhead Lake, Laguna Salada, and Horse Stable Pond). Next to the Golden Gate Park Oak Woodlands are Stow Lake and Lily Pond. Lake Merced is the only surface water body in the Natural Areas that the SFBRWQCB identifies as a significant surface water body (SFBRWQCB 1995). The water bodies associated with each of these Natural Areas are described below.

Lake Merced

With an area of about 30 acres, Lake Merced in southwestern San Francisco is the largest freshwater lake in the city (Metcalf & Eddy 2008). It contains the largest expanse of wetland habitat in San Francisco and provides refuge for thousands of migratory birds (SFRPD 2006). The lake overlies the North Westside Basin Aquifer, and the lake level reflects groundwater elevations in the shallow aquifer. During the past 80 years, for a variety of reasons, including variations in rainfall and runoff, groundwater pumping, and changes in sources of inflow, water levels in Lake Merced have

fluctuated over a range of about 23 feet (Metcalf & Eddy 2008). The maximum recorded elevation was at about 24.5 feet above mean sea level, an elevations falling to about 1.5 feet above mean sea level. In response to concerns about falling lake levels during the 1980s and 1990s and declines in the underlying aquifer, a number of management actions have been undertaken aimed at stabilizing the lake level, including reducing groundwater pumping from the Westside Aquifer and recharging the lake with stormwater. Management of the lake level and water quality is the responsibility of the SFPUC, which is developing a Lake Merced Watershed Plan. Furthermore, the North Westside Basin Groundwater Management Plan (SFPUC 2005) calls for ensuring that pumping groundwater wells in the basin does not lead to declines in water levels in Lake Merced or Pine Lake. The SFPUC, in collaboration with North San Mateo County Sanitation District, initiated the Lake Merced Pilot Stormwater Enhancement Project in 2003 to use stormwater in the Vista Grande Canal, which would normally flow to the ocean, to recharge Lake Merced. The Vista Grande Canal runs parallel to John Muir Drive near the southwest shoreline of South Lake and Impound Lake. The stormwater is treated by filtration through a riparian buffer along the shoreline of the lake.

Pine Lake

Pine Lake, with a surface area of about 1.7 acres, occupies a narrow forested depression between sand dunes west of Sigmund Stern Grove and is one of the few natural lakes in San Francisco. The lake was originally known as Laguna Puerca or, alternatively, as Mud Lake, perhaps owing to fluctuating seasonal water levels. Sigmund Stern Grove and Pine Lake are on the southern boundary of the Parkside District, which was originally founded in 1905 (Brandi and LaBounty 2008). The watershed of Pine Lake is currently about 35 acres but historically was larger, draining the western slope of Mount Davidson. Although the drainage area of the lake has been reduced by urban development and diversion of runoff to storm sewers, like Lake Merced, Pine Lake is maintained by groundwater levels in the North Westside Basin Aquifer, which underlies both lakes.

Among the hydrologic issues confronting Pine Lake are fluctuating water levels, bank erosion, water quality degradation from urban runoff, and nutrient loading that can result in algae growth followed by decay and reductions in dissolved oxygen levels.

San Francisco Bay

India Basin Shoreline Park is in southeastern San Francisco and borders San Francisco Bay, which is identified as an impaired water body, as described above.

Stow Lake

Stow Lake encircles Strawberry Hill, part of the Golden Gate Park Oak Woodlands Natural Area, in the northeast corner of Golden Gate Park (SFRPD 2006). Stow Lake is not in the Natural Area but receives runoff from Strawberry Hill.

Lily Pond

Lily Pond, in the Golden Gate Park Oak Woodlands Natural Area, is south of the Conservatory of Flowers. The pond occupies a quarried depression next to the Natural Area. It receives runoff from the Natural Area but is not within the boundary of the Natural Area.

McLaren Park

McLaren Park lies on a ridge between three watersheds. A small part of the western side of the park surrounding Excelsior Middle School drains to the west into the Islais Creek watershed. The northern portion of the park, generally the part north of Mansell Street, lies within the Yosemite Creek Basin, the area historically drained by Yosemite Creek, which ran north of Bayview Hill and Candlestick Park, to Yosemite Slough on San Francisco Bay. Today, except for remnants of the headwater drainage in McLaren Park, most of the drainage network of Yosemite Creek has been diverted to underground storm sewers. The combined storm sewers collect stormwater and sanitary sewage and transport it via force mains and tunnels to the Southeast Water Pollution Control Plant (SFPUC 2009a).

The most notable surface water features in McLaren Park are in the Yosemite Creek watershed. These include Yosemite Marsh, a small natural wetland within the Natural Area of the park, near the intersection of Oxford and Bacon Streets; Gray Fox Creek, which drains to the north, in the direction of McNab Lake, along the south side of the amphitheater; McNab Lake, a small artificial impoundment that borders the Natural Area in the northeast corner of the park, near the Louis Sutter Playground; and a reservoir, surrounded on three sides by the Natural Area, on the northwest side of the park (SFRPD 2006). Yosemite Marsh and Gray Fox Creek each lie at the head of branches of the former Yosemite Creek (Ramirez-Herrera et al. 2006).

The southern half of McLaren Park is in the Sunnydale Basin/Visitacion Valley watershed, which drains to San Francisco Bay south of Candlestick Point. This watershed is considerably smaller than the watershed of Yosemite Creek and therefore historically contained smaller and less competent streams (Ramirez-Herrera et al. 2006; SFPUC 2007b).

Islais Creek

The Islais Creek Basin, which extends south to Daly City and drains most of the southeast quadrant of San Francisco, covers an area of nearly 7,000 acres (SFPUC 2009b). Until the late 1800s, Islais Creek provided about 85 percent of San Francisco's drinking water (SFPUC 2007a). With urban growth, nearly all of the streams that drain the basin have been undergrounded. The last remaining aboveground reach of the creek drains the upper portion of Glen Canyon Park. The Glen Canyon Park reach is an intermittent stream but supports willows and other riparian vegetation. The creek enters a five-foot-diameter underground culvert at the lower end of Glen Canyon Park and continues underground in the combined storm and sanitary sewage conveyance system to the Southeast Water Pollution Control Plant. This plant discharges treated wastewater to San Francisco Bay via the concrete-lined Islais Creek Channel, just north of Islais and Napoleon Streets, east of Interstate 280 (SFPUC 2009b).

Sanchez Creek

Sanchez Creek is in Sharp Park in Pacifica. It originates on a ridge above the park and flows through the park to Horse Stable Pond near the Pacific Ocean. Sanchez Creek feeds Arrowhead Lake, which is a former irrigation reservoir in the upper canyon. Sanchez Creek is directed through culverts in the lower part of the park (SFRPD 2006).

Arrowhead Lake

Arrowhead Lake is in the eastern portion of Sharp Park, in the upper reaches of the watershed near the archery range. It formerly served as a reservoir to store irrigation water for the park in the dry season.

Laguna Salada and Horse Stable Pond

Laguna Salada, in the western portion of Sharp Park, is a large brackish lake, occupying approximately 27 acres. Laguna Salada is up to 7.5 feet deep under typical conditions, which is when there are no storms (SFRPD 2009a). Laguna Salada was originally a coastal lagoon with intermittent periods of connection and disconnection with the ocean. Construction of a berm and then a levee in the 1940s and 1980s resulted in permanently preventing direct tidal influence, except for rare events when storms overtop or breach the levee (SFRPD 2006).

Horse Stable Pond is south of Laguna Salada and consists of an open water pond and a freshwater wetland. It is connected to Laguna Salada via an approximately 1,000-foot-long channel that was constructed to drain water from the lagoon to the pond, and together these three features form a wetland complex. In addition to water from Laguna Salada, Horse Stable Pond receives water from

Sanchez Creek from the east. Horse Stable Pond is shallower and smaller than Laguna Salada, and typical water depths range from one to three feet. Seven wetland series are found around and within Laguna Salada. Flood waters in the wetland complex are drained by pumps in Horse Stable Pond, which pump water into the Pacific Ocean during the winter, when water levels in the pond get too high (SFRPD 2009a).

The *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System* (KHE 2009) was prepared for the SFRPD to improve the understanding of the hydrologic processes that affect the distribution of ecological habitats in the Laguna Salada wetland system and flooding of the adjacent golf course. The assessment characterized the variability of water level fluctuations from year to year in the Laguna Salada wetland system. Hydrologic monitoring at the site documented water level fluctuations over a range of 3.2 feet from April 2008 through February 2009. Observers noted a gradual recession of the water surface elevation in Laguna Salada, from 7.3 feet (NAVD 88) in May 2008 to 6.1 feet in October 2008. Rainfall in early November 2008 quickly filled Laguna Salada, and the water surface elevation remained near seven feet through the early winter (NAVD 88). A storm in mid-February 2009 increased the water surface to 9.3 feet (KHE 2009).

Results from a water budget investigation reveal that the system is supplied with adequate water to fill the ponds even in dry years. The hydrologic assessment and a previous hydrologic site assessment (Philip Williams & Associates et al. 1992) were both completed during multiyear droughts. The assessments reflect worst-case scenarios with respect to water supply and water quality in the Laguna Salada wetlands. However, conditions observed and monitored during these studies reflect suitable conditions to sustain desired ecological habitats (KHE 2009).

Variability of water levels in the wetlands from year to year is low due to the operation of the pumping station. Early spring water levels in the ponds are consistent among dry, normal, and wet water years because the water level is controlled by the pumping station. Dry season losses due to evapotranspiration and seepage do not likely vary much year to year. Surface water inflows associated with winter storms provide the primary source of water to the wetland system. Groundwater inflow exceeds groundwater outflow (seepage); as a result, groundwater inflows contribute to the overall water budget of the system, and dry season water level recession occurs at a slightly slower rate than would be expected due to evapotranspiration losses alone (KHE 2009).

The hydraulic connectivity of the wetland system was evaluated by monitoring concurrent water surface elevations in Laguna Salada and the Horse Stable Pond. The connector channel enables

hydraulic exchange of water between the pond areas at water surface elevations greater than 6.2 feet (NAVD 88). The connector channel limits the rate at which water can be exchanged between the two pond areas. Dense vegetation growth in the channel creates hydraulic friction, which slows the movement of water (KHE 2009).

The seasonal variation of salinity in the wetland system was monitored to characterize conditions and to assess potential impacts of saltwater encroachment. Salinity is a concern because of its potential to affect the survival of sensitive species that use this wetland habitat. During the monitoring period, salinity in the pond areas ranged between 0.7 and 2.5 parts per thousand. Salinity in Laguna Salada appears uniform and well mixed. The total mass of dissolved salts in the wetland system increased by eight percent during the monitoring period. Relatively saline groundwater, with a salinity of 15 parts per thousand, was observed in the sandy flat between Laguna Salada and the seawall; however, measured groundwater gradients indicate net groundwater movement in this area is westward or from Laguna Salada toward the ocean. The small net increase observed in the total mass of dissolved salts may be explained by short-term encroachments of salt water toward the wetlands or concentration of salts by evaporation of relatively fresh (low salinity) sources. However, the observed increase falls within the likely range of uncertainty associated with the accuracy of data sources and the mass balance calculations. Any encroachment of salt water in recent years has not produced cumulative effects on the salinity of the pond areas. Salinity observed in 2008 ranged within the values reported in the Draft Laguna Salada Resource Enhancement Plan for observations in 1990-1991 (KHE 2009).

A modeling system was developed to integrate the rainfall-runoff, flood routing, and pond storage characteristics of the wetland system. Findings from the modeling investigation illustrate the water level responses to a range of storms, based on conditions at the site. The model provides an analytical tool that can be used in future investigations to evaluate the potential impacts on flood hazards from various conceptual design alternatives (KHE 2009).

Flood Protection

The Federal Emergency Management Agency (FEMA) issued a preliminary flood insurance rate map (FIRM) for San Francisco in 2007. FEMA anticipates publishing a revised preliminary FIRM in 2011. FIRMs identify flood-prone areas, including those that are subject to inundation during a flood having a one percent chance of occurrence in a given year (also known as a base flood or 100-year flood). FEMA refers to a floodplain that is at risk from a flood of this magnitude as a special flood hazard area (SFHA). SFHAs are further delineated with such designations as Zone A or Zone V. Moderate flood-prone areas are designated by Zone B or Zone X. Zone B is areas subject to a 1 in 500

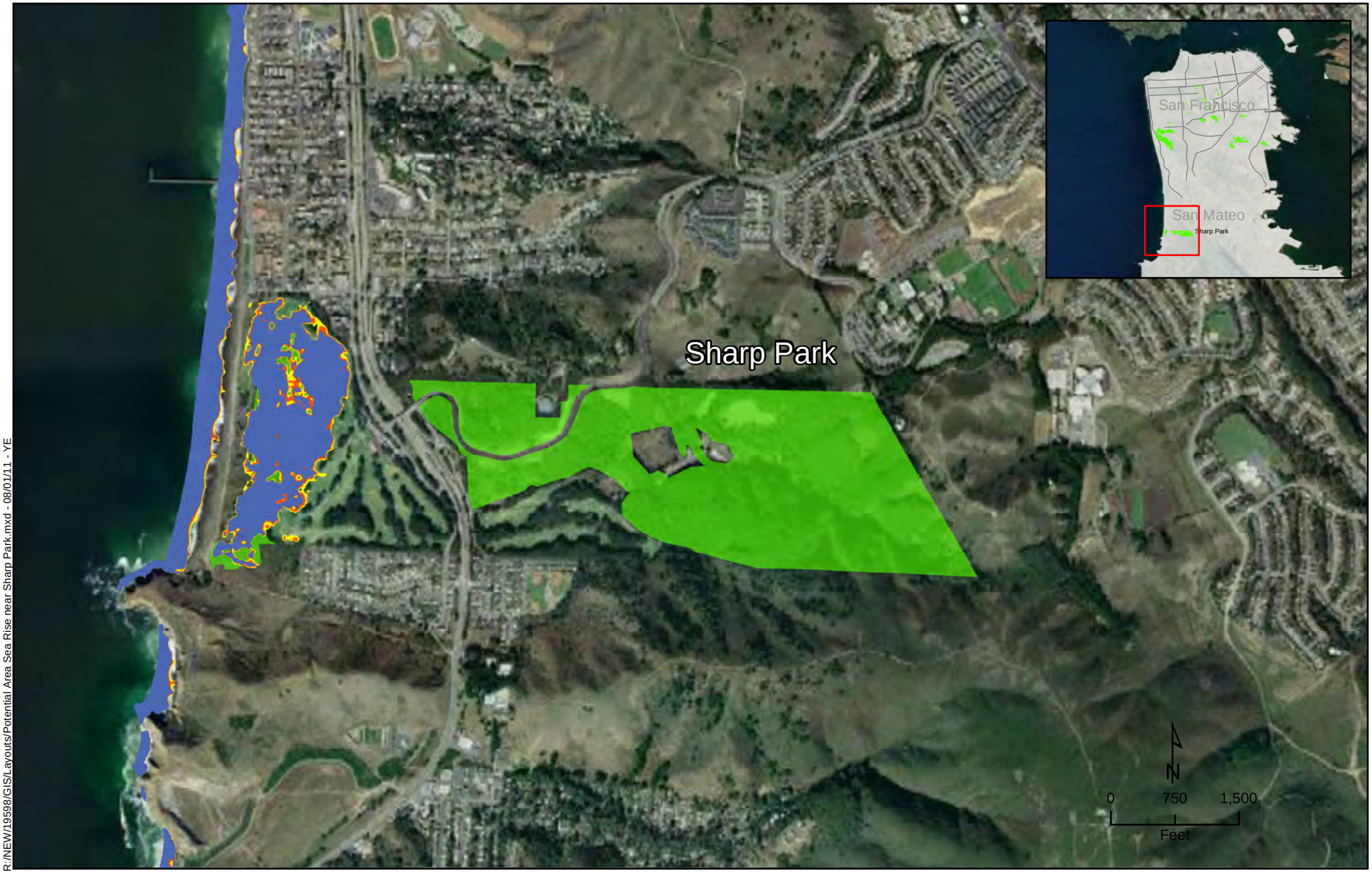
chance of flooding in a given year, or flooding to a depth of less than one foot. According to the preliminary map, the only Natural Area in San Francisco within a preliminary SFHA is India Basin, which is in Zone V (an area of coastal flooding subject to wave hazards). Because FEMA has not yet published a final FIRM, San Francisco adopted the preliminary flood zones identified in FEMA's preliminary FIRM in Final Draft Interim Floodplain maps, which were published in July 2008 (CCSF 2008e).

Currently, San Francisco does not participate in the National Flood Insurance Program (NFIP). On June 10, 2008, the Board of Supervisors introduced a floodplain management ordinance to govern construction and substantial improvements in flood-prone areas of San Francisco and to authorize San Francisco's participation in the NFIP. The ordinance includes a requirement that any construction or substantial improvement of structures in a designated flood zone must meet the flood damage minimization requirements in the ordinance, pending publication of a final FIRM by FEMA. The NFIP regulations allow a local jurisdiction to issue variances to its floodplain management ordinance under certain narrow circumstances, without jeopardizing the local jurisdiction's eligibility in the NFIP. The ordinance was revised at FEMA's request, and the the final ordinance was passed by the Board of Supervisors on September 23, 2010 (CCSF 2010a).

Flood hazard zones in Sharp Park, which is outside the corporate limits of San Francisco, are identified in a FIRM published in 1987 (FEMA 1987). The FIRM identifies Laguna Salada and the lower reach of Sanchez Creek as Zone A (areas with a one percent annual chance of flooding). A larger area that includes a portion of the golf course southeast of Laguna Salada is identified as Zone B (areas subject to a 1 in 500 chance of flooding in a given year, or flooding to a depth of less than one foot). Recent computer modeling performed for this project indicates the potential for more widespread flooding of the golf course next to Laguna Salada (KHE 2009), including inundation as a result of sea level rise.

Sea Level Rise

Sea levels have risen over seven inches along the California coast in the past century and are projected to rise another 12 inches by 2040 and as much as 4.6 feet by 2100, in response to global climate change (California Natural Resources Agency 2009). Sea level rise could increase flooding potential in coastal areas. The two Natural Areas at greatest risk of flooding from this projected sea level rise are Sharp Park and India Basin; Figures 7 and 8 illustrate potential sea level rise of 50 centimeters (1.6 feet), which could occur around mid-century.



R:/NEW/19598/GIS/Layouts/Potential Area Sea Rise near Sharp Park.mxd - 08/01/11 - YE

The projected sea level rise of 150 centimeters.

Natural Area

Roadway

10 yr recurrence interval

50 yr recurrence interval

100 yr recurrence interval

TETRA TECH

Potential Sea Level Rise near Sharp Park

Figure 7



R:/NEW/19598/GIS/Layouts/Potential Area Sea Rise for San Francisco Bay.mxd - 08/01/11 - YE

The projected sea level rise of 150 centimeters.

Natural Area

Roadway

10 yr recurrence interval

50 yr recurrence interval

100 yr recurrence interval

TETRA TECH

Potential Sea Level Rise for San Francisco Bay

Figure 8

Sea level rise will put additional stress on the seawall at Sharp Park and could result in more frequent overtopping (SFRPD 2009a). Rising sea levels will also result in higher groundwater levels near the coast, as the water table rises to maintain net groundwater outflow to the ocean. Higher groundwater levels will reduce storage capacity of Laguna Salada somewhat and will require more frequent or increased rates of pumping to maintain the water level in Laguna Salada below the elevation at which flooding impacts could occur.

The Sharp Park Seawall Evaluation (Arup 2009) summarizes the results of efforts to assess and rank the current condition of the seawall, evaluates performance in five years and under projected sea-level rise in years 2040, 2060, and 2100, and assesses salt water intrusion into the wetlands. During the site assessment, no signs of seawater penetration through the seawall were observed. However, elevated salinity levels and a seep have been reported near the western edge of Horse Stable Pond, at the southern end of the seawall. This is the location of an abandoned drainage pipe, and it is possible that seawater is seeping along the drainage pipe during high tides (Arup 2009).

While portions of the seawall are in fair to good condition, mainly in armored areas, there are other portions of the seawall that are in poor condition. Significant erosion rills, near-vertical slope faces, and beach sand within two feet of the seawall are all issues that negatively affect the condition of the wall. If improvements are not performed to alleviate these conditions, it is very likely that the seawall would be overtopped and breached during a 100-year storm or as a result of future sea level rise (Arup 2009).

India Basin is the only Natural Area in San Francisco that borders San Francisco Bay. Elevations in the park range from sea level to approximately 25 feet above sea level. There are approximately 2.8 acres of tidal wetland in the 6.2-acre Natural Area (SFRPD 2006). A 4.6-foot sea level rise in this area would likely submerge the wetland, but upland areas would likely not be affected by the projected increase in sea level.

Water Quality

Islais Creek, Lake Merced, and San Francisco Bay next to India Basin are identified as impaired water bodies under Section 303(d) of the Clean Water Act. This is because they contain pollutants above levels considered consistent with their designated beneficial uses. The law requires determination of total maximum daily loads of the pollutants that cause the impairment and implementation of plans to maintain loadings below these levels.

V.H.3 Impacts

Significance Thresholds

A proposed project would have a significant hydrology and water quality impact if it were to result in the following:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of nearby wells would drop to a level that would not support land uses or planned uses for which permits have been granted);
- Substantially alter the drainage pattern of the site or area, including altering the course of a stream or river, in a manner that would result in substantial on-site or off-site erosion or siltation;
- Substantially alter the drainage pattern of the site or area, including altering the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in on-site or off-site flooding;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
- Otherwise substantially degrade water quality.

Impacts Addressed in the Initial Study

In the Initial Study in Appendix A, impacts related to the following criteria were identified as not significant:

- Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or FIRM or other authoritative flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; and
- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mud flow.

As a result, these CEQA significance criteria are not evaluated further in this EIR.

Significant Natural Resource Areas Management Plan Impacts

While the SFRPD has considered management options for the Sharp Park seawall, including a naturally managed seawall and shoreline, those options are not proposed as part of the SNRAMP and would require additional CEQA review before they could be implemented. As such, they are not addressed in this EIR.

SNRAMP activities that could have a significant impact on water quality (programmatic projects and Sharp Park restoration) are generally mitigated, based on the following categories:

- Ground-disturbing actions (such as clearing, grading, grubbing, and excavation) on one or more acres of land that would require compliance with the conditions of the state NPDES General Construction Permit, which includes development of a SWPPP;
- Ground-disturbing actions of less than one acre of land that drains to local water bodies and that are not covered by the NPDES General Construction Permit but require erosion control and stormwater pollution prevention measures to comply with state discharge requirements and to maintain consistency with the SFPUC State-approved SWMP; or
- Ground-disturbing activities that could result in discharges to San Francisco's combined sewer system, regulated by the SFPUC under San Francisco's municipal NPDES stormwater permit, which requires erosion control and stormwater pollution prevention measures.

Many of the Natural Areas, including Glen Park and McLaren Park, are in drainages that discharge to a combined sewer system, while others, such as India Basin, Pine Lake, and Lake Merced, are not. Construction that involves discharges to combined sewer systems is not covered under the NPDES general construction permit because the stormwater in these systems is treated at wastewater treatment plants. Discharges to combined sewer systems in San Francisco are regulated by the SFPUC under San Francisco's municipal NPDES stormwater permit.

In addition, for the Sharp Park restoration, the SFRPD would obtain the appropriate permits and regulatory approvals for dredge and fill activities under Sections 401 and 404 of the Clean Water Act; these requirements may also apply to other SNRAMP activities. Conditions of approval may include measures to protect water bodies from increased turbidity and suspended sediments, as well as to avoid overall water quality degradation. These approvals are discussed further in Section V.G, Biological Resources.

Water Quality

Programmatic Impacts

Impact HY-1: Implementation of programmatic projects under the SNRAMP would violate water quality standards or otherwise degrade water quality. (**Less than Significant with Mitigation**)

Ground-disturbing activities can expose soils to erosion, increasing the amount of sediment in runoff from the site, which may ultimately discharge to surface water bodies. Project activities that would involve ground disturbance and therefore could increase erosion and sediment loading to stormwater runoff include removing large nonnative trees and other invasive vegetation, creating trails, and implementing large-scale erosion control projects. Short-term ground disturbance may occur where slopes or drainages are modified, even when the modification is designed to reduce erosion in the long term. Erosion that results in an increase in sediment load to receiving water bodies could result in significant water quality impacts.

While these activities could contribute some sediment to water bodies in or near the Natural Areas, the proposed activities would be implemented in a way to lessen the impacts on water quality. As discussed in Section III.E.5 (page 92), tree removal would be selective, would be implemented gradually over several years, would involve limb-by-limb removal, and would leave tree stumps and root balls intact; areas around the remaining stumps would be revegetated. Other types of vegetation would be removed selectively and would include revegetation of the affected areas. Ground disturbance would be further reduced by minimizing the use of heavy equipment and relying on manual techniques to remove vegetation.

Trail creation and erosion control projects would involve soil disturbance and may also remove vegetation, resulting in short-term increases in the potential for soil erosion. To reduce the erosion potential, slopes would be stabilized and revegetated. BMPs to reduce or prevent soil erosion would be used in areas where ground-disturbing activities take place, including installing silt fences and straw wattles to slow sediment movement and by using run-on controls to divert surface runoff from work areas. The specific erosion control measures to be implemented for each programmatic project would be in accordance with General Recommendations GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion).

However, substantial erosion that results in an increase in sediment load to receiving waters could result in significant impacts on water quality. Mitigation Measure M-HY-1 requires the SFRPD to implement applicable pollution avoidance measures, erosion and sediment controls, hazardous

waste management, post-construction BMPs, and other water quality protection measures. Mitigation Measure M-HY-1 would ensure that measures are taken to reduce potential water quality impacts, unless equally or more protective measures are identified during project specific environmental review. As a result, the impacts of programmatic projects on water quality resulting from sediment discharge to water bodies would be ***less than significant***.

Pesticide and herbicide use in the Natural Areas would be in accordance with the SFRPD's Integrated Pest Management (IPM) Program and San Francisco's Integrated Pest Management Ordinance, which are described in Section III.E.5 (page 90) and further detailed in Chapter 4 of the SNRAMP (SFRPD 2006). As stated in the SNRAMP, the Natural Areas Program uses a least toxic decision making model in its vegetation management, and workers applying herbicides are trained and required to follow the manufacturer's label (SFRPD 2006).

The primary herbicides used by the SFRPD in the Natural Areas are glyphosate (under the trade names Roundup, Aquamaster, and Rodeo), imazapyr (Habitat and Polaris), triclopyr (Garlon), and aminopyralid (Milestone). Glyphosate, the primary product used, is a broad spectrum, nonselective systemic herbicide that is effective against weeds; it has low toxicity to wildlife but moderate toxicity to fish (Monsanto 2005). Roundup binds tightly to soil, which reduces the potential for migration to surface water or groundwater. Garlon is a selective systemic herbicide that controls broadleaf weeds without harming grasses. It degrades quickly in the environment and has low toxicity to aquatic species (Dow 2009). Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity. As described in Section III.E.5, only aquatic-specific herbicides, such as Rodeo, Aquamaster, and Habitat, would be applied to wetlands and to areas next to water bodies.

In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25 percent of the land managed by the SFRPD (SFRPD 2006). Pesticides would be used as infrequently as possible in the Natural Areas to achieve the desired results. Pesticide use would be carefully monitored, would involve the use of least toxic methods and materials that are appropriate to the environment in which they are applied, and would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be ***less than significant***.

Water quality could also be impacted by spills of petroleum products, such as gasoline, diesel, or hydraulic oil used in powered equipment, or of other contaminants that might be used in the project area. Released to the environment, these materials could contaminate and degrade the quality of

surface water bodies in the Natural Areas, resulting in a significant impact. Mitigation Measure M-HY-1 involves implementing stormwater pollution prevention measures designed to avoid polluted runoff and minimize impacts on water quality. Additionally, Mitigation Measure M-HZ-13 requires SFRPD to prepare an emergency response plan for accidental releases of hazardous materials and that equipment be refueled at least 100 feet from a water body, further reducing potential water quality impacts.

With implementation of Mitigation Measures M-HY-1 and M-HZ-13, the impacts of programmatic projects on water quality would be reduced to ***less than significant***.

M-HY-1: Implementation of Stormwater Pollution Prevention Measures

Construction projects that do not drain to San Francisco's combined sewer system and involve one or more acres of land disturbance are required to obtain coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activity. In accordance with the NPDES General Permit requirements, the SFRPD or its contractors would submit a notice of intent to the SWRCB's Division of Water Quality, would develop a SWPPP, and would implement site-specific BMPs to prevent discharges of nonpoint source pollutants in construction-related stormwater runoff to storm drains and water bodies. As required by the NPDES General Construction Permit, trained and certified persons would prepare the SWPPPs and would conduct inspections to ensure the effectiveness of the BMPs.

Listed below are BMPs that would be implemented at the Natural Areas to meet the minimum requirements of the NPDES General Construction Permit. These measures may be altered, supplemented, or deleted during the SFBRWQCB's review process, as it has final authority over the terms of the SWPPP.

Other programmatic projects shall implement the following measures, where applicable to a project, unless other equally or more effective measures are determined to be necessary during future project-specific environmental review. These projects are those on less than one acre and that do not require a NPDES General Construction Permit or that drain to San Francisco's combined sewer system and are regulated by the SFPUC.

a. <u>Schedule to Avoid or Minimize Impacts</u>

- Schedule construction to minimize ground disturbance during the rainy season;
- Sequence construction to minimize the amount of time that soils remain disturbed;

- Stabilize all disturbed soils as soon as possible following the completion of ground-disturbing work in any area of the project site;
- Provide plans to stabilize soil with vegetation or physical means in the event rainfall is expected; and
- Install erosion and sediment control BMPs before starting any ground-disturbing activities.

b. Erosion and Sediment Controls

- Preserve vegetation in areas where no construction is planned or where construction will occur at a later date;
- Stabilize and revegetate disturbed areas as soon as possible after construction with planting, seeding, or mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material), except in cultivated areas;
- Install silt fences, coir rolls, and other suitable measures around the perimeter of the construction zone, staging areas, storm drains, temporary stockpiles, spoil areas, stream channels, swales, down-slope of all exposed soil areas, and other locations determined necessary to prevent off-site sedimentation;
- Install temporary slope breakers during the rainy season on slopes greater than 5 percent, where the base of the slope is less than 50 feet from a water body, wetland, or road crossing, at spacing intervals required by the SFBRWQCB;
- Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets; and
- Detain and treat stormwater and water produced by construction site dewatering using sedimentation basins, sediment traps (when water is flowing and there is sediment), baker tanks, or other measures to ensure that discharges to receiving waters meet applicable water quality objectives

c. Housekeeping

- Store all equipment, materials, fuels, lubricants, solvents, and other possible contaminants away from waterways and in secured locations;
- Check equipment for leaks regularly;
- Wash construction equipment in a designated enclosed area regularly; and

- Refuel all vehicles and equipment at least 100 feet from any water bodies.

d. Waste Management and Hazardous Materials Pollution Control

- Remove trash and construction debris from the project area daily;
- Locate sanitary facilities a minimum of 300 feet from water bodies;
- Maintain sanitary facilities regularly;
- Maintain spill containment and cleanup equipment on-site and properly label and dispose of wastes;
- Locate waste collection areas close to construction entrances and away from roadways, storm drains, and water bodies;
- Inspect trash receptacles and other waste and debris containers regularly for leaks and remove and properly dispose of any hazardous materials and liquid wastes placed in these containers; and
- Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures.

e. BMP Inspection, Maintenance, and Repair

- Inspect all BMPs regularly to confirm proper installation and function;
- Inspect all stormwater BMPs daily during storms;
- Inspect sediment basins, sediment traps, and other detention and treatment facilities regularly throughout the construction period;
- Provide sufficient devices and materials (e.g., silt fence, coir rolls, and erosion blankets) throughout project construction to enable immediate repair or replacement of failed BMPs; and
- Inspect all seeded and revegetated areas regularly for failures and remediate or repair them immediately.

f. Post-Construction BMPs

- Revegetate all temporarily disturbed areas as required after construction;
- Remove any remaining construction debris and trash from the project site and area on project completion;

- Phase the removal of temporary BMPs as necessary to ensure stabilization of the site;
- Maintain post-construction site conditions to avoid any unintended drainage channels, erosion, or areas of sedimentation; and
- Correct post-construction site conditions as necessary to comply with the SWPPP and any other pertinent SFBRWQCB requirements.

Project-Level Impacts (*Routine Maintenance*)

Impact HY-2: Implementation of routine maintenance activities under the SNRAMP would violate water quality standards or otherwise degrade water quality. (Less than Significant with Mitigation)

The potential to violate water quality standards or degrade water quality from routine maintenance is considered minimal because of the small scale and low intensity of ground disturbance from these activities. Weeds and trees would be removed, plants would be installed, and trails would be maintained predominately using hand tools, without large mechanized equipment, and in small increments; this would avoiding soil erosion and other waste discharges and the potential to degrade water quality. Weed removal would be phased in in small increments, and areas would be stabilized and revegetated where needed to avoid bare soils. Trees would be removed limb-by-limb, tree stumps and root balls would be left intact, and areas around the remaining stumps would be revegetated. Trails would be maintained using hand tools to compact eroded soil and to clear overgrown or fallen vegetation, with the intent of preserving the basic functionality of the trails. Typically, only one to a few workers would be present at a time in a Natural Area, further reducing the likelihood of erosion impacts.

Pesticides and herbicides may be used as part of routine maintenance in the Natural Areas to control invasive vegetation and other pests. Introduced pollutants from herbicides applied in the Natural Areas could degrade water quality, although incidences are unlikely due to the controlled manner and small scale of use. Use of these materials would be in accordance with the IPM Program and San Francisco's Integrated Pest Management Ordinance, which are described in Section III.E.5 (page 90) and are further detailed in Chapter 4 of the SNRAMP (SFRPD 2006). Under the SNRAMP, only aquatic-specific herbicides would be applied to wetlands and to areas next to water bodies. As stated in the SNRAMP, the Natural Areas Program uses a least toxic decision making model in its vegetation management, and those applying herbicides are trained and are required to follow the manufacturer's label (SFRPD 2006). Pesticide use in the Natural Areas would have less than significant environmental impacts to water quality because SFRPD would use as little pesticide as

possible to achieve the desired results, would be carefully monitored, would involve the use of the least toxic methods and materials that are appropriate to the environment in which they are applied, and would adhere to the IPM Program.

Introduction of pollutants from inadvertent spills of petroleum products could degrade water quality. The likelihood of substantial spills of petroleum products is low because maintenance activities would rely primarily on manual methods, and only small equipment, such as chain saws and mowers, and small quantities of associated fuels would be used. However, any spills near or in water bodies could have a significant impact on water quality. Implementing Mitigation Measure M-HZ-14, which calls for preparation of a general emergency response plan for routine management activities using gasoline- or diesel-powered equipment, would reduce this impact to ***less than significant***.

For the reasons described above, routine maintenance activities would have ***less than significant*** impacts on water quality with implementation of Mitigation Measure M-HZ-14 (described in Section V.I.3).

Project-Level Impacts (*Sharp Park Restoration*)

Impact HY-3: Implementation of the Sharp Park restoration under the SNRAMP would violate water quality standards or otherwise degrade water quality. (Less than Significant with Mitigation)

The Sharp Park restoration program would result in short-term deterioration in water quality in Laguna Salada and Horse Stable Pond during project activities that disturb bottom sediments.

Approximately 60,000 cubic yards of sediment spoils are expected to be generated by deepening Horse Stable Pond and Laguna Salada by about one to three feet and deepening the connecting channel between the two water bodies. To the extent possible, depending on the amount of organic matter entrained in the dredged material, some of this dredged material would be placed on the golf course or would be used to create upland habitat. Soil disturbance or placement of dredge material in upland areas could result in enhanced erosion until vegetation cover stabilizes the soils.

Dredged materials could result in potential impacts on water quality through conversion of the chemical characteristics of the soil after exposure to oxygen. Coastal lagoons, such as Laguna Salada and Horse Stable Pond, are sometimes favorable environments for the accumulation of sulfide minerals from biological decay and lack of oxygen. The sulfides can be converted to sulfuric acid

when exposed to atmospheric oxygen by dredging them and placing them on the ground surface. Although not expected to significantly alter surface water pH, acidic soils could have undesirable localized effects on sensitive aquatic habitat. As described in Section III.F.2 (page 99), sediments would be tested to determine if elevated concentrations of sulfides are present and if the sediments could serve as soils suitable for supporting desired vegetation. Treatment of acidic soils may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils, placing the dredged material in a nonsensitive location, or treating the dredged material with lime to neutralize the acid.

Dredging would be regulated by the SWRCB and SFBRWQCB through Section 401 of the Clean Water Act. The intent of this regulation is to prevent any degradation of water quality that would impair beneficial uses of the receiving water bodies. The SFRPD would be required to obtain a Section 401 water quality certification and to implement Mitigation Measures M-BI-12a and 12b, which include measures to avoid, minimize and restore affected wetlands and waters of the state (described in Section V.G.3).

Under typical dry season conditions, inflow from the watershed to Laguna Salada is not sufficient to trigger pumping from Horse Stable Pond to the Pacific Ocean. Under normal conditions, water levels in both water bodies tend to decline during the dry season. As part of the Laguna Salada restoration project, Laguna Salada and Horse Stable Pond would be drained before the dredging and deepening begin. Dredging would be conducted during the dry season (April 15 through October 15), when inflow to Laguna Salada is lowest. Lowering the water levels of Laguna Salada and Horse Stable Pond would provide additional storage capacity to contain inflow that may occur during construction and would help reduce the amount of wet sediment to be managed. As a result, the SFRPD does not propose to discharge water from Laguna Salada or Horse Stable Pond to the Pacific Ocean during restoration.

Historic rainfall records for Pacifica indicate that storms capable of generating significant runoff occasionally occur during the dry season. In the event that significant runoff occurs during construction, excess runoff would be managed in accordance with conditions established during the Section 404 and 401 regulatory approval processes for the project. Since it is desirable to maintain the low water levels in Laguna Salada and Horse Stable Pond during dredging activities, if permissible under the permits, excess runoff may be pumped to the Pacific Ocean. Discharge of suspended sediment to the ocean is not expected to adversely impact ocean waters, and sediment discharge is a natural function of all streams. Alternatively, excess runoff could be stored in Laguna Salada during dredging to avoid the need for discharge to the Pacific Ocean.

After construction, a monitoring program would be designed and implemented, as described in Mitigation Measure M-BI-12b, which would ensure that water quality is suitable for survival of the aquatic species of concern. This measure also would ensure that water quality is adequate to meet any discharge requirements that may be required for the project. Impacts on water quality from disturbance of sediment during dredging would be ***less than significant*** by avoiding discharges during construction or ensuring that sediment-laden water is discharged in compliance with the permits issued for the project and by monitoring water quality to demonstrate that it is suitable for aquatic species (M-BI-12b).

Use of heavy equipment near Laguna Salada for dredging and restoring wetlands could result in spilled fuels, hydraulic fluid, or lubricants. In accordance with Mitigation Measure M-HZ-13, a project emergency response plan would be prepared, identifying training and spill prevention and control equipment and procedures that must be implemented by work crews at the site. Implementing M-HZ-13 would reduce water quality impacts from potential contaminant spills or releases to ***less than significant***.

Disturbance of more than one acre of land would trigger the need for a NPDES General Construction Permit, which requires a qualified stormwater or erosion control professional to prepare a SWPPP. M-HY-1, Implementation of Stormwater Pollution Prevention Measures, would avoid and minimize impacts on water quality from disturbance of upland areas during construction, through such measures as ensuring the work is done during the dry season; implementing erosion and sediment control BMPs; ensuring that hazardous materials and hydrocarbons are managed properly; and ensuring that disturbed soils are revegetated or otherwise stabilized. Therefore, with implementation of M-HY-1, any stormwater impacts would be ***less than significant***.

Groundwater

Programmatic Impacts

Impact HY-4: Implementation of the programmatic projects under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

The proposed project does not include any activities that would require the use of groundwater. Actions designed to reduce erosion by slowing the rate of runoff could increase infiltration of runoff, potentially increasing groundwater recharge.

The foliage of large trees on some forested areas, such as Mount Davidson and the Interior Greenbelt, can capture and condense the moisture in fog. The condensed moisture precipitates, creating conditions analogous to a light rain. In areas where this occurs, this fog-derived moisture can contribute significantly to soil moisture and at times may produce runoff and groundwater recharge, which supports understory vegetation growth. Therefore, removing large trees in sufficient numbers could reduce precipitation in these areas. However, the project calls for removing a relatively small percentage of trees and replanting trees, which would be implemented gradually, resulting in minor reductions in fog-capture precipitation, compared to current conditions. In Sharp Park, where a larger percentage of the trees within the Natural Area (about 27 percent of the invasive trees) would be removed, the amount of precipitation captured by these trees represents a relatively small percentage of the total precipitation that falls in the watershed and ultimately recharges groundwater. While the reduction in the tree canopy might have a localized impact on soil moisture beneath the trees, it is not likely to significantly affect groundwater levels. Therefore, programmatic projects would result in ***less than significant*** impacts on groundwater.

Project-Level Impacts (*Routine Maintenance*)

Impact HY-5: Implementation of routine maintenance under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (No Impact)

Routine maintenance would not require use of groundwater and is not expected to impact groundwater levels; therefore, routine maintenance would have ***no impact*** on groundwater.

Project-Level Impacts (*Sharp Park Restoration*)

Impact HY-6: Implementation of the Sharp Park restoration under the SNRAMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

In Sharp Park, the Laguna Salada wetland system is naturally maintained by groundwater during periods of low surface water inflow, such as during the summer. At these times, the water elevation in Horse Stable Pond and Laguna Salada represents the groundwater table. Groundwater flow from the watershed to the ocean maintains the pond elevations above sea level. Over the course of the year, surface inflows to Laguna Salada exceed groundwater inflows to Laguna Salada by 600 percent (KHE 2009). Some of the excess surface water inflow is lost to evaporation and uptake by plants,

some flows as groundwater to the sea, and some is pumped to the ocean during periods of high inflow.

If the water level of Laguna Salada or Horse Stable Pond were lowered below the elevation of the groundwater table, groundwater levels in the surrounding aquifer would be depressed and salt water from the ocean would migrate inland (salt water intrusion). The operation of pumps to control water levels in Horse Stable Pond and Laguna Salada would be designed to maintain water levels for the protected species and would also reduce the frequency of flooding of the golf course. Water levels in Laguna Salada and Horse Stable Pond would not be drawn down more than necessary to prevent flooding and would therefore not draw down groundwater levels, such that salt water would intrude.

Although the project would have an impact on groundwater levels by maintaining the elevation of the ponds, the groundwater impacts would be ***less than significant*** because the Sharp Park restoration project would not deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in groundwater volume or a lowering of the local groundwater table.

Erosion and Siltation

Programmatic Impacts

Impact HY-7: Implementation of the programmatic projects under the SNRAMP would result in substantial erosion or siltation. (Less than Significant with Mitigation)

The potential for erosion to impact surface water quality has been described and analyzed under Impact HY-1. Some of the proposed project activities, such as repairing gullies, recontouring or repaving roads, and implementing stream bank erosion control measures, might initially increase erosion, but they are anticipated to have long-term erosion reduction benefits. Vegetation removal/replacement and trail creation may slightly alter drainage patterns at the different Natural Areas and might even lead to a temporary increase in stormwater runoff until new vegetation becomes established. However, the small scale of these activities would not result in substantial erosion or siltation. The potential for erosion would be ***less than significant*** through implementation of the GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion) erosion control measures and the erosion and sediment control BMPs described in M-HY-1, Implementation of Stormwater Pollution Prevention Measures.

Project-Level Impacts (*Routine Maintenance*)

Impact HY-8: Implementation of the routine maintenance activities under the SNRAMP would not result in substantial erosion or siltation. (Less than Significant)

As discussed in HY-2, routine maintenance would involve minimal potential for soil disturbance and is not expected to cause substantial erosion or siltation that would affect adjacent water bodies. The potential is minimal for routine maintenance to violate water quality standards or to degrade water quality because of the small scale and low intensity of ground disturbance associated with these activities. Weeds and trees will be removed, plants will be installed, and trails will be maintained predominately using hand tools, without large mechanized equipment, and in small increments; this would avoid soil erosion and waste discharges and the potential to degrade water quality. Weed removal would be phased in small increments, and areas would be stabilized and revegetated where needed to avoid bare soils. Trees would by removed limb-by-limb, tree stumps and root balls would be left intact, and areas around the remaining stumps would be revegetated. Trails would be maintained using hand tools to compact eroded soil and to clear overgrown or fallen vegetation, with the intent of preserving the basic functionality of the trails. Typically, only one to a few workers would be present at a time in a Natural Area, further reducing the likelihood of erosion impacts. Therefore, erosion and siltation impacts from routine maintenance would be ***less than significant***.

Project-Level Impacts (*Sharp Park Restoration*)

Impact HY-9: Implementation of the Sharp Park restoration under the SNRAMP would not result in substantial erosion or siltation. (Less than Significant with Mitigation)

Within Sharp Park, the SNRAMP proposes to create shallow pools in Laguna Salada by thinning the tule vegetation and removing vegetation in Horse Stable Pond and in the channel that connects Laguna Salada to the pond. Additionally, wetland complex restoration would include dredging to remove sediment and decaying vegetation, recontouring the shoreline to create shallow water habitat, creating an upland refuge in the middle of Laguna Salada, and constructing upland mounds on the east side of Laguna Salada. The project calls for deepening the open water areas of Laguna Salada and Horse Stable Pond by one to three feet and extensively excavating the eastern portion of Laguna Salada and Horse Stable Pond to restore open water habitat.

During construction, ground-disturbing activities, modification of the contours of the shoreline and perimeter of Laguna Salada, and use of construction equipment, could result in short-term erosion

or siltation impacts. These impacts would be mitigated through preparation and implementation of a SWPPP, as described in M-HY-1. With implementation of Mitigation Measure M-HY-1, short-term erosion and siltation impacts of Sharp Park restoration activities would be ***less than significant***.

Restoration activities are intended to reverse the effects of past siltation. Installing sediment traps, including one at the mouth of Sanchez Creek upstream of Horse Stable Pond and one at the north end of Laguna Salada, would reduce the rate of siltation of these two water bodies, resulting in long-term ***less than significant*** impacts.

Flooding

Programmatic Impacts

Impact HY-10: Implementation of the programmatic projects under the SNRAMP would not result in flooding. (Less than Significant)

There are no activities included in the project that would significantly alter the drainage pattern of the sites or that would substantially increase runoff such that flooding would occur, with the possible exception of modifying the wetland complex in Sharp Park, as discussed below.

In Sharp Park, removing eucalyptus trees in the upland area would increase incident rainfall that reaches the ground and could increase the rate of runoff into Sanchez Creek, the main drainage for this watershed. However, the increase is not expected to be substantial in comparison to the size of the drainage area and considering the normal range of runoff volume; additionally, the area would be revegetated following tree removal. Over time, the proposed project would reduce surface runoff by dispersing water more widely over the ground surface and slowing runoff velocities, thereby increasing infiltration. Therefore, the flooding impacts of the programmatic projects would be ***less than significant***.

Project-Level Impacts (*Routine Maintenance*)

Impact HY-11: Implementation of routine maintenance activities under the SNRAMP would not result in flooding. (No Impact)

Routine maintenance is not expected to alter stormwater flows, to reduce the capacity of stormwater conveyances, or to alter drainage patterns in a way that might lead to increased potential for flooding in any of the Natural Areas. Therefore, there would be ***no impact*** on flooding from routine maintenance.

Project-Level Impacts (*Sharp Park Restoration*)

Impact HY-12: Implementation of the Sharp Park restoration under the SNRAMP would not result in flooding. (Less than Significant)

Flooding of Sharp Park Golf Course has been a recurring problem since the 1940s. The pump system in Horse Stable Pond was installed in 1941 to control the water level in Laguna Salada by pumping water from the pond into the Pacific Ocean. One objective of pumping is to reduce the drawdown of the pond from December through March in order to create suitable habitat for the California red-legged frog to reproduce (SFRPD 2006). Another objective is to prevent excessive flooding of the golf course so that red-legged frogs would not lay their eggs high above the normal shoreline of Laguna Salada during floods, which would make them vulnerable to predators, and to maintain water levels that sustain tadpoles through metamorphosis. Computer modeling of storm scenarios shows that the pump capacity is likely to be exceeded at a frequency of about once every two years (SFRPD 2009a).

The golf course floods whenever the pumps in Horse Stable Pond are not able to keep up with the inflow from the watershed. Because the watershed east of Highway 1 is much larger than the golf course, most of the runoff from the watershed drains via Sanchez Creek to Horse Stable Pond. As water levels rise in Horse Stable Pond, water flows through the connecting channel into Laguna Salada. The capacity of Laguna Salada would be slightly increased through dredging that is proposed for Sharp Park, but the increase in volume would be small compared to the amount of runoff generated by a moderate to large storm. Therefore, changes to Laguna Salada would not significantly alter the frequency of flooding, which is regulated primarily by the rate at which the pumps in Horse Stable pond are able to discharge water to the ocean and by the intensity of rainfall in the watershed that governs the rate at which water is delivered to Horse Stable Pond via Sanchez Creek. Proposed regrading and filling of topographic depressions on the land surrounding Laguna Salada could allow more complete drainage to Laguna Salada and prevent localized ponding in low-lying areas.

Overall, implementing the project would not substantially alter the drainage pattern of the site or area and would not substantially increase the rate or amount of surface runoff so as to cause additional flooding, resulting in ***less than significant*** flooding impacts from the Sharp Park restoration project.

Stormwater Runoff

Programmatic Impacts

Impact HY-13: Implementation of the programmatic projects under the SNRAMP would affect stormwater runoff quantity or quality. (Less than Significant with Mitigation)

Programmatic project activities would not create a net increase in impervious surfaces and would not contribute additional runoff that would exceed the capacity of existing or planned stormwater drainage systems. Over time, programmatic projects, such as vegetative plantings, stream bank stabilization, and erosion control, would reduce impervious surfaces and the amount of water flowing to storm drains or water bodies and would increase infiltration into the ground. Thus, the project would result in a net benefit by reducing stormwater quantity.

As described under Impact HY-1, programmatic projects may impact stormwater runoff during construction of individual projects or while implementing larger scale tree or vegetation removal. The specific erosion control measures to be implemented for each programmatic project would be in accordance with General Recommendations GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion). In addition, applicable pollution avoidance measures, erosion and sediment controls, hazardous waste management, post-construction BMPs, and other water quality protection measures listed in Mitigation Measure M-HY-1 would be implemented to improve stormwater runoff quality, unless equally or more protective measures are identified during project-specific environmental review. As a result, the impacts of programmatic projects on stormwater quality would be ***less than significant***.

Project-Level Impacts (*Routine Maintenance*)

Impact HY-14: Implementation of the routine maintenance activities under the SNRAMP would not substantially affect stormwater runoff quantity or quality. (Less than Significant with Mitigation)

Routine maintenance would not change conditions in the Natural Areas and result in a net increase in impervious surfaces, and no changes to stormwater runoff quantity are expected.

As described above for HY-2, the potential for routine maintenance to degrade water quality is minimal because of the small scale and low intensity of ground disturbance. Weeds and trees would be removed, plants would be installed, and trails would be maintained predominately using hand

tools, without large mechanized equipment, and in small increments, thus avoiding soil erosion and other waste discharges and the potential to degrade water quality.

Also as described in HY-2, routine maintenance could contribute to contamination of surface runoff as a result of inadvertent spills or use of chemicals, such as pesticides. However, the impacts would be reduced to be ***less than significant*** by implementing Mitigation Measure M-HZ-14, which requires preparation of a general emergency response plan for routine management activities using gasoline- or diesel-powered equipment and by implementing the SFRPD's Integrated Pest Management Program.

Project-Level Impacts (*Sharp Park Restoration*)

Impact HY-15: Implementation of the Sharp Park restoration under the SNRAMP would affect stormwater runoff quantity or quality. (Less than Significant with Mitigation)

In Sharp Park, overland flow and runoff mostly drains into Sanchez Creek. None of the restoration project activities would increase impervious surfaces or would contribute runoff water that would exceed the capacity of an existing or planned stormwater drainage system. Therefore, the Sharp Park restoration would have ***less than significant*** impacts from creating or contributing runoff water.

As discussed in HY-3, construction proposed for the Laguna Salada wetland complex could result in erosion and potential sediment discharges and would require the use of heavy diesel-powered equipment near Laguna Salada. It is possible for such sediments to be transported in runoff and for equipment to leak oil and fluids that would be washed into the receiving water bodies, which would constitute a significant impact. However, implementing Mitigation Measures M-HY-1, Implementation of Stormwater Management Measures, M-HZ-13, Preparation of Emergency Response Plan for Accidental Releases of Hazardous Materials, and M-BI-12a and M-BI-12b, which require measures to protect wetland and riparian communities, would ensure that potential pollution impacts from construction and equipment would be ***less than significant***.

As described under HY-3, there is a potential for sediments dredged from Laguna Salada and placed on land to leach acids or other constituents that may be present in the dredged sediment to the adjacent surface water. Although not expected to be substantial, the potential for these effects would be evaluated by testing the sediments before dredging, as described in Section III.F.2 (page 99). If necessary, the sediment would be managed to reduce the chemical effects, and dredged sediment stockpiles would be protected from wind and water mobilization by using erosion control and

stockpile BMPs included in M-HY-1, Implementation of Stormwater Management Measures. This would result in a ***less than significant*** impact on the quality of stormwater runoff.

Cumulative Impacts

Impact HY-16: The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively considerable significant impact related to hydrology and water quality. (Less than Significant)

The geographic context for the analysis of cumulative impacts on hydrology and water quality includes areas that are within a quarter mile of the Natural Areas and multiple projects in Pacifica that may impact Sharp Park. Cumulative projects could result in impacts to water quality through the discharge of sediment or other pollutants (for example, petroleum hydrocarbons, herbicides and pesticides, metals, and pharmaceuticals) to waterways or through increased erosion.

Overall, potential net cumulative long-term impacts on hydrology and water quality from the SNRAMP are expected to be beneficial by reducing erosion and therefore the potential for water quality impacts, as well as reducing flooding on the Sharp Park Golf Course.

A number of projects have been implemented, are planned, or are being conducted on a pilot scale that could impact groundwater elevations and quality in the North Westside Basin in San Francisco. These projects also could affect water elevations and water quality in Pine Lake and Lake Merced. Conjunctive use of groundwater in the North Westside Basin could alter water levels in the lakes, likely making lake levels more stable, which is consistent with the goals of the project. Continued or expanded use of stormwater to recharge Lake Merced may also help to stabilize the lake level. Recycled treated wastewater reharging the North Westside Basin aquifer could also help to maintain and stabilize lake levels, reducing reliance on natural recharge to replenish the aquifer. Lake elevations might be maintained at higher elevations than in previous years, resulting in the need to alter or adapt operation and maintenance of the lakes and shorelines to future conditions that differ from current conditions. The proposed project would not contribute to any groundwater effects associated with these projects.

The SFPUC is evaluating low impact design projects (2009a, 2009b, 2009c) to help reduce the frequency of spills of untreated sanitary wastewater from the combined sewer systems in the Islais Creek, Yosemite Creek, and Sunnydale Basins. Proposed SNRAMP projects also include infiltration or storage of stormwater in open space areas, such as McLaren Park, Glen Canyon Park, and other Natural Areas, to reduce the quantity of runoff that enters the combined sewer system. In

combination with low impact design projects throughout San Francisco, implementation of these SNRAMP projects would make a cumulatively beneficial contribution to reducing the potential for wastewater spills to the San Francisco Bay.

Management actions proposed for the Mount Sutro Open Space Preserve, which is next to, and to the east of, the Interior Greenbelt Natural Area, could result in cumulative hydrologic impacts in conjunction with the proposed project. Opponents of initial plans to remove invasive trees and invasive understory vegetation to increase recreation access to the Mount Sutro Open Space Preserve have expressed concern that removing trees would reduce capture and precipitation of moisture from fog, resulting in drier conditions on the forest floor. The prevailing wind direction is westerly, and trees on the Mount Sutro Open Space Preserve may also block wind and protect trees in the Interior Greenbelt. Current plans for the Mount Sutro Open Space Preserve call for demonstration projects in limited areas to evaluate the effects of tree and vegetation removal. Tree removal from the SNRAMP program would be phased and would primarily involve thinning forested areas. Removed trees would be replaced with native trees and vegetation to preserve the function of the forested areas. Based on the relatively small percentage of trees proposed to be removed in the demonstration project and the smaller number of trees to be removed from the Interior Greenbelt Natural Area, the potential contribution of hydrologic impacts from the SNRAMP in combination with these other projects is not considered to be cumulatively considerable (***less than significant***).

Proposed development projects in Pacifica include residential development of approximately 261 units on an estimated 150 acres and commercial development of approximately 85,000 square feet of building space. All of these projects could increase surface runoff and erosion and increase sedimentation in the Sanchez Creek watershed, which would increase sediment in the wetland complex. The SFPUC Recycled Water Project would also discharge to Sanchez Creek. Because the project would implement erosion and sediment control measures in Sharp Park, including installing sedimentation basins at the mouth of Sanchez Creek and on the north side of the wetland complex, the project would help to reduce cumulative impacts on water quality from these other projects. Therefore, the project is expected to have a cumulatively beneficial impact on water quality and hydrology in the Sanchez Creek watershed.

During the 20-year project planning period for the project, the sea level is expected to rise less than one foot. Although sea level rise may continue over time, a sea level rise at India Basin Shoreline Park of less than one foot during the project's 20-year planning period is unlikely to result in significant flooding or salt water intrusion impacts. Similarly, a small rise in sea level is not expected

to impact Balboa, which lies inland of the Ocean Beach seawall. An increase in sea level may lead to a rise in regional groundwater levels in the coastal aquifer. The elevation of Lake Merced would need to rise proportionally to maintain the existing hydraulic balance and barrier to salt water intrusion into the aquifer. There is adequate freeboard above the current lake elevation of Lake Merced to accommodate the anticipated rise in sea level without inducing flooding or increasing potential for salt water intrusion. At Sharp Park, sea level rise would increase the base level elevations of Laguna Salada and Horse Stable Pond. Fresh water must continue to discharge to the ocean underground, and in order for this to happen, the elevation of the water table would rise in proportion to the rise in sea level. The freshwater/saltwater interface, which is a zone of mixing, would move inland somewhat. Salinity in Laguna Salada may increase, especially during dry periods when outflow of fresh groundwater from the watershed above Sharp Park is lowest. The magnitude of sea level rise during the project planning period would probably be too small to result in significant erosion of the sea wall, but the effects are difficult to predict. Higher sea levels will result in faster erosion of the rocky headlands and would probably change the beach profile in front of the sea wall, which in turn may lead to erosion of the foot of the seawall, especially during the winter, when wave runup is greatest and beach sand is normally depleted.

Over a longer term, sea level rise is expected to continue, and could rise to levels that would cause significant impacts. Because these impacts would be experienced on a regional scale, the efforts to mitigate these impacts would be addressed through future projects on the regional scale.

Among the cumulative effects on water resources of sea level rise are increased frequency of flooding of low-lying areas, increased salt water intrusion in coastal wetlands, increased coastal erosion, and increased potential for contamination of receiving waters because of inundation of areas containing hazardous substances. One approach to mitigating these and similar long-term cumulative effects is to move vulnerable development and activities out of low-lying coastal areas and to encourage coastal and shoreline uses, such as open space, that can accommodate sea level rise. In general, Natural Areas are expected to have low impacts on water resources and therefore are not expected to contribute to the cumulative impacts on water quality that may result from sea level rise, resulting in a less than cumulatively considerable (***less than significant***) contribution to sea level rise impacts.

V.I HAZARDS AND HAZARDOUS MATERIALS

The topic of hazards and hazardous materials was discussed in the Initial Study. However, due to comments received during the NOP scoping period, this section has been included in the EIR to address the following additional topics that required clarification or additional analysis:

- Concerns regarding mosquito-borne disease vectors;
- Herbicide application;
- Hazardous soils contaminants; and
- Fire hazards.

Comments about hazards and hazardous materials received during the NOP scoping process concerned the following:

- Effects on the California red-legged frog and on residential neighbors from Sharp Park;
- Aerial spraying for mosquito control;
- Impacts of herbicide application on people, animals, and insects;
- Effects of hazardous materials used to control mosquitoes and invasive species;
- Effects of creating habitat that encourages mosquito breeding, increasing the public health risk from West Nile virus;
- Effects of leaving tree stumps on the ground that would create an ideal breeding medium for treehole mosquitoes, as well as other types of mosquitoes;
- Impacts of prohibiting pesticide use on mosquito populations, especially the mosquito carrying the West Nile virus;
- The potential for tree removal to dry out the Mount Sutro Forest and alter the wind patterns, increasing the fire hazard for homes near the forest;
- The observation that restored landscape of native grassland and dune scrub is not less flammable than the nonnative species that would be removed;
- Public safety issues at every park, especially at Sharp Park;
- Possible effects of toxic lead in the soil east of Highway 1 leaching into the groundwater and the stream in the canyon and flowing to Laguna Salada wetlands, contaminating restoration sites; and

- Removal of nonnative plants and trees enhancing habitat for small mammals that carry ticks and cause the spread of Lyme disease.

V.I.1 Regulatory Setting

Federal

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act provides federal control of pesticide distribution, sale, and use. The EPA was given authority under the act to study the consequences of pesticide usage and to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the EPA. Registration assures that pesticides will be properly labeled and that if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Clean Water Act

The Clean Water Act is the cornerstone of surface water quality protection in the United States. The act does not deal directly with groundwater or with water quantity issues. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

State

At the state level, the Department of Toxic Substances Control administers laws and regulations related to hazardous waste and hazardous substances, in accordance with Division 20, Chapters 6.5 and 6.8, of the California Health and Safety Code and CCR, Title 22. The SFBRWQCB enforces laws and regulations governing releases of hazardous substances and petroleum, in accordance with Division 20, Chapters 6.7, 6.75, and 6.8, of the California Health and Safety Code (Sections 25100, 25200, and 25300 et seq.), and the Porter Cologne Water Quality Control Act (Division 7, Section 13100 et seq., of the California Water Code) and CCR, Title 23. In particular, the SFRWQCB focuses on all petroleum releases and those hazardous substance releases that may impact groundwater or surface water.

In addition, the California Department of Public Health is responsible for ensuring that facilities that use, store, or dispose of radiological materials are properly investigated, decontaminated, and decommissioned or licensed, or that they are properly exempted from such requirements, in accordance with state and federal laws and regulations. These include the state Radiation Control Law (California Health and Safety Code, Section 114960 et seq., and CCR Title 17, Division 1, Chapter 5).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, the California Environmental Protection Agency adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The program has six elements: Hazardous Materials Release Response Plans and Inventories; California Accidental Release Prevention Program; Underground Storage Tank Program; Aboveground Petroleum Storage Act Program; Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements. The program is implemented at the local level. The San Francisco Department of Public Health is the Certified Unified Program Agency responsible for the implementation of this program through its local oversight program.

California Coastal Act

The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. Those policies applicable to hazards and hazardous materials are discussed in Section IV.A.12.

V.I.2 Environmental Setting

Conventional control methods attempt to address the symptoms of a pest problem. The Natural Areas Program employs IPM, a multistep ecologically based approach that enables staff to make decisions regarding where, when, and how resources should be best allocated to control pests. IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem and implementing effective long-term management solutions by using a range of expertise, a combination of treatment methods, and a comprehensive monitoring and evaluation process. The IPM program complies with the San Francisco IPM Ordinance which promotes nonchemical use strategies and the elimination of all but exempted pesticides. The ordinance requires that those who apply pesticides to be trained and to follow the manufacturer's label. San

Francisco has posting requirements for pesticide use, which include notifying the local community about the pesticides planned for the area four days before the application.

The San Francisco Department of the Environment oversees and implements IPM practices citywide. The SFPRD staff has mandatory annual pesticide use training that includes personal protective equipment, labels, spill response, and safe transport and use of pesticides.

Vegetation Control

Current management methods used in the Natural Areas Program include the following:

- Physical control methods, which range from hand pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
- Biological control, which involves revegetating cleared areas and introducing native plants to compete/outcompete with weedy species;
- Chemical control, which involves the use of herbicides to suppress wildland weeds, in compliance with the San Francisco Pest Management Ordinance;
- Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon); and
- Public education and outreach.

Mosquito and Tick Control

The SFRPD coordinates with the San Francisco Department of the Environment to control mosquitoes and insects in the Natural Areas within San Francisco. The San Francisco Department of the Environment implements the San Francisco IPM program to control mosquitoes and to prevent insect-borne diseases, including the West Nile virus. The city's program emphasizes the elimination of breeding habitat and the use of least-toxic larvicides to target mosquitoes at their most vulnerable stage, before they emerge as adults (San Francisco Department of the Environment 2005). As indicated above, San Francisco has posting requirements for pesticide use. These requirements include notifying the local community about the pesticides planned to be used in the area four days before the application.

SMCMVCD provides mosquito and insect control at Sharp Park. The SMCMVCD has programs for the control of mosquitoes and ticks, including mosquito-borne diseases such as the West Nile virus. The SMCMVCD's integrated pest management for mosquito control includes a preventive approach, underground source control, and mosquito control within pools, ponds, fountains,

marshes, and creeks. The SMCMVCD's integrated management includes controlling mosquitoes in their immature stages before emerging as biting adults (SMCMVCD 2009). Further, the SMCMVCD programs include a Lyme disease program, a tick prevention and removal program, and a tick-borne diseases program (SMCMVCD 2009). The SMCMVCD uses mainly the following mosquito larva treatments:

- Golden Bear 1111—A refined petroleum distillate that breaks down in a few days. It is applied to the surface of standing water and causes mosquito larvae to drown.
- Methoprene—A juvenile growth hormone that targets specific mosquito larvae. When methoprene is applied to the water, it keeps the larvae in a juvenile stage.
- *Bacillus thuringiensis israelis*—A bacteria that is toxic to mosquito larvae. The bacteria causes the stomach lining of mosquito larvae to rupture, ultimately killing the larvae.
- Mosquito fish (*Gambusia affinis*)—These fish eat mosquito larvae.

Fire Hazards

Most of the Natural Areas are classified as Urban Unzoned fire hazard areas by the California Department of Forestry and Fire Protection (California Department of Forestry and Fire Protection 2009). Glen Canyon Park, Mount Davidson, Bayview Park, and Lake Merced are in areas with a fire hazard severity rating of moderate (California Department of Forestry and Fire Protection 2009). Sharp Park is within an area classified as high fire hazard and is next to areas classified as "very high fire hazard severe zone" by the California Department of Forestry and Fire Protection (City of Pacifica 1980a; California Department of Forestry and Fire Protection 2009).

Lead in Soils

The SFRPD used to maintain a rifle range in Sharp Park. This facility has been closed for over 13 years. Located near the archery club, this facility is outside of the Natural Areas at Sharp Park. A soil and groundwater investigation identified the presence of lead, polycyclic aromatic hydrocarbons, antimony, and arsenic (DTSC 2009). The Department of Toxic Substances Control issued a Notice of Exemption on August 5, 2009, for the removal action work plan for consolidation of lead-contaminated soil at the former Sharp Park Rifle Range. Implementation of the work plan involves the excavation of approximately 12,000 to 16,000 cubic yards of contaminated soil, which would be placed on-site and covered with imported clean soil (DTSC 2009). These cleanup and remediation activities have been completed.

V.I.3 Impacts

Significance Thresholds

A proposed project would have a significant hazards and hazardous materials impact if it were to result in any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
- Expose people or structures to a significant risk of loss, injury, or death involving fires.

Impacts Addressed in the Initial Study

In the Initial Study (Appendix A), impacts related to the following criteria were identified as not significant:

- Emit hazardous emissions or be handled within a quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled in accordance with Government Code, Section 65962.5, and, as a result, would create a significant hazard to the public or the environment;
- Be a safety hazard for people residing or working in the project area within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport;
- Be a safety hazard for people residing or working in the vicinity of a private airstrip that is in the project area; and
- Impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan. As a result, these CEQA significance criteria are not evaluated further in this EIR.

SNRAMP impacts concerning windthrow hazards and their effects on public safety are addressed below and in Section V.E, Wind and Shadow.

Public Health and Safety Hazards

Programmatic Impacts

Impact HZ-1: Implementation of programmatic projects under the SNRAMP would not result in significant impacts on public safety from windthrow effects. (Less than Significant)

Windthrow effects associated with tree removal projects that exceed half an acre at any one time could result in falling trees, creating a public safety hazard for visitors and nearby residents. Tree removal could affect wind patterns, which could increase windthrow hazards. However, as discussed in Section V.E, Wind, tree removal would not substantially change wind patterns, so windthrow hazards would not cause a significant risk to humans and nearby residents. In general, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Removing trees may benefit public safety because damaged and dying trees may be at greater risk of falling and injuring visitors or residents. Alterations in wind patterns and impacts of ground-level wind hazards on pedestrians are analyzed in Section V.E, Wind. Tree removal under the programmatic projects would result in ***less than significant*** windthrow effects on public safety.

Impact HZ-2: Implementation of the programmatic projects under the SNRAMP would not increase the mosquito and tick population. (Less than Significant)

Programmatic projects would not change the depth or shape of water bodies. As noted in Section III.E.5, to control the spread of mosquito-borne diseases, the SFRPD would implement the following BMPs:

- Educate staff about the most effective ways to avoid being bitten by mosquitoes;
- Remove small water features that contain standing water or treat those features with *Bacillus thuringiensis israelis*, a biological control agent for mosquito larvae, if the features were to remain and Public Health Services were to identify a potential health hazard; and
- Encourage staff to drain any standing water in stored equipment or temporary depressions.

With the implementation of these BMPs, impacts of programmatic projects from mosquitoes and ticks would be ***less than significant***.

Project-Level Impacts (Routine Maintenance)

Impact HZ-3: Implementation of the routine maintenance activities under the SNRAMP would not result in significant impacts on public safety from windthrow effects. (Less than Significant)

Windthrow associated with routine maintenance tree removal would result in public safety hazards on visitors or nearby residents similar to those of the programmatic projects. Due to the reduced level of tree removal, the magnitude of the impacts would be smaller. During routine maintenance, only invasive trees and overhanging tree limbs would be removed and only in places where trees are expanding into or threatening native habitat or are a safety concern. Removing trees and limbs may benefit public safety because damaged and dying trees may be at greater risk of falling and injuring visitors or residents. Typically, individuals or small groups of trees would be removed; therefore, windthrow hazards from project-level activities would cause a ***less than significant*** risk to people and nearby residents.

Impact HZ-4: Implementation of the routine maintenance activities under the SNRAMP would not increase the mosquito and tick population. (No Impact)

Routine maintenance would not change the depth or shape of water bodies, so it would not create areas of standing water that could lead to an increase the mosquito or tick population. As such, routine maintenance would have ***no impact*** on public health from mosquitoes and ticks.

Project-Level Impacts (Sharp Park Restoration)

Impact HZ-5: Implementation of the Sharp Park restoration activities under the SNRAMP would not impact public safety from windthrow effects. (No Impact)

The Sharp Park restoration would not result in windthrow that would cause public safety hazards. A few individual trees may be removed as part of the wetland and upland habitat restoration. Further, the proposed restoration would be in Laguna Salada and away from visitors and residents. Therefore, Sharp Park restoration would have ***no impact*** on public safety with respect to windthrow. The impacts of tree removal in other parts of Sharp Park are addressed under Impact HZ-1 above.

Impact HZ-6: Implementation of the Sharp Park restoration activities under the SNRAMP would not result in a significant increase in the mosquito and tick population. (Less than Significant)

Changes to the depth, shape, and vegetation of Laguna Salada as part of the proposed Sharp Park restoration could increase the mosquito population in that area. The SMCMVCD would continue to

control mosquitoes at Laguna Salada; as discussed in Section III.F.23, the SFRPD would coordinate with the SMCMVCD on the proposed changes to Laguna Salada to minimize the potential for developing mosquito breeding habitat. Over the past several years, sediments have accumulated in Laguna Salada and enhanced the growth of cattails; cattail and tule stands provide ideal habitat for tule mosquitoes. Management activities include thinning stands of tules, which would reduce the habitat of tule mosquitoes. Also, the SMCMVCD would continue to implement the IPM program to control Lyme disease and tick-borne diseases. Further, the SFRPD would implement the BMPs stated in Section III.E.5 to control the spread of mosquito-borne disease. Therefore, Sharp Park restoration would result in ***less than significant*** impacts from mosquitoes and ticks.

Hazardous Material Use

Programmatic Impacts

Impact HZ-7: Implementation of the programmatic projects under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control. (Less than Significant)

Using herbicides to control invasive species and enhance the growth of native habitats during programmatic projects could have adverse impacts on wildlife, groundwater, and the local population. Impacts from the use of herbicides on wildlife and surface water are discussed in Section V.G, Biological Resources, and Section V.H, Hydrology and Water Quality. The type of control method used for plant pests in the Natural Areas is under the discretion of the SFRPD Natural Areas Program. The program's policy is to comply with the San Francisco IPM Ordinance, which promotes nonchemical control strategies and the elimination of all but exempted pesticides.[1] The Natural Areas Program formalized restoration guidelines in Native Habitat Restoration: A Guide for Citizen Involvement in San Francisco Natural Areas (SFRPD 2000). This document covers preferred removal techniques for 15 invasive species and is intended primarily for use by community groups. Ultimately, human resources, site conditions, and level of infestation would determine the type of control method used.

Factors that make manual and mechanical methods impractical and chemical treatments preferable are as follows:

[1] Pesticide is a general term to describe any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pests can be insects, mice and other animals, unwanted plants (weeds), fungi, or microorganisms, like bacteria and viruses. The term pesticide includes herbicides, insecticides, fungicides, and various other substances used to control pests (EPA 2011a).

- Direct threats to human health and safety (e.g., steep, inaccessible unstable slopes and significant poison oak infestations);
- Large infestations requiring ongoing repeated strenuous physical labor, such as picking and lifting, that may injure staff, contract field crews, or volunteers; and
- Areas where access, human trampling, or soil disturbance may directly or indirectly damage native plant communities or cause soil erosion.

Despite the emphasis on hand, mechanical, and alternative methods of removal, herbicides are used to control invasive weeds in Natural Areas, especially when other methods are not feasible. As noted above, in compliance with the San Francisco IPM Ordinance, the Natural Areas Program staff undergo annual training on the use of herbicides and on BMPs to avoid impacts on the local population, wildlife, and other resources, such as surface water. Herbicide application would comply with the principles of IPM, which uses multiple treatment methods to control undesirable weeds and other pests. Of the over 40 approved pesticides used by the SFRPD, the Natural Areas Program would likely continue to use pesticides similar to those currently used,[2] classified by the San Francisco Department of the Environment under the medium hazard and high hazard categories. Further, as part of the BMPs under the SNRAMP, and in order to avoid adverse impacts on wildlife and water quality, the staff would apply only aquatic-specific herbicides to areas next to water bodies; aquatic-specific herbicides are those determined safe for aquatic life. As indicated above, pesticides would be implemented only when other means, such as physical or biological control, would not be sufficient. Further, in compliance with the San Francisco IPM Ordinance, the San Francisco Department of Environment would oversee and implement the IPM plan. Those who apply pesticides would be trained and required to follow the manufacturer's label. Also, in compliance with the IPM Ordinance, signs alerting the public of a scheduled spray would be posted in a prominent location three days before the application and would remain up for four days after the application. All use of pesticides would be recorded by the SFRPD and forwarded to the San Francisco Department of the Environment. Further, the Natural Areas Program would use pesticides that are the least toxic option that effectively controls the weed. Therefore, impacts from applying herbicides as part of the IPM for programmatic projects under the SNRAMP would be ***less than significant***.

[2] The primary herbicides currently used by the SFRPD in the Natural Areas are Roundup, Aquamaster, and Rodeo (active ingredient: glyphosate), Habitat and Polaris (active ingredient: imazapyr), Garlon (active ingredient: triclopyr), and Milestone (active ingredient: aminopyralid)..

Impact HZ-8: Implementation of the programmatic projects under the SNRAMP would not disturb lead-contaminated soil. (No Impact)

Lead-contaminated soil was identified in the archery club near the Sharp Park Natural Area. However, soils contaminated with lead are outside the Natural Area, and the proposed programmatic projects would not result in any activities that would disturb the lead-contaminated soil or increase the potential of lead migration into the groundwater or adjacent streams. Therefore, programmatic projects would have ***no impact*** with respect to disturbing lead-contaminated soil.

Project-Level Impacts (Routine Maintenance)

Impact HZ-9: Implementation of the routine maintenance activities under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control. (Less than Significant)

Use of herbicides during routine maintenance would have impacts similar to those discussed under programmatic projects. However, impacts from routine maintenance would be of a smaller magnitude because herbicides would be used in smaller quantities and on smaller areas. Therefore, impacts from the use of herbicides during routine maintenance would be ***less than significant***.

Impact HZ-10: Implementation of the routine maintenance activities under the SNRAMP would not disturb lead-contaminated soil. (No Impact)

Routine maintenance would have impacts from soils contaminated with lead or lead migration into groundwater similar to those described under the programmatic projects. Therefore, routine maintenance would have ***no impact*** with respect to disturbing lead-contaminated soil.

Project-Level Impacts (Sharp Park Restoration)

Impact HZ-11: Implementation of the Sharp Park restoration activities under the SNRAMP would not create a significant hazard through the use of pesticides for vegetation control. (Less than Significant)

The Sharp Park restoration may require the use of herbicides for vegetation removal and control. The impacts would be similar to those described under Impact HZ-7. The SFRPD would be more restrictive in its selection of herbicides to be employed during Sharp Park restoration activities to ensure that the health and recovery of the California red-legged frog and San Francisco garter snake are not compromised. As a result, the impacts from applying herbicides as part of the Sharp Park restoration project would be ***less than significant***.

Impact HZ-12: Implementation of the Sharp Park restoration under the SNRAMP would not disturb lead-contaminated soil. (No Impact)

Soils contaminated with lead are outside the Sharp Park restoration area. The proposed project would not result in any activities that would disturb the lead-contaminated soil near the archery club or increase the potential of lead migration into the groundwater or adjacent streams. Therefore, ***no impacts*** are expected with respect to disturbing lead-contaminated soil from Sharp Park restoration.

Hazardous Material Accidents

Programmatic Impacts

Impact HZ-13: Implementation of the programmatic projects under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Programmatic projects could result in accidental release of hazardous materials into the environment. Programmatic projects would require the use of motor vehicles and motorized equipment for management activities, such as tree removal, weeding, erosion control, and trail construction. Hazardous materials[3] likely to be used during the programmatic projects include fuel, oil, solvents, and lubricants for equipment and equipment maintenance. Hazardous materials would be used in marginal quantities and would be stored off-site. Any activities involving hazardous materials and hazardous waste[4] would be conducted in accordance with strict health and safety standards mandated by OSHA. However, accidental release of hazardous materials to the environment and nearby water bodies is considered a potentially significant impact. With implementation of M-HZ-13, impacts involving the transportation, disposal, or release of hazardous materials would be ***less than significant***.

[3] Hazardous materials—Defined in Section 25501(h) of the California Health and Safety Code, these are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment.

[4] Hazardous waste—Any material that is relinquished, recycled, or inherently waste-like and falls under Title 22 of the California Code of Regulations. Division 4.5, Chapter 11, contains regulations for classifying hazardous wastes. A waste is considered hazardous if it causes human health effects, has the ability to burn, causes severe burns or damages materials, or causes explosions or generates toxic gases, in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including hazardous wastes, as defined by the Resource Conservation and Recovery Act, non-Resource Conservation and Recovery Act hazardous wastes, extremely hazardous wastes, and special wastes.

M-HZ-13: Emergency Response Plan for Accidental Releases of Hazardous Materials

To reduce impacts from the accidental release of hazardous materials, the SFRPD shall prepare an emergency response plan for the Sharp Park restoration and each programmatic project that uses gasoline- or diesel-powered equipment before the project began. The plan shall include emergency procedures for hazardous materials releases. These procedures shall include requirements for the necessary personal protective equipment, spill containment procedures, and worker training to respond to accidental spills and releases. The plan shall also require equipment to be refueled at least 100 feet from any streams or water bodies. During the implementation of programmatic projects, all hazardous materials, including any hazardous wastes, shall be used, stored, transported, and disposed of in accordance with local, state, and federal hazardous materials regulations. Developing and implementing the plan will ensure the proper storage and use of hazardous materials, proper response to accidental releases, and worker training, all of which will minimize contamination from hazardous materials.

Project-Level Impacts (Routine Maintenance)

Impact HZ-14: Implementation of the routine maintenance activities under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Potential impacts related to the accidental release of hazardous materials from routine maintenance are similar to those described for programmatic projects. However, the scale and magnitude of these impacts would be smaller for routine maintenance. Smaller quantities of hazardous materials would be used, and the duration of hazardous materials use is expected to be shorter and more intermittent. However, accidental release of these substances to the environment and nearby water bodies is considered a potentially significant impact. M-HZ-14 requires preparation of a general emergency response plan for accidental releases of hazardous materials during routine maintenance and that equipment be refueled at least 100 feet from a water body. With the implementation of M-HZ-14, impacts involving the accidental release of hazardous materials during routine maintenance would be ***less than significant***.

M-HZ-14: General Emergency Response Plan for Routine Management Activities Using Gasoline- or Diesel-Powered Equipment

To reduce impacts from accidental releases of hazardous materials, the SFRPD shall prepare a general emergency response plan to address routine management activities that use gasoline- or

diesel-powered equipment. The plan shall include emergency procedures for hazardous materials releases with requirements for the necessary personal protective equipment, spill containment procedures, and worker training to respond to accidental spills and releases. The plan shall also require equipment to be refueled at least 100 feet from any streams or water bodies. During routine maintenance, all hazardous materials, including any hazardous wastes, shall be used, stored, transported, and disposed of in accordance with local, state, and federal hazardous materials regulations. Developing and implementing the plan will ensure the proper storage and use of hazardous materials, proper response to accidental releases, and worker training, all of which will minimize contamination from hazardous materials.

Project-Level Impacts (Sharp Park Restoration)

Impact HZ-15: Implementation of the Sharp Park restoration under the SNRAMP would not create significant hazard to the public or the environment through accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Potential impacts related to the accidental release of hazardous materials from the Sharp Park restoration are similar to those described for programmatic projects. Accidental release of these substances to the environment and nearby water bodies is considered a potentially significant impact. However, as required under Impact HZ-13 to reduce impacts from accidental hazardous materials releases from programmatic projects, M-HZ-13 involves preparation of an emergency response plan for accidental releases of hazardous materials and that equipment be refueled at least 100 feet from a water body. With the implementation of M-HZ-13, impacts involving the accidental release of hazardous materials during Sharp Park restoration would be ***less than significant***.

Fire Hazards

Programmatic Impacts

Impact HZ-16: Implementation of programmatic projects under the SNRAMP would not result in substantial fire hazards. (Less than Significant)

Programmatic projects include invasive weed and tree removals that exceed half an acre at any one time. Removed trees would include those that are diseased and dying, thereby reducing easily combustible fuel loads. Also, implementing recommendation GR-13a would reduce the presence of vegetation with high fire hazard ratings, such as dense and aging French broom and eucalyptus. Tree and invasive weed removal would reduce the amount of available fuel for fires. More important, timber thinning would increase the space between trees, reducing the ability of a fire to

rapidly spread. Additionally, the management activities would result in healthier trees that are less susceptible to stress from drought; healthy trees are less likely to catch fire than dying trees with dead limbs and needles. However, chain saws and other motorized equipment would increase the risk of fire. Natural Areas Program gardeners carry fire extinguishers in their trucks and would use appropriate fire prevention and suppression measures for more extensive tree and shrub removal. The SFRPD would continue to hold regular meetings with the San Francisco Fire Department and would coordinate management activities, such as tree removal, with that department. As Sharp Park and a few Natural Areas within San Francisco are classified as moderate to high fire hazard zones, tree and invasive weed removal as part of the programmatic projects would reduce the potential of fire hazards within these areas. Further, tree removal would be carefully coordinated, fire suppression equipment would be located on-site, and no prescribed burning is planned within the Natural Areas. Because of this, programmatic projects would have ***less than significant*** fire hazard impacts.

Project-Level Impacts (Routine Maintenance)

Impact HZ-17: Implementation of the routine maintenance activities under the SNRAMP would not result in substantial fire hazards. (Less than Significant)

Routine maintenance includes invasive weed and tree removal in areas of less than half an acre. Similar to the impacts described under the programmatic projects, routine maintenance would reduce the presence of vegetation with high fire hazard ratings, such as dense and aging French broom and eucalyptus. Therefore, tree and invasive weed removal would reduce the amount of available fuel for fires. As such, routine maintenance would result in ***less than significant*** fire hazard impacts.

Project-Level Impacts (Sharp Park Restoration)

Impact HZ-18: Implementation of the Sharp Park restoration activities under the SNRAMP would not result in substantial fire hazard impacts. (Less than Significant)

The Sharp Park restoration would include removing certain invasive vegetation to enhance habitat and establish native vegetation. Motorized equipment used during restoration would increase the risk of fire. Workers involved in the restoration activities would carry fire extinguishers in their trucks and would use appropriate fire prevention and suppression measures during restoration. Therefore, the Sharp Park restoration would have ***less than significant*** impacts from fire hazards.

Cumulative Impacts

Impact HZ-19: The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact related to hazards and hazardous materials. (Less than Significant)

Risks from hazardous materials impacts, including the use of pesticides, are generally localized and site specific, with the exception of those resulting from the transportation of hazardous materials. These risks are generally site specific, so the geographic context for the analysis of the use of hazardous materials and fire hazards is limited to the area surrounding the project site, while cumulative impacts from transporting hazardous materials are analyzed for projects along the transportation routes. As a result, relevant cumulative projects typically involve demolition and construction activities, such as the Hunters Point Shipyard/Candlestick Point Redevelopment project.

Cumulative development and building projects could generate hazardous wastes, such as asbestos from friable building materials, lead-based paint on building surfaces, and polychlorinated biphenyls in lighting fixtures. In addition, previously unknown contamination, possibly the result of improper disposal or housekeeping, may be discovered as structures are demolished. The cumulative effects of demolishing and constructing buildings could expose construction workers to health or safety risks through exposure to hazardous materials, although the individual workers potentially affected would vary from project to project. Hazards and hazardous materials associated with the cumulative projects are anticipated to be discrete and confined to the boundaries of the cumulative project sites. The proposed project would not contribute to these cumulative impacts because the project does not include demolition and new construction.

Although existing, proposed, and reasonably foreseeable development could have unique hazardous materials considerations, the developers would be required to comply with the range of federal, state, and local statutes and regulations applicable to the use, transport, and disposal of hazardous materials. Future project proponents also would be required to comply with the future regulatory programs of applicable enforcement agencies. Compliance with these federal, state, and local laws and regulations pertaining to hazardous materials management would be sufficient to minimize health and safety risks to workers and users of the Natural Areas.

Assuming cumulative projects are conducted in compliance with all applicable statutes and regulations, the overall hazards and hazardous materials cumulative impact would be less than significant. Although it would involve the use and transport of hazardous materials, such as fuel for

maintenance equipment and pesticides, the proposed project would comply with all applicable statutes and regulations. Further, implementing the project mitigation described above would reduce the project's impact contribution from the transportation, disposal, or release of hazardous materials to ***less than significant***.

The proposed project, in combination with other cumulative projects, would contribute to reducing the potential impacts of fire hazards. Other projects, such as the seismic upgrade of the Auxiliary Water Supply System and the Mount Sutro Open Space Reserve Management Plan, would similarly contribute to reducing fire hazard impacts. The seismic upgrade of the Auxiliary Water Supply System would improve the emergency response during fires within San Francisco. The Mount Sutro project would reduce the potential for fire hazards in Mount Sutro by thinning and removing hazardous trees in that area. Therefore, the risk of fire hazards resulting from the proposed project in combination with other cumulative projects would be ***less than significant***.

V.J AGRICULTURE AND FOREST RESOURCES

Agricultural resources have been adequately analyzed in the Initial Study prepared for the proposed project in April 2009 and are not analyzed in this EIR. Amendments to the CEQA guidelines that became effective on March 18, 2010, included several checklist items to address greenhouse gases and their impacts on the environment. In particular, the agriculture and forest resources section was revised to include analysis of the direct and indirect loss of forest land and compliance with state laws pertaining to forestry. This section analyzes the impacts of the proposed project on the forest resources.

No comments related to agriculture and forest resources were received during the NOP scoping process.

V.J.1 Regulatory Setting

Federal

No federal regulations related to agricultural and forest resources are applicable to the proposed project.

State

The California Public Resources Code 12220 defines forest as land that can support ten percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. California Public Resource Code 4526 defines timberland as land other than that owned by the federal government and land designated by the California Board of Forestry and Fire Protection as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species are determined by the board on a district[1] basis, after consultation with the district committees and others (California Public Resource 25 Code 4526).

The California Coastal Act includes specific policies that address lands suitable for agricultural and timber purposes adjacent or near the coast and provides direction on potential retention or conversion of these lands. Although Sharp Park borders the Pacific Ocean, it does not contain any primary or suitable agricultural lands, and no trees are used as timber; this is described in greater

[1] "District" means a forest district.

detail below in Section V.J.2. Therefore, the proposed restoration effort at Sharp Park is in compliance with the California Coastal Act.

Local

San Francisco

The *San Francisco General Plan* includes Policy 2.9, which is "Maintain and expand the urban forest," as follows:

> Many of the city-maintained trees have reached maturity and need to be replaced. This is particularly true in the City's older parks, where many trees are dead or visibly decaying. A major reforestation effort should be undertaken by the City in many of the larger parks, on other City properties, and some major public streets. The magnitude of this effort is beyond the current scope of existing tree maintenance programs and budgets. A farsighted program should be developed to adequately maintain San Francisco's urban forest and to ensure a legacy of green in the century ahead.

The policy states that a reforestation program should include the following major program elements:

- *Systematic Inventory.* The database elements should include geographic location, tree species, size, age, and disease classes, and other information as may be necessary.
- *Planting, Tree Replanting, and Maintenance.* The species or variety planted in any area should be chosen for design objectives identified in the Urban Design Element of the General Plan, as well as the tree's ability to thrive in the area's microclimate and soil conditions. Guidelines should be developed, as appropriate, for required tree removal. Removal of large areas of naturalistic tree plantings will require treatment significantly different from that used to remove overmature or diseased street trees. When large or overmature trees have been removed, reforestation should proceed as soon as practical. However, a certain number of dead trees should be left standing for their habitat value, if they are not a safety hazard.
- *Wood Waste Management and Utilization.* Tree removal and reforestation would generate a significant amount of wood and waste products. A program should be developed to use the wood and effectively manage the waste generated. Sale of merchantable timber, cord lumber, wood chips, and bark chips could help to offset the cost of the reforestation program and would reduce the solid waste problem that tree removal and maintenance generates.

City of Pacifica

As a general guide, the *City of Pacifica General Plan* states that the "long-term productivity of soils and timberlands shall be protected and conversions of coastal commercial timberlands in units of commercial size to other uses of their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities."

V.J.2 Environmental Setting

The 32 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately four percent of the total city area; one area is in Pacifica. They range in size from less than one acre to almost 400 acres. Most of these areas are used as recreational open spaces by residents and visitors. Overall there are an estimated 118,000 trees within the Natural Areas, approximately 54,000 of which are in Sharp Park, leaving 64,000 within San Francisco.

Forest Land

California is composed of a diverse landscape of over 100 million acres. Thirty-three million acres are characterized as forests, over which there is a broad range of forest types and species (California Board of Forestry and Fire Protection 2008). The area of forests in California is split roughly evenly between private and public ownership; 45 percent is private, 52 percent is federal, and three percent is state or local government (California Board of Forestry and Fire Protection 2008). The state Public Resource Code 12220 defines forest land as land that can support ten percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including biodiversity, water quality, and recreation.

The forest sector is unique in that it is the only sector that removes carbon dioxide (CO_2) from the atmosphere and sequesters it over the long term. Carbon sequestration is the process by which atmospheric carbon dioxide is absorbed by trees and other vegetation through photosynthesis and is stored as carbon in trunks, branches, foliage, roots, and soils. Forests are both a sink and a source of carbon dioxide. Carbon storage in forests and wood products provides a carbon sink, while decay and wildfire ultimately release the absorbed carbon under the natural cycle of forest growth, senescence (aging), and regeneration. Normally when trees die, the stored carbon is released into the atmosphere through decomposition. However, if the biomass from removed trees is used as feedstock for power plants, GHG emissions that would have occurred with other fuel sources are displaced (California Board of Forestry and Fire Protection 2008).

The forest sector represents complex biological systems that are inherently highly variable and difficult to quantify and predict. Furthermore, forests are anticipated to respond to climate change in complex and uncertain ways. It will be challenging to manage forests to enhance sequestration capacity across a landscape that is itself changing in response to climate (California Board of Forestry and Fire Protection 2008). Current projections of sequestration rates under various climate change scenarios show both increases and decreases in carbon storage, depending on various assumptions. To date, few analyses of the potential for additional sequestration over time have considered the future effects of climate change (EPA 2011b).

Carbon dioxide emissions for the California forest sector in 2004 were estimated at approximately 4.9 million metric tons (MMT) from disturbances such as fires and harvesting and 4.5 MMT from the decomposition of forest products in landfills and composting facilities. Atmospheric CO_2 removal by forests was estimated at -14.1 MMT (the minus sign denotes removal of CO_2 from the atmosphere). Taken together, atmospheric CO_2 removals and emissions represent a sector-wide net flux of approximately -4.7 MMT CO_2 for the combination of public and private lands (California Board of Forestry and Fire Protection 2008).

The California Climate Action Registry adopted an Urban Forestry protocol in August 2008 (California Board of Forestry and Fire Protection 2008). The protocol provides guidance to account for and report GHG emissions reductions associated with a planned set of tree planting and maintenance to permanently increase carbon storage in trees. This protocol found that atmospheric CO_2 reductions due to trees result from a number of processes: sequestering carbon in live trees, maintaining sequestered CO_2 in removed trees by storing it in wood products, reducing GHG emissions by conserving energy used for space heating and cooling, or displacing GHG emissions by using urban tree residue as bioenergy fuel; at the same time, GHGs released through tree care and decomposition must be accounted for (California Board of Forestry and Fire Protection 2008).

The principles that guide forest carbon management, based on the state Board of Forestry and Fire Protection Work Plan, recognize that optimal carbon storage may be achieved by enhancing forest stocks, by increasing longevity and reuse of wood products, and by reducing losses from insects, pathogens, and wildfires. The three major agents affecting California's forest are wildfire, insects and disease, and human development/use (California Board of Forestry and Fire Protection 2008).

Climate change in the forest sector can alter disturbance regimes by affecting the timing, frequency, and magnitude of wildfires, pest infestations, and other agents of disturbance (Dale et al. 2001). The resiliency of a forest refers to its ability to recover from disturbance and is a measure of its overall

health. Improving forest and range (grassland) resiliency means that systems are better able to store carbon and resist extreme climatic events. Obtaining better resiliency requires forest management that, among other things, promotes a diverse mix of tree species and a broad range of age classes and that maintains optimum densities for forest health and growth. Promoting resilience increases the ability of a system to withstand negative impacts without losing its basic functions (California Board of Forestry and Fire Protection 2008).

Once trees die or are cut down, they begin to decompose and return stored carbon to the atmosphere. The rate of decomposition differs greatly based on the fate of the wood. Wood that is chipped and applied as mulch decomposes relatively quickly, while wood salvaged for use in wood products can survive 50 years or more, before gradually decomposing. The combustion of gasoline and diesel fuels by vehicle fleets and by such equipment as chainsaws, chippers, stump removers, and leaf blowers also contributes to GHG emissions. CO_2 released by equipment during tree planting, maintenance, and other program-related activities is equivalent to about 2 to 5 percent of the annual CO_2 reductions obtained through sequestration and reduced power plant emissions[2] (California Climate Action Registry 2008). Also, tree maintenance results in healthier trees that have a better potential to sequester CO_2 for a longer term.

Trees are an important resource to the people of San Francisco and to the varied wildlife species that use the urban forests within the City. As important a resource as the trees are, the species that are present throughout the Natural Areas are almost entirely nonnative, and most are also invasive.

V.J.3 Impacts

Significance Thresholds

A proposed project would have a significant agricultural and forest resources impact if it were to result in the following:

- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220[g]) or timberland (as defined in Public Resource Code section 4526);

[2] Urban forests have two indirect effects on atmospheric CO_2 and other greenhouse gases. First, trees around buildings can reduce heating and air conditioning use, thereby reducing emissions of GHGs associated with the consumption of electricity, natural gas, and fuel oil. Second, normally when trees die, if the biomass from removed trees is used as feedstock for power plants, GHG emissions that would have occurred with other fuel sources are displaced.

- Cause the loss of forest land or convert forest land to nonforest use; or
- Involve other changes in the environment, which, due to their location or nature, could convert farmland to nonagricultural use or convert forest land to nonforest use.

Impacts Addressed in the Initial Study

In the Initial Study (included in Appendix A), impacts related to the following criteria were identified as not significant:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;
- Conflict with existing zoning for agricultural use; and
- Involve other changes to the environment which could result in conversion of Farmland of Statewide Importance to non-agricultural use.

As a result, these CEQA significance criteria are not evaluated further in this EIR.

Significant Natural Resource Areas Management Plan Impacts

Trees are proposed to be removed from 15 of the 32 Natural Areas: Bayview Park, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Glen Canyon Park and O'Shaughnessy Hollow, Golden Gate Park Oak Woodlands, Grandview Park, Interior Greenbelt, Lake Merced, McLaren Park, Mount Davidson, Palou-Phelps, Twin Peaks, and Sharp Park. The trees targeted for removal in five of these Natural Areas (Buena Vista Park, Grandview Park, Oak Woodlands, Palou-Phelps, Brooks Park, and Twin Peaks) are not considered to be urban forests (SFRPD 2006).

Zoning for Forest Land or Timberland

Programmatic Impacts

Impact AF-1: Implementation of the programmatic projects under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland. (No Impact)

There are no known uses of trees within the Natural Areas for timberland. Therefore, large-scale tree removal would have no impacts on timberland. Large-scale tree removal is defined as exceeding half an acre or more than 20 trees at any one time. Large-scale tree removal of urban forest could occur at Bayview Park. Glen Canyon Park and O'Shaughnessy Hollow, Interior Greenbelt, Lake Merced, McLaren Park, Mount Davidson, and Sharp Park. As noted above, the state Public Resources Code 12220 defines forest land as land that can support 10 percent native tree cover of

any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including biodiversity, water quality, and recreation. Although vegetation in some Natural Areas may not meet this criterion (because vegetation composition may be less than 10 percent native), they are considered as such for purposes of this analysis. Large-scale tree removal would not include native trees. New planted trees would be native trees. Further, most of the Natural Areas are used as recreational open spaces by residents and visitors and would continue to be used for that purpose. Further, the SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The mission of the program is two-fold: to preserve, restore, and enhance remnant Natural Areas and to develop and support community-based site stewardship of these areas. Therefore, the proposed tree removal under programmatic projects would not conflict with zoning or cause forest land or timberland to be rezoned. The proposed tree removal under programmatic projects would even better support the conditions of forest land by removing dead and dying trees and thinning trees to achieve a healthier forest density. Also, there would be no change in the zoning of the Natural Areas. As such, the proposed tree removal under programmatic projects would have ***no impacts*** on forest land and timberland zoning.

Project-level Impacts (Routine Maintenance)

Impact AF-2: Implementation of routine maintenance activities under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland. (No Impact)

Trees removal as part of the routine maintenance activities affects less than half an acre and less than 20 trees at any one time. Routine maintenance tree removal could occur at all of the Natural Areas listed above under large-scale tree removal, plus Corona Heights and Dorothy Erskine Park. Impacts of tree removal during routine maintenance activities would be similar to those described above under programmatic projects. Tree removal would focus on dead or dying trees and tree thinning would allow promotion and establishment of a native understory, decrease the site dominance of invasive species, and improve the health of the forest by relieving crowding. Also, there would be no change in the zoning of the Natural Areas. Therefore, tree removal under the routine maintenance activities would not conflict with zoning or cause forest land or timberland to be rezoned. Proposed tree removal as part of routine maintenance activities would have ***no impacts*** on forest land and timberland zoning,

Project-level Impacts (Sharp Park Restoration)

Impact AF-3: Implementation of the Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on zoning for forest land or timberland. (No Impact)

A few individual trees may be removed as part of the wetland and upland habitat restoration. As such, the Sharp Park restoration would have ***no impact*** on zoning for forest land or timberland.

Loss or Conversion of Farmland or Forest Land

Programmatic Impacts

Impact AF-4: Implementation of the programmatic projects under the SNRAMP would not have a substantial adverse effect on the loss or conversion of farmland or forest land. (Less than Significant)

Natural Areas of San Francisco

Because no farmland is present within the Natural Areas, no impacts to this resource would occur from the programmatic projects. Invasive trees removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area, where other native vegetation instead would be planted. Additional shrubs and grasses also would be planted.

Tree removal in San Francisco would not convert forest land to nonforest land and would not change the existing environment to result in the loss of farmland or forest land. Tree removal in MA-3 urban forests would follow the general urban forest management practices (GR-15), which focus on the removal of dead or dying trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. These stressed trees do not sequester carbon at the same rate as healthy trees. The sequestration life of trees is about 20 years, after which they sequester carbon at much lower rates. Additionally, isolated trees or small stands of trees would be removed in MA-1 and MA-2 areas for conservation purposes. Removed trees in MA-1 and MA-2 areas would be replaced on a one-to-one basis and additional shrubs and grasses would be planted; therefore, vegetation would increase within the Natural Areas of San Francisco.

Tree removal could affect the forest carbon sequestration process (this topic is discussed in detail in Section E.7 of the Initial Study in Appendix A). Sequestration depends on tree growth and mortality, which in turn depends on species composition, age, structure, and forest health. Newly planted trees accumulate carbon rapidly for several decades, and then the annual increase in sequestered carbon

declines. Old trees can release as much carbon dioxide from decay as they sequester from new growth; however, at the same time they serve as valuable carbon sinks. When trees are stressed they can lose their normal ability to absorb carbon dioxide. Hence, healthy, vigorous growing trees will absorb more CO_2 than will trees that are diseased or otherwise stressed. Management goals in MA-1 forests are approximately 50 to 100 square feet of basal area per acre after trees are removed. The goal for the MA-2 stands is slightly higher basal areas, ranging from approximately 100 to 200 square feet per acre. Tree removal under programmatic projects would prioritize dead or dying trees and would maintain a healthy forest and therefore help in maintaining the carbon sequestered by the urban forest. The total number of trees would not change within the Natural Areas of San Francisco, and the amount of carbon sequestered would increase in the long term from replacing dead, dying, and diseased trees. Therefore, implementation of the programmatic projects in San Francisco would have ***less than significant*** impacts on the loss or conversion of forest land.

Sharp Park

For tree removal in Sharp Park, many of the trees would be replaced not with trees but with more appropriate native vegetation, as identified in the SNRAMP. The area subject to tree removal is not considered forest land under Public Resource Code 12220 because it contains no native tree cover. Approximately 15,000 trees in Sharp Park would be removed from MA-1 and MA-2 areas. Not all trees in MA-1 and MA-2 areas would be removed. Some scattered large individuals would remain in order to minimize large-scale disturbance and disruption to wildlife and to promote a natural conversion to native scrub habitats. The long-term goal in the MA-1 and MA-2 areas is to slowly convert those areas to native scrub and grassland habitats or oak woodlands. In most cases this conversion would take significantly longer than the 20-year life of the SNRAMP. As trees are removed, the canyon slopes at Sharp Park would gradually support fewer trees and more scrub habitats. The overall character of the canyon would remain that of a wooded area for a long time following tree removal as older trees are allowed to naturally age and die. While a high number of trees would be replaced with native vegetation at Sharp Park, a conversion toward nonforest habitat, those areas would still be maintained as vegetated landscapes capable of carbon sequestration. Further, as most of the trees removed would be older trees, those trees do not act as good sinks for carbon compared to actively growing trees. The active growing period of urban trees is 20 years, depending on tree species, planting density, and location (IPCC 2007). As documented in Section E.7 of the Initial Study in Appendix A, based on research studies, grassland and scrub habitat could act as a significant carbon sink (Conant et al. 2001). The California Registry is

developing flexible mechanisms to address reversals[3] if removed trees are not replaced (California Climate Action Registry 2008).

Although the proposed programmatic projects would convert urban forest into grass and scrub land in Sharp Park, it would not affect the general use of those areas. Over the long term, those areas would still be vegetated and used as open spaces for recreation and would not be developed. Tree removal would focus on dead and dying trees that do not sequester carbon at the same rate as healthy trees. Further, conversion of forest land to grassland and scrub habitat would not result in conversion of land to uses that do not sequester carbon, such as new developments, and would not significantly impact the carbon sequestration process within the project area because other plants also sequester carbon. Therefore, the proposed programmatic projects would have ***no impact*** on farmland or forest land conversion.

Project-level Impacts (Routine Maintenance)

Impact AF-5: Implementation of the routine maintenance activities under the SNRAMP would not have a substantial adverse effect on the loss or conversion of farmland or forest land. (Less than Significant)

Because no farmland is present within the Natural Areas, no impacts to this resource would occur from routine maintenance. Under routine maintenance activities, trees would be removed in areas less than half an acre and affect fewer than 20 trees at one time. Tree removals as part of the routine maintenance activities would have similar impacts on urban forest conversion and carbon sequestration as those described under the programmatic projects for the Natural Areas of the San Francisco and Sharp Park. However, these impacts would be of a smaller scale and magnitude. Therefore, the impacts of tree removal under the routine maintenance activities on farmland or forest land conversion would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact AF-6: Implementation of the Sharp Park restoration under the SNRAMP would not have a substantial adverse effect on the conversion of forest land (No Impact)

Because no farmland is present within the Natural Areas, no impacts to this resource would occur from the Sharp Park restoration project. A few individual trees may be removed as part of the

[3] Reversal is sequestered CO_2 that is released back to the atmosphere.

wetland and upland habitat restoration. As a result, implementation of the Sharp Park restoration would have ***no impact*** on the loss or conversion of farmland or forest land.

Cumulative Impacts

Impact AF-7: The proposed project, in combination with other planned and foreseeable future projects, would not have a cumulatively considerable substantial adverse effect related to agriculture and forest resources. (Less than Significant)

The geographic scope of this analysis covers San Francisco and Pacifica. Cumulative projects that would have an impact on urban forests include the planning projects that would result in the creation of new open spaces or add a substantial number of trees, such as the Candlestick Point-Hunters Point Shipyard, Executive Park, and Glen Canyon Park projects. As an example, the Candlestick Point-Hunters Point Shipyard development will add approximately 10,000 trees. Further, the SFRPD Forestry Program includes tree planting and restoration within the San Francisco neighborhood parks. Other cumulative projects, such as the Mount Sutro Open Space Reserve Management Plan (Mount Sutro), include removal of hazardous trees and forest thinning projects as a fire mitigation measure. Among the objectives of the Mount Sutro project are replacing highly flammable eucalyptus trees with more fire resistant species, increasing age diversity of trees, and improving the health and safety of the remaining trees. That project includes removing an average of 18 trees per acre in an area with a density of 280 trees per acre. Other cumulative projects might result in the removal of a few individual trees. None of the cumulative projects would convert urban forests to nonforest use. Further, San Francisco trees are protected by the San Francisco Urban Forestry Ordinance which requires the replacement of removed trees on a one-to-one basis. Further, new developments are required to plant one tree for every 20 feet of street frontage pursuant to the Planning Code Section 132 of the Green Landscape Ordinance. Therefore, cumulative projects in San Francisco would not result in significant impacts to the conversion of the urban forest.

Removal of trees in Pacifica is subject to the logging and heritage tree ordinances; these ordinances do not apply to the SFRPD or Sharp Park. Although cumulative projects in Pacifica could result in tree removal, project proponents would have to comply with the local ordinances. Therefore, cumulative tree removal projects in Pacifica would not have significant impacts on the conversion of the urban forest.

As discussed above, the proposed project would not contribute considerably to cumulative impacts on forest land or timberland. As a result, cumulative impacts on forest land and timberland would be ***less than significant.***

V.K AIR QUALITY

The purpose of the BAAQMD Guidelines is to assist lead agencies in evaluating the air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin. The Guidelines provide procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. Using the 1999 BAAQMD CEQA Air Quality Guidelines, which were in effect at the time of its publication, the NOP/Initial Study prepared for the proposed project addressed air quality and found impacts to be less than significant. Subsequent to publication of the NOP/Initial Study, the BAAQMD issued revised guidelines that supersede the 1999 BAAQMD CEQA Air Quality Guidelines (BAAQMD 2011a). Therefore, this section of the EIR discusses the adopted 2011 BAAQMD CEQA Air Quality Guidelines and CEQA air quality thresholds of significance.

Comments about air quality received during the NOP scoping process concerned the following:

- The effects of prescribed burns on air pollution.

Prescribed burns are no longer proposed as part of the SNRAMP.

V.K.1 Regulatory Setting

Federal Ambient Air Quality Standards

The 1970 Clean Air Act (last amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all ambient air quality standards (Table 12) by the deadlines specified in the Clean Air Act. The ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above the ambient air quality standards before adverse health effects are observed.

In general, the Bay Area Air Basin experiences low concentrations of most pollutants when compared to federal standards, except for inhalable and fine particulate matter (PM_{10} and $PM_{2.5}$), for which standards are exceeded periodically.

Table 12
State and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Concentration	National Concentration
Ozone	8 Hours	0.070 ppm (137 µg/m^3)	0.075 ppm
	1 Hour	0.09 ppm (180 µg/m^3)	
Carbon Monoxide	8 Hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide	24 Hours	0.04 ppm (105 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	
	24 Hours	50 µg/m3	150 µg/m^3
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m3	15 µg/m^3
	24 Hours		35 µg/m^3
Sulfates	24 Hours	25 µg/m^3	
Lead	Calendar Quarter		1.5 µg/m^3
	30 Day Average	1.5 µg/m^3	
Hydrogen Sulfide	1 Hour		
Vinyl Chloride (chloroethene)	24 Hours	0.010 ppm (26 µg/m^3)	
Visibility Reducing particles	8 Hour (10:00 to 18:00 Pacific time)		

ppm = parts per million
mg/m^3 = milligrams per cubic meter
µg/m^3 = micrograms per cubic meter

Source: BAAQMD 2011b

In June 2004, the Bay Area was designated as a marginal nonattainment area of the national 8-hour ozone standard. The EPA lowered the national 8-hour ozone standard from 0.80 to 0.75 parts per million effective May 27, 2008. EPA will issue final designations based upon the new 0.75 parts per million ozone standard soon. The Bay Area Air Basin is in attainment for other criteria pollutants, with the exception of the 24-hour standards for PM_{10} and $PM_{2.5}$, for which the Bay Area is designated "Unclassified."

State Ambient Air Quality Standards

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological characteristics in California, there is considerable diversity between the state and national ambient air quality standards. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent (Table 12).

In 1988, California passed the California Clean Air Act (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. The Bay Area Air Basin is designated as "nonattainment" for state ozone, PM_{10}, and $PM_{2.5}$ standards. The Bay Area Air Basin is designated as "attainment" for most other pollutants, such as nitrogen oxides (NOx), reactive organic gases (ROG), and carbon monoxide (CO).

The federal and state ambient air quality standards are presented in Table 12.

Air Quality Planning Relative to State and Federal Standards

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the State PM_{10} standard). On September 15, 2010, the BAAQMD, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, adopted the *2010 Clean Air Plan* (BAAQMD 2010a), which replaced the *Bay Area 2005 Ozone Strategy*.

The *2010 Clean Air Plan* updated the *2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provide a control strategy to reduce ozone, particulate matter, toxic air contaminants, and greenhouse gases in a single, integrated plan; review progress in improving air quality in recent years; and establish emission control measures to be adopted or implemented in the 2010 – 2012 time frame. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission, local governments,

transit agencies, and others. The *2010 Clean Air Plan* represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard.

Air Resources Board Idling Regulations

In 2005, the California Air Resources Board (ARB) approved a regulatory measure to reduce emissions of toxic and criteria air pollutants by limiting the idling of new heavy-duty diesel vehicles. The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour. Buses or vehicles also must turn off their engines upon stopping at a school and must not start their engines more than 30 seconds before beginning to depart from a school. Additionally, Senate Bill 351 (SB 351) (adopted in 2003) prohibits locating public schools within 500 feet of a freeway or busy traffic corridor.

Regional/Local Air Quality Planning

Bay Area Air Quality Management District

BAAQMD is the regional agency with jurisdiction over air quality regulations within the nine-county Bay Area Air Basin. The Association of Bay Area Governments, Metropolitan Transportation Commission, county transportation agencies, cities and counties, and various nongovernmental organizations also join in efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

BAAQMD is responsible for attaining and/or maintaining air quality in the Bay Area Air Basin within federal and State air quality standards. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the Air Basin and to develop and implement strategies to attain the applicable federal and State standards.

In 1999, BAAQMD adopted its *CEQA Air Quality Guidelines* as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. In May 2011, BAAQMD published an updated and revised version of its *CEQA Air Quality Guidelines*, which includes updates to the revised thresholds of significance adopted by its board in June 2010. BAAQMD is recognized as the regional agency with special expertise in air quality; therefore, the Air District's guidelines and thresholds are commonly used in CEQA analysis, and are normally relied upon by the Planning Department for its significance determinations.

San Francisco General Plan Air Quality Element

The *San Francisco General Plan* (*General Plan*) includes the 1997 Air Quality Element, which includes the following objectives:

Objective 1: Adhere to state and federal air quality standards and regional programs.

Objective 2: Reduce mobile sources of air pollution through implementation of the Transportation Element of the *General Plan.*

Objective 3: Decrease the air quality impacts of development by coordination of land use and transportation decisions.

Objective 4: Minimize particulate matter emissions from road and construction sites.

Objective 5: Link the positive effects of energy conservation and waste management to emission reductions.

San Francisco Clean Construction Ordinance

San Francisco Ordinance 70-07, which adds San Francisco Administrative Code Article 6.25, amends San Francisco Administrative Code Article 6.67, and adds San Francisco Environment Code Article 411, is known as the Clean Construction Ordinance. The ordinance requires that contractors on public works construction projects that take 20 days or more to complete reduce vehicle emissions by (1) using a blend of at least 20 percent biodiesel in off-road vehicles and construction equipment and (2) using construction equipment with engines that meet Tier 2 standards or use best available control technology. Many of the programmatic projects would be subject to the Clean Construction Ordinance; however, the Sharp Park restoration project would not be subject to this ordinance.

San Francisco Dust Control Ordinance

San Francisco Health Code Article 22B, and *San Francisco Building Code* Section 106.A.3.2.6, collectively the Construction Dust Control Ordinance, requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection. The Director of Department of Building Inspection may waive this requirement for activities on sites less than one half-acre that are unlikely to result in any visible wind-blown dust.

For project sites greater than one half-acre in size, the Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Health Department. The SFRPD

would be required to comply with the Ordinance and submit a Dust Control Plan for the Sharp Park restoration project and many of the programmatic projects.

V.K.2 Environmental Setting

Criteria Air Pollutants

As required by the 1970 federal Clean Air Act, the EPA has identified six criteria air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. EPA calls these pollutants criteria air pollutants because the agency has regulated them by developing specific public-health-and-welfare-based criteria as the basis for setting permissible pollutant levels. Ozone, CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead are the six criteria air pollutants.

The San Francisco Bay Area Air Basin is currently designated as a nonattainment area for state and national ozone standards, state and national $PM_{2.5}$, and state PM_{10}. For other criteria pollutants, such as NO_2, CO, and SO_2, the San Francisco Bay Area Air Basin is designated as an in attainment or is unclassified. Table 13 presents the current federal and state attainment status for the San Francisco Bay Area Air Basin.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NOx. The main sources of ROG and NOx, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.

Table 13
State and National Attainment Status

Pollutant	Averaging Time	California Attainment Status	National Attainment Status
Ozone	8 Hours	N	N
	1 Hour	N	
Carbon Monoxide	8 Hours	A	A
	1 Hour	A	A
Nitrogen Dioxide	1 Hour	A	U
	Annual Arithmetic Mean		A
Sulfur Dioxide	24 Hours	A	
	1 Hour	A	A
Inhalable Particulate Matter (PM_{10})	Annual Arithmetic Mean	N	
	24 Hours	N	U
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	N	A
	24 Hours		N
Sulfates	24 Hours	A	
Lead	Calendar Quarter		A
	30 Day Average	A	
Hydrogen Sulfide	1 Hour	U	
Vinyl Chloride (chloroethene)	24 Hours	No information available	
Visibility Reducing Particles	8 Hour (10:00 to 18:00 Pacific time)	U	

N = nonattainment
A = attainment
U = unclassified

Source: BAAQMD 2011b

Particulate Matter

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facility operations, and ground-disturbing activities, such as construction, are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the state Air Resources Board (ARB), studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated

that particle pollution "may significantly reduce lung function growth in children." The ARB also reports that statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.

Among the criteria pollutants that are regulated, particulates appear to represent a serious ongoing health hazard. As long ago as 1999, the BAAQMD was reporting, in its *CEQA Air Quality Guidelines*, that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. High levels of particulates have also been known to exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions.

Nitrogen Dioxide

NO_2 is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from a contribution to ozone formation, nitrogen oxides, including NO_2, can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. The federal 1-hour standard was recently made more stringent by the EPA with a statistical form that allows some hours to exceed the standard before triggering a nonattainment designation. Vehicle exhaust is a dominant urban source of NO_2, and concentrations of NO_2 near major roads can be appreciably higher than those measured at monitors in the current regional monitoring network. Table 13 shows that the standard for NO_2 is being met in the Bay Area. However, existing monitoring methods must be revised by 2013 to determine compliance with the new federal standards.

Sulfur Dioxide

SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses, cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources

of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects; children are at special risk. Some lead-containing chemicals cause cancer in animals.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and mortality. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks. 2008 TAC emissions for San Francisco and San Mateo Counties (the counties in which the proposed project would take place) are shown in Table 14. TACs for which data were not available for either county are not included in Table 14.

Table 14
Toxic Air Contaminants, San Francisco and San Mateo Counties

Toxic Air Contaminant	Total Emissions, San Francisco County (pounds per year)	Total Emissions, San Mateo County (pounds per year)
Acetaldehyde	0.22	7.50
Acrylonitrile	ND	32.33
Ammonia (NH_3)	166.03	28,537.46
Arsenic (all)	1.36	0.22
Benzene	507.78	3,230.81
Benzyl chloride	ND	62.96
Beryllium (all)	0.80	0.10
Cadmium	3.48	0.43
Carbon tetrachloride	ND	12.85
Cellosolve	57.64	277.00
Cellosolve acetate	380.54	27.34
Chlorinated dioxins & furans	0.00	0.00
Chloroform	496.81	2,109.70
Chromium (hexavalent)	0.07	0.04
Dichlorobenzene	31.38	578.69
Diesel Engine Exhaust Particulate	6,345.76	6,999.34
Dioxane, 1,4-	ND	62.78
Ethyl chloride	ND	70.28
Ethylbenzene	636.18	7,229.00

Table 14
Toxic Air Contaminants, San Francisco and San Mateo Counties

Toxic Air Contaminant	Total Emissions, San Francisco County (pounds per year)	Total Emissions, San Mateo County (pounds per year)
Ethylene dibromide	ND	15.03
Ethylene dichloride	ND	75.77
Ethylene glycol	1,539.67	747.10
Ethylene oxide	2.00	0.04
Ethylidene chloride	ND	835.62
Formaldehyde	15,932.76	6,548.89
Hexane	71.85	4,742.73
Hydrochloric acid mist	ND	99.60
Hydrogen Chloride (HCl)	ND	24,287.12
Hydrogen Fluoride (HF)	ND	1.34
Hydrogen Sulfide (H_2S)	7,529.52	18,204.58
Isophorone	ND	9.32
Isopropyl alcohol	41,633.98	102,518.21
Lead (all)	4.10	0.46
Manganese	4.53	0.55
Mercury (all)	0.96	2.03
Methyl alcohol	1,788.10	2,888.59
Methyl cellosolve	4.24	ND
Methyl tertiary-butyl ether	ND	12.82
Methylene chloride	1,588.82	19,584.50
Naphthalene	0.11	8.07
Nickel	54.92	6.71
PAHs (benzo[a]pyrene equivalent)	0.85	0.00
Perchloroethylene	50,256.75	50,400.75
Phenol	128.24	16.23
Propylene glycol monomethyl ether	693.56	96.90
Selenium	ND	0.08
Styrene	4,745.83	13,368.91
Tetrachloroethane, 1,1,2,2-	ND	66.61
Toluene	15,018.74	39,746.92
Trichloroethane, 1,1,1- (without dioxane)	ND	4,955.35
Trichloroethane, 1,1,1- (with dioxane)	94.12	1,078.16
Trichloroethylene	127.73	2,226.30
Vinyl chloride	ND	717.27
Vinylidene chloride	ND	17.40
Xylene	16,470.01	26,544.89

ND = no data

Source: BAAQMD 2008

Diesel Particulate Matter

The ARB identified diesel particulate matter as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of diesel particulate matter are higher near heavily traveled highways. The estimated cancer risk from

exposure to diesel exhaust is much higher than the risk associated with any other toxic air pollutant routinely measured in the region.

Recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. The ARB community health risk assessments and regulatory programs have produced air quality information about certain types of facilities for consideration by local authorities when siting new residences, schools, day care centers, parks and playgrounds, and medical facilities (i.e., sensitive land uses, or "receptors"). Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals (ARB 2005).

In 2000, the ARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. As part of the Plan, the ARB in 2008 approved a new regulation for existing heavy-duty diesel vehicles that will require retrofitting and replacement of vehicles (or their engines) over time such that by 2023, all vehicles must have a 2010 model year engine or equivalent. Additional regulations apply to new trucks and to diesel fuel. With new controls and fuel requirements, 60 trucks built in 2007 would have the same soot exhaust emissions as one truck built in 1988 (Pollution Engineering 2006). Despite these reductions, the ARB recommends that proximity to sources of diesel particulate matter emissions be considered in the siting of new sensitive land uses. The ARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including housing and transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, ARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.

Roadway-Related Pollutants

Motor vehicles are responsible for a large share of air pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases, and also contribute to particulates by generating road dust and through tire wear. Epidemiologic studies have demonstrated that people living in proximity to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. Air pollution monitoring done in conjunction with epidemiological studies

has confirmed that roadway related health effects vary with modeled exposure to particulate matter and nitrogen dioxide. In traffic-related studies, the additional non-cancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet. As a result, the ARB recommends that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day.

Sensitive Receptors

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, population subgroups with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and populations with other environmental or occupational health exposures (e.g. indoor air quality) that affect cardiovascular or respiratory diseases. Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions.

V.K.3 Impacts

Significance Thresholds

A proposed project would have a significant air quality impact if it were to result in any of the following:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation; or

- Expose sensitive receptors to substantial pollutant concentrations.

Impacts Addressed in the Initial Study

In the Initial Study (Appendix A), impacts related to the following criteria were identified as not significant:

- Conflict with or obstruct implementation of the applicable air quality plan; and
- Create objectionable odors affecting a substantial number of people.

As a result, odors are not evaluated further in this EIR. As discussed in the Regulatory Setting section, since the completion of the Initial Study, BAAQMD, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, adopted the *2010 Clean Air Plan*, which replaced the *Bay Area 2005 Ozone Strategy*. The following discussion addresses compliance with the *2010 Clean Air Plan.*

The *2010 Clean Air Plan* provides a control strategy to reduce ozone, particulate matter, TACs, and greenhouse gases and represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard (see Section V.K.1, Regulatory Setting, for more information). The proposed project, which involves management of the Natural Areas and includes reintroduction of sensitive species, tree removal in conformance with forestry statements, and erosion control measures, would not conflict with the *2010 Clean Air Plan* or obstruct implementation of the plan; therefore, there would be no impact and no additional analysis is required.

Significant Natural Resource Areas Management Plan Impacts

This section addresses the impacts of the project during activity phases related to construction, operation, and routine maintenance. Construction impacts were assessed quantitatively for the Sharp Park Natural Area because those restoration activities are expected to be the largest of the programmatic projects undertaken under the SNRAMP. Other programmatic projects were assessed qualitatively based on the outcome of the analyses of the Sharp Park restoration activities. Operational or routine maintenance impacts were assessed qualitatively. Operational activities, including routine maintenance, would be similar to current activities conducted in the Natural Areas and therefore would not result in a substantial net increase in fugitive dust, criteria air pollutant emissions, or health risks.

The results of the quantitative construction analysis of the Sharp Park restoration activities were compared to the 2011 BAAQMD *CEQA Air Quality Guidelines* significance thresholds for construction-related activities for criteria air pollutant emissions. The new guidelines also include significance thresholds for operational activities; however, because operational impacts would result in negligible increases of criteria air pollutant emissions, these thresholds would not be exceeded and are not discussed further.

For ROG, NOx, and $PM_{2.5}$ (exhaust emissions only), a construction-related net increase of 54 pounds per day would be considered significant, while for PM_{10} (exhaust emissions only), a net increase of 82 pounds per day would be considered significant. There are no quantitative thresholds for construction dust emissions; instead, impacts are considered less than significant if best management practices are employed to control dust during construction activities, including demolition and excavation. The BAAQMD has identified a list of recommended BMPs for controlling fugitive dust to ensure that dust-related impacts are reduced to less than significant.

For health risks and hazards resulting from emissions of toxic air contaminants during project construction, BAAQMD has identified quantitative significance thresholds. The thresholds for project-specific impacts are an increase in lifetime cancer risk equal to or greater than 10 chances in one million, an increase in the non-cancer risk equal to or greater than a chronic or acute Hazard Index[1] of 1.0, or an increase in the annual average concentration of $PM_{2.5}$ equal to or greater than 0.3 micrograms per cubic meter. BAAQMD also recommends cumulative thresholds of 100 in one million cancer risk, a Hazard Index greater than 10.0, and an increased $PM_{2.5}$ concentration greater than 0.8 micrograms per cubic meter. BAAQMD has also determined that projects that comply with a qualified community risk reduction plan would result in a less than significant health risk impact; however, no jurisdiction in the San Francisco Bay Area has completed a qualified community risk reduction plan.

The principal sources of pollutants during the Sharp Park restoration would be the emissions generated by heavy equipment and construction vehicles used during project activities. Exhaust emissions resulting from the restoration activities were estimated using the Urban Land Use Emissions Model (URBEMIS) model and compared to the BAAQMD significance thresholds.

[1] Acute and chronic exposure to non-carcinogens is expressed as a Hazard Index, which is the ratio of expected exposure levels to acceptable reference exposure levels.

For the health risk assessment related to use of diesel-powered equipment during the Sharp Park restoration, hazardous air pollutant impacts on sensitive receptors were assessed using the EPA's Industrial Source Code Short Term Version 3 dispersion model and meteorological data from the Fort Funston meteorological station (the nearest meteorological station approximately 10 miles north of the proposed project). The nearest sensitive receptor was assumed to be at the project boundary to provide a conservative exposure assessment that would be applicable to other programmatic projects. Cancer and non-cancer health risks were calculated using the ARB's Hot Spots Analysis Reporting Program and compared to the BAAQMD criteria to determine if they would be significant. Potential cancer risk was calculated using age-sensitivity factors[2] from the concentrations produced from the air modeling analysis. Cancer risk was weighted by a factor of 10 for exposure that occurs to an individual from the third trimester of gestation (the period of development of young from conception until birth) to two years of age, and by a factor of three for exposures that occur from two years through 15 years of age. These weighing factors were applied equally to all carcinogens.

Fugitive Dust

Programmatic Impacts

Impact AQ-1: Programmatic projects under the SNRAMP would result in substantial fugitive dust emissions. (Less than Significant with Mitigation)

Programmatic projects proposed under the SNRAMP would result in fugitive dust emissions primarily during construction activities. In response to the need for consistent control measures to reduce fugitive dust during construction, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008), with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection.

The San Francisco Construction Dust Control Ordinance (Dust Control Ordinance) was adopted in July 2008. Under this ordinance, all site preparation work, demolition, and other construction activities in San Francisco must comply with specific dust control measures. The Dust Control

[2] Age-sensitivity factors were identified in accordance with the guidelines set by the Office of Environmental Health and Hazard Assessment.

Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the director of the San Francisco Department of Public Health.

For projects less than half an acre, the project proponent must comply with the general dust control requirements listed in Section 106.3.2.6.3(c) of the San Francisco Building Code, which are:

- Water all active construction areas sufficiently to prevent dust from becoming airborne. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour (mph). Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible.
- Provide as much water as necessary to control dust (without creating runoff) in any area of land clearing, earth movement, excavation, drillings, and other dust-generating activity.
- During excavation and dirt-moving activities, wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday.
- Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down or use other equivalent soil stabilization techniques.
- Use dust enclosures, curtains, and dust collectors as necessary to control dust in the excavation area.

For projects larger than half an acre, the Dust Control Ordinance requires the project sponsor to submit a dust control plan for approval by the San Francisco Department of Public Health before a building permit can be issued by the San Francisco Department of Building Inspection. For project sites that are larger than half an acre and located within 1,000 feet of sensitive receptors, the project sponsor must develop a site-specific dust control plan to be approved by the director of the San Francisco Department of Public Health. The site-specific dust control plan requires the project sponsor to:

- Submit a map to the director of the San Francisco Department of Public Health, showing all sensitive receptors within 1,000 feet of the site;
- Wet down areas of soil at least three times per day;

- Provide an analysis of wind direction, and install upwind and downwind particulate dust monitors;
- Record particulate monitoring results;
- Hire an independent third party to conduct inspections and keep a record of those inspections;
- Establish shutdown conditions based on wind, soil migration, and other factors;
- Establish a hotline for surrounding community members who may be affected by project-related dust;
- Limit the area subject to construction activities at any one time;
- Install dust curtains and windbreaks on the property lines, as necessary;
- Limit the amount of soil in hauling trucks to the size of the truck bed, and secure the load with a tarpaulin;
- Enforce a 15-mph speed limit for vehicles entering and exiting construction areas;
- Sweep affected streets with water sweepers at the end of the day;
- Install and use wheel washers to clean truck tires;
- Stop construction activities when winds exceed 25 mph;
- Apply soil stabilizers to inactive areas; and
- Sweep off adjacent streets to reduce particulate emissions.

Project sponsors are required to designate an individual to monitor compliance with dust control requirements.

The SNRAMP is a City project and construction would be carried out by SFRPD and City contractors. Pursuant to Health Code Article 22B, Section 1247, "All departments, boards, commissions, and agencies of the City and County of San Francisco that authorize construction or improvements on land under their jurisdiction under circumstances where no building, excavation, grading, foundation, or other permit needs to be obtained under the San Francisco Building Code shall adopt rules and regulations to insure that the same dust control requirements that are set forth in this Article are followed." The Construction Dust Ordinance contains the BAAQMD-recommended BMPs. Thus, compliance with Article 22B and all adopted rules and regulations will ensure that potential dust-related air quality impacts would be reduced to less than significant.

The construction activities of programmatic projects in San Francisco would be subject to the Dust Control Ordinance; therefore, impacts from construction-related fugitive dust emissions would be ***less than significant.***

Programmatic projects outside San Francisco are not subject to the Dust Control Ordinance; therefore, those projects that include grading or other activities that could generate fugitive dust could result in significant fugitive dust emissions. With implementation of Mitigation Measure M-AQ-1, which would require the SFPRD to comply with the provisions of the Dust Control Ordinance for programmatic projects outside San Francisco, the impact of fugitive dust emissions from programmatic projects outside San Francisco would be reduced to ***less than significant.***

M-AQ-1: Fugitive Dust Reduction

The SFRPD would implement the requirements of the Dust Control Ordinance for all programmatic projects that are outside of San Francisco to reduce fugitive dust emissions.

For projects less than half an acre, the SFRPD would comply with the general dust control requirements listed in Section 106.3.2.6.3(c) of the San Francisco Building Code, which are:

- Water all active construction areas sufficiently to prevent dust from becoming airborne. Increased watering frequency may be necessary whenever wind speeds exceed 15 mph. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible.
- Provide as much water as necessary to control dust (without creating runoff) in any area of land clearing, earth movement, excavation, drillings, and other dust-generating activity.
- During excavation and dirt-moving activities, wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday.
- Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down or use other equivalent soil stabilization techniques.
- Use dust enclosures, curtains, and dust collectors as necessary to control dust in the excavation area.

For projects greater than half an acre, in addition to the general dust control requirements above, the SFRPD would prepare a site-specific dust control plan that requires the project sponsor to:

- Submit a map to the director of the San Francisco Department of Public Health, showing all sensitive receptors within 1,000 feet of the site;
- Wet down areas of soil at least three times per day;
- Provide an analysis of wind direction, and install upwind and downwind particulate dust monitors;
- Record particulate monitoring results;
- Hire an independent third party to conduct inspections and keep a record of those inspections;
- Establish shutdown conditions based on wind, soil migration, and other factors;
- Establish a hotline for surrounding community members who may be affected by project-related dust;
- Limit the area subject to construction activities at any one time;
- Install dust curtains and windbreaks on the property lines, as necessary;
- Limit the amount of soil in hauling trucks to the size of the truck bed, and secure the load with a tarpaulin;
- Enforce a 15-mph speed limit for vehicles entering and exiting construction areas;
- Sweep affected streets with water sweepers at the end of the day;
- Install and use wheel washers to clean truck tires;
- Stop construction activities when winds exceed 25 mph;
- Apply soil stabilizers to inactive areas; and
- Sweep off adjacent streets to reduce particulate emissions.

Project-level Impacts (Routine Maintenance)

Impact AQ-2: The routine maintenance activities under the SNRAMP would not result in substantial fugitive dust emissions. (Less than Significant)

Routine maintenance activities would be similar to current activities conducted in the Natural Areas and therefore would not result in a substantial increase of fugitive dust. Also, the type and scale of

routine maintenance activities would create relatively small amounts of dust. Therefore, the impacts of fugitive dust emissions from routine maintenance at the San Francisco Natural Areas would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact AQ-3: The Sharp Park restoration under the SNRAMP would result in substantial fugitive dust emissions. (Less than Significant with Mitigation)

The Sharp Park restoration activities are outside San Francisco and therefore are not subject to the Dust Control Ordinance. Construction-related activities could result in significant fugitive dust emissions. As described for the programmatic projects, implementing Mitigation Measure M-AQ-1 would require the SFPRD to comply with the provisions of the Dust Control Ordinance, as described under Impact AQ-1. The project site is over half an acre and therefore, in accordance with M-AQ-1, would require preparation of a dust control plan and implementation of the requirements of that plan. With implementation of M-AQ-1, the impact of fugitive dust emissions from the Sharp Park restoration activities would be ***less than significant.***

Criteria Air Pollutants

Programmatic Impacts

Impact AQ-4: Programmatic projects under the SNRAMP would contribute substantially to an existing or projected air quality violation and would result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard. (Significant and Unavoidable with Mitigation)

Programmatic projects would include trail construction, hillside stabilization, erosion control measures, and tree removal projects that exceed half an acre at any one time. The Sharp Park restoration is considered the largest of the projects that would be proposed under the SNRAMP. Therefore, criteria air pollutant emissions resulting from other programmatic projects are expected to be less than those resulting from the Sharp Park restoration; however it is speculative to determine how much less air pollutants would be generated by programmatic projects at this time because programmatic projects proposed under the SNRAMP lack specific details and have not been developed to a point that enables a quantitative air quality analysis. A criteria air pollutant analysis of the Sharp Park restoration project was conducted for the project-level analysis in the SNRAMP and for purposes of conservative analysis, provides information on expected criteria air pollutant impacts from other programmatic projects proposed under the SNRAMP. As discussed in Impact

AQ-6, NOx average daily emissions for the Sharp Park restoration project would be 153 pounds per day, which exceeds the BAAQMD construction threshold of 54 pounds per day. The SFRPD would implement Mitigation Measure M-AQ-4 (revised from the Initial Study), which requires the use of best available control technology for construction equipment to be included in SFRPD contract specifications, to reduce the impacts of NOx emissions during the Sharp Park restoration and for programmatic projects.

For purposes of conservative analysis, it is assumed that other programmatic projects would be similar to the Sharp Park restoration activities and would result in similar emissions and therefore criteria air pollutant impacts would be significant. However, as discussed above, the details of the other programmatic projects are not yet known and actual emissions from a given programmatic project could result in substantially lower criteria pollutant emissions. For this reason, M-AQ-4 allows the SFRPD to perform a refined air quality analysis prior to implementation of each programmatic project to determine if the pollutant minimizing contract specifications are necessary. If this refined analysis is not conducted, then Mitigation Measure M-AQ-4 requires the SFRPD to incorporate into its construction specifications measures to reduce construction vehicle emissions. The proposed mitigation measure would reduce NOx emissions but may not reduce emissions to below the BAAQMD significance threshold. Using Tier 3 or similar engines would be the most effective way to reduce NOx emissions for each programmatic project. The South Coast Air Quality Management District has performed an assessment of the effectiveness of Tier 3 engines and estimated that a 39 percent emission reduction is possible from replacement of Tier 2 with Tier 3 heavy equipment (South Coast Air Quality Management District 2010). If a 39 percent NOx reduction were achievable, the estimated 153 pounds per day would be reduced to 93 pounds per day, which still exceeds the BAAQMD threshold of 54 pounds per day. Therefore, given the uncertainty regarding the level of construction required for programmatic projects and the effectiveness of M-AQ-4 to reduce criteria air pollutant emissions to below BAAQMD's significance thresholds, NOx emissions resulting from programmatic projects may remain above the BAAQMD daily threshold and could result in ***significant and unavoidable*** criteria air pollutant impacts.

M-AQ-4: Construction Contract Specification to Reduce Construction Vehicle Emissions

The SFRPD will consult with EP before implementing each programmatic project. Under EP's direction, the SFRPD will either conduct a refined air quality analysis prior to project implementation, or EP will provide a list of all feasible mitigation measures to incorporate into the construction specifications to reduce construction vehicle emissions. If SFRPD were to conduct a refined air quality analysis and find that construction-related criteria air pollutant emissions would

be below the BAAQMD thresholds, SFRPD would not be required to incorporate mitigation measures into the project's construction specifications. The following mitigation measures are examples of mitigation measures that EP might direct the SFRPD to incorporate into construction specifications for the Sharp Park restoration project or the programmatic projects.

- For programmatic projects between 2011 and 2015, use Tier 3 equipment with best available control technology where feasible. For programmatic projects conducted after 2015, use Tier 4 equipment or interim Tier 4 equipment equipped with best available control technology where such equipment exists.
- Use temporary power provided by the Pacific Gas & Electric Company instead of diesel generators; where it is not possible to plug into the electric grid, use Tier 4 diesel generators and air compressors.
- Use concrete batched from local plants to limit concrete trucks' travel time and the amount of diesel exhaust emitted.
- Use on-road haul trucks model year 2007 or later.
- Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Have all equipment checked by a certified mechanic to determine that equipment is running in proper condition prior to operation.

Project-level Impacts (Routine Maintenance)

Impact AQ-5: Routine maintenance activities under the SNRAMP would not contribute substantially to an existing or projected air quality violation and would not result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard. (Less than Significant)

Routine maintenance would include removal of invasive weeds and trees and maintenance of trails and catchment basins. Routine maintenance activities would be similar to current activities conducted in the Natural Areas. Therefore, these activities would not result in a net increase of criteria air pollutant emissions. As such, routine maintenance activities would result in ***less than significant*** criteria air pollutant impacts.

Project-level Impacts (Sharp Park Restoration)

Impact AQ-6: The Sharp Park restoration under the SNRAMP would contribute substantially to an existing or projected air quality violation and would result in a net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal, state, or regional ambient air quality standard. (Significant and Unavoidable with Mitigation)

The Sharp Park restoration would be conducted between May 1 and October 15. The restoration activities would include two main sources of criteria air pollutant emissions:

- Construction Equipment – Construction requires usage of heavy-duty equipment, such as bulldozers, excavators, loaders, etc. Exhaust emissions from this equipment during construction activities would vary daily as activity levels change; and
- Vehicles – Transport vehicles travelling to and from the site, including delivery trucks hauling materials and automobiles carrying workers, generate exhaust emissions.

Criteria pollutant emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ generated during the restoration activities would incrementally add to the regional atmospheric loading of these pollutants. The BAAQMD *CEQA Air Quality Guidelines* recommend the quantification of project-related exhaust emissions and comparison of the emissions to its quantitative significance thresholds. Therefore, average daily exhaust emissions that would be associated with the Sharp Park restoration have been estimated and are presented in Table 15.

Table 15
URBEMIS Results for Sharp Park Restoration Criteria Air Pollutant Emissions (average daily emissions in pounds per day)

Criteria Air Pollutant	Sharp Park Restoration Criteria Air Pollutant Emissions	BAAQMD Thresholds for Construction Emissions
ROG	13	54
NOx	153	54
PM_{10} Exhaust	3.4	82
$PM_{2.5}$ Exhaust	3.1	54

As shown in Table 15, short-term construction emissions from implementation of the Sharp Park restoration project would not exceed the BAAQMD significance thresholds, except for NOx emissions, for which the restoration activities would result in an average of 153 pounds per day. Although the San Francisco Bay Area Air Basin is designated as an attainment area for NOx, daily

exceedance of the BAAQMD significance threshold would be considered a significant impact. NOx is also an ozone precursor, meaning that it can react with other molecules in the atmosphere to form ozone. Therefore, exceedance of the BAAQMD significance threshold for NOx may result in increases of ozone, for which the Bay Area is designated as a marginal nonattainment area. The SFRPD would implement Mitigation Measure M-AQ-4 to limit construction vehicle emissions, thereby reducing the impacts of NOx emissions during the Sharp Park restoration. However, even with the implementation of M-AQ-4, NOx emissions would remain above the BAAQMD daily threshold. Therefore, criteria air pollutant impacts from Sharp Park restoration would be ***significant and unavoidable***.

Following completion of the restoration activities, there would be negligible emissions from maintenance activities over the long term, and operational criteria air pollutant impacts would be ***less than significant***.

Sensitive Receptors

Programmatic Impacts

Impact AQ-7: Programmatic projects under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

The Sharp Park restoration would be the largest of the programmatic projects that would be expected to occur under the SNRAMP. Based on the health risk analysis presented for Sharp Park below under Impact AQ-9, hazardous air pollutants generated by the restoration activities would not exceed the significance thresholds of 10 in a million cancer risk and Hazard Index of 1.0 (see air quality report in Appendix H). Further, the restoration activities would not exceed the annual average threshold for $PM_{2.5}$ of 0.3 micrograms per cubic meter. The analysis conducted for the Sharp Park restoration project conservatively assumed a residential child receptor would be located at the Sharp Park construction boundary for the duration of construction activities, allowing the results of this analysis to inform the analysis for programmatic projects proposed under the SNRAMP. Given that this analysis concluded that there would be no significant impacts to the most sensitive receptors from the largest of projects carried out by the SNRAMP, other programmatic projects would also result in health risk impacts that are below the BAAQMD thresholds for cancer risk, hazard index, and $PM_{2.5}$. As such, health risks associated with the programmatic projects would be ***less than significant***.

Project-level Impacts (Routine Maintenance)

Impact AQ-8: Routine maintenance under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

Routine maintenance activities are expected to be substantially similar to current operations within the Natural Areas, and negligible changes are anticipated in the routine maintenance emissions of hazardous air pollutants and their associated health risks, such as from the use of gasoline- or diesel-powered equipment. Therefore, these activities would not be expected to expose sensitive receptors to substantial pollutant concentrations. As such, routine maintenance impacts related to health risk impacts on sensitive receptors would be ***less than significant***.

Project-level Impacts (Sharp Park Restoration)

Impact AQ-9: Sharp Park restoration under the SNRAMP would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

A quantitative health risk assessment was performed to determine if sensitive receptors would be exposed to substantial pollutant concentrations from the Sharp Park restoration activities. Although the adjacent residential areas located at approximately 300 feet to the north and southeast of Laguna Salada were the nearest identified sensitive receptors, for purposes of the health risk assessment, the nearest sensitive resident child receptor was assumed to be at the project boundary to provide a conservative exposure assessment that would be applicable to other programmatic projects. Health risks associated with diesel particulate matter, $PM_{2.5}$, and TAC emissions from the restoration activities were evaluated in accordance with the BAAQMD CEQA Air Quality Guidelines. The health risk analysis used the EPA's Industrial Source Code Short Term Version 3 dispersion model and meteorological data from the Fort Funston meteorological station (the nearest meteorological station to the proposed project). Dispersion modeling results for cancer and non-cancer health risks were calculated using the ARB's Hot Spots Analysis Reporting Program and compared to the BAAQMD health risks thresholds. As presented in Table 16, hazardous air pollutant emissions resulting from the restoration activities would be below the BAAQMD health risk thresholds for cancer risks, non-cancer risks, and annual average $PM_{2.5}$ concentrations; therefore, Sharp Park restoration activities would have ***less than significant*** impacts associated with health risks.

Table 16
Health Risk Assessment Results for Sharp Park Restoration

Source	Cancer Risk (per million)	Chronic Hazard Index	Acute Hazard Index	Annual Average $PM_{2.5}$ (micrograms per cubic meter)
Sharp Park Restoration	0.62	0.0025	0.0088	0.04
BAAQMD Thresholds for Construction Emissions	Less than 10	Less than 1.0	Less than 1.0	Less than 0.3

Cumulative Impacts

Impact AQ-10: Implementation of the proposed project in combination with past, present, and reasonably foreseeable projects in the vicinity would result in cumulatively considerable significant air quality impacts. (Significant and Unavoidable with Mitigation)

The geographic scope of this analysis covers San Francisco and Pacifica. Cumulative projects that would have an impact on air quality are those that would generate fugitive dust, emit criteria air pollutants, and/or result in emissions that could increase health risks to sensitive receptors. Most of the cumulative projects listed in Appendix G involve some amount of construction, demolition, or renovation and thus would generate fugitive dust and criteria pollutant emissions that could increase health risks. Many of these projects are relatively small, such as additions to existing buildings, renovation of existing buildings, and small construction projects such as construction or demolition of one or two buildings. Large projects that could involve a substantial amount of construction, renovation, or demolition, are the California Pacific Medical Center project and the Candlestick Point-Hunters Point Shipyard Phase II Development Project. All of the cumulative projects would be required to comply with the emissions thresholds and other regulatory requirements of the BAAQMD, and those projects in San Francisco would be required to comply with the San Francisco Dust Control Ordinance.

Programmatic Projects

The programmatic projects would result in less than significant fugitive dust impacts because the SFRPD would comply with the applicable provisions of the San Francisco Dust Control Ordinance. Compliance with the Dust Control Ordinance is required by law, therefore, sponsors of cumulative projects in San Francisco would also be required to comply with this ordinance and therefore would not contribute significantly to fugitive dust emissions and cumulative fugitive dust impacts would be ***less than significant***. Programmatic projects at Sharp Park would be required to comply with M-

AQ-1 and would therefore not result in a considerable contribution to any potentially significant cumulative fugitive dust impacts.

The programmatic projects would result in significant unavoidable air quality impacts as a result of exceeding the BAAQMD thresholds for NOx emissions. BAAQMD considers projects that exceed the criteria air pollutant thresholds to also result in a considerable contribution to cumulative criteria air pollutant emissions. Implementing M-AQ-4 would reduce the impacts of the programmatic projects NOx emissions; however, the impacts would not be reduced to a level below significance. Therefore, cumulative impacts of the programmatic projects associated with criteria air pollutants would be ***significant and unavoidable***.

The cumulative health risks of programmatic projects could vary significantly, primarily because roadway and other stationary sources within 1,000 feet of the project boundary would be different for each location and could change over time. Additionally, the locations of the closest sensitive receptors would depend on the boundaries of individual construction activities. Because of this uncertainty, it was assumed that cumulative health risk impacts at the maximally exposed individual for any particular programmatic project would be significant. Implementing Mitigation Measure M-AQ-10 would require that a cumulative site-specific health risk analysis be performed and appropriate mitigation measures be applied before each programmatic project could be implemented. However, due to the uncertainty of the effectiveness of the mitigation measures at reducing health risks below the relevant thresholds, cumulative health risk impacts from programmatic projects are assumed to be ***significant and unavoidable***.

M-AQ-10: Cumulative Health Risk Analysis for Programmatic Projects

As part of the environmental review for all programmatic projects, the SFRPD will conduct a cumulative site-specific health risk analysis to determine if nearby sensitive receptors would be affected by those projects in combination with other known sources (e.g., roadway sources and permitted stationary sources) and existing construction projects within 1,000 feet. Based on the results of those analyses, EP would determine the need for and the scope of additional measures to reduce health risk impacts from construction activities. Mitigation measures to reduce construction-related health risks could include those listed under M-AQ-4.

Routine Maintenance

As discussed previously, routine maintenance activities are expected to be substantially similar to current maintenance operations within the Natural Areas and negligible impacts from fugitive dust, criteria air pollutants, and health risk impacts to sensitive receptors. The impacts of routine

maintenance when added to other cumulative impacts are not expected to contribute considerably to any significant cumulative air quality impacts; sponsors of cumulative projects would be responsible for reducing air quality impacts below the level of significance for their project impacts, and the emissions contribution of routine maintenance activities in the regional and cumulative context would not be considerable.

Sharp Park Restoration

The Sharp Park restoration activities would result in less than significant fugitive dust impacts because the SFRPD would be required to implement M-AQ-1, which requires preparation and implementation of a dust control plan; that plan would contain all of the BAAQMD recommended BMPs to control fugitive dust. Since the Sharp Park restoration project would include the BAAQMD-recommended BMPs, it would not be anticipated to result in a considerable contribution to any cumulative fugitive dust impacts as a result of past, present or reasonably foreseeable projects. Therefore, cumulative fugitive dust impacts would be ***less than significant***.

The Sharp Park restoration activities would result in significant unavoidable air quality impacts as a result of exceeding the BAAQMD thresholds for NOx emissions. BAAQMD considers projects that exceed the criteria air pollutant thresholds to also result in a considerable contribution to cumulative criteria air pollutant emissions. Implementing M-AQ-4 would reduce the impacts of the Sharp Park restoration NOx emissions. However, the impacts would not be reduced to a level below significance. Therefore, cumulative impacts associated with criteria air pollutants would be ***significant and unavoidable***.

Cumulative health risks of the Sharp Park restoration activities were calculated by adding the emissions from restoration activities at Sharp Park to all roadway and stationary sources within 1,000 feet of the project boundary. The main roadway emissions near Laguna Salada are from Highway 1.[3] The Sharp Park golf course also operates a gasoline dispensing station that is used for golf cart refueling. The refueling station is the only stationary source identified within 1,000 feet of the project's construction activities. Based on a review of the BAAQMD stationary source database, the Sharp Park refueling station would not be a significant source of health risks to nearby sensitive receptors, and risks from this source are considered negligible; furthermore, this station is located

[3] Health risks from Highway 1 were estimated based on BAAQMD Roadway Screening Tables for Highway 1 in San Mateo County (April 2011). The distance between construction activities and Highway 1 was conservatively estimated to be no closer than 400 feet. Using the BAAQMD screening tables, cancer, non-cancer and annual average $PM_{2.5}$ risks were extrapolated for a distance of 400 feet. The BAAQMD screening tables are available online at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx. Accessed August 17, 2011.

over 500 feet from the nearest identified sensitive receptor, which is the nearest residence. The BAAQMD's thresholds for cumulative health risks are whether cumulative risks as a result of project construction, stationary and mobile sources exceed a cancer risk of 100 in a million, a hazard index of 10, and an annual average $PM_{2.5}$ concentration of 0.8 microgram per cubic meter. As presented in Table 17 below, cumulative health risk impacts from all roadway and stationary sources of TAC emissions and $PM_{2.5}$ would result in a lifetime cancer risk of 2.22 chances in one million, a Chronic Hazard Index of 0.0045, and an increase in the annual average concentration of $PM_{2.5}$ of 0.061 micrograms per cubic meter. These cumulative health risk levels would not exceed BAAQMD's cumulative construction thresholds for cancer and non-cancer risks and annual average $PM_{2.5}$ emissions. Therefore, cumulative health risk impacts associated with Sharp Park restoration would be ***less than significant***.

Table 17
Cumulative Health Risk Assessment Results for Sharp Park Restoration

Source	Cancer Risk (per million)	Chronic Hazard Index	Annual Average $PM_{2.5}$ (microgram per cubic meter)
Sharp Park Restoration	0.62	0.0025	0.04
Highway 1	1.6	0.002	0.021
Cumulative	**2.22**	**0.0045**	**0.061**
BAAQMD Cumulative Threshold	100	10	0.8

VI. OTHER CEQA ISSUES

Section 15126.2 of the CEQA Guidelines requires that an EIR discuss growth-inducing impacts, significant unavoidable impacts, significant irreversible impacts, and significant environmental impacts of the proposed project. These topics, along with areas of known controversy and issues to be resolved and effects found not to be significant, are discussed in the subsections below.

VI.A GROWTH-INDUCING IMPACTS

Due to the nature of its management activities, the proposed project has little potential to induce economic growth or population growth and construction of associated support facilities in the surrounding community. At most, continued improvement of the Natural Areas and their facilities may increase the appeal of the neighborhoods in which they are located. This is more likely to result in minor population shifts within San Francisco and Pacifica neighborhoods, as opposed to population growth. The project would not substantially increase the number of employees within the Natural Areas Program or otherwise lead to economic growth, and it would not induce population growth.

VI.B SIGNIFICANT UNAVOIDABLE IMPACTS

As discussed in Section V and summarized in Table 2 in Section I, the significant unavoidable impacts of the proposed project would be:

- Significant unavoidable impacts to the historic integrity associated with Sharp Park Golf Course from closing Hole 12 and modifying Holes 10 and 13;
- Significant unavoidable impacts from NOx criteria pollutant emissions, which could exceed the BAAQMD daily threshold even with the implementation of mitigation;
- Significant unavoidable cumulative impacts related to physical deterioration of recreational facilities resulting from increased dog use due to the implementation of the SNRAMP and the GGNRA Dog Management Plan; and
- Significant unavoidable cumulative impacts related to special status plant and wildlife species from increased dog use due to the implementation of the SNRAMP and the GGNRA Dog Management Plan.

None of the other significant impacts resulting from the proposed project are unavoidable; the mitigation measures available to reduce impacts to less than significant also are described and summarized in those sections.

VI.C SIGNIFICANT IRREVERSIBLE IMPACTS

Apart from consumption of nonrenewable resources, the proposed project would have no irreversible impacts. The modifications to the Natural Areas proposed under the SNRAMP do not preclude opportunities for future modification of those areas.

Implementing the management activities would require motorized equipment and vehicles, which would consume nonrenewable fuels (diesel and gasoline). The quantities of these fuels used by the project work crews are expected to be minor and similar to those currently used; under the SNRAMP, the use of these fuels would not substantially increase. Improved Natural Areas may also encourage more local, nonmotorized forms of recreation, potentially resulting in minor reductions in vehicle miles traveled, thus reducing fuel consumption. Project compliance with the San Francisco Clean Construction Ordinance also would reduce fuel consumption. Additionally, implementing Improvement Measure I-ME-1, to increase energy efficiency, and Mitigation Measure M-AQ-4, to limit idling of diesel-fueled vehicles, would further reduce the consumption of nonrenewable resources. The improvement measure is described in the Initial Study (included in Appendix A) and in the Summary of Environmental Impacts and Mitigation Measures (Table 2 in Chapter I).

None of the irreversible impacts would be considered significant.

VI.D SIGNIFICANT ENVIRONMENTAL IMPACTS

As discussed in Section V, the proposed project is expected to have significant environmental impacts on cultural and paleontological resources (Section V.D), recreation (Section V.F), biological resources (Section V.G), hydrology and water quality (Section V.H), hazards and hazardous materials (Section V.I), and air quality (V.K). These impacts are also summarized in Table 2 in Chapter I.

VI.E AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

Comments on the NOP were grouped into the following categories and are summarized in the scoping report in Appendix A (and in Chapter V and Section VI.F):

- Sharp Park Golf Course;
- General project;
- General CEQA;
- General environmental;
- Cumulative impacts;

- Land use and land use planning;
- Aesthetics;
- Cultural and paleontological resources;
- Transportation and circulation;
- Noise;
- Air quality;
- Wind and shadow;
- Recreation;
- Utilities and service systems;
- Biological resources;
- Geology and soils;
- Hydrology and water quality; and
- Hazards and hazardous materials.

The Draft EIR has considered the CEQA-related concerns and other issues raised through the scoping process. These issues are addressed in Section V (Environmental Setting and Impacts) and Section VI.F (Effects Found Not to be Significant).

VI.F EFFECTS NOT FOUND TO BE SIGNIFICANT

The effects not found to be significant are discussed in more detail in the Initial Study in Appendix A. The following resources are addressed only in the Initial Study:

- Population and housing;
- Public services; and
- Mineral and energy resources.

The following resources are addressed in this EIR:

- Land use and land use planning (Section V.B);
- Aesthetics (Section V.C);
- Cultural and paleontological resources (Section V.D);

- Wind and shadow (Section V.E);
- Recreation (Section V.F);
- Biological resources (Section V.G);
- Hydrology and water quality (Section V.H);
- Hazards and hazardous materials (Section V.I); and
- Agriculture and forest resources (Section V.J); and
- Air Quality (Section V.K).

For the following resources found to have less than significant effects in the Initial Study, additional or clarifying text is provided below to address the concerns expressed in comments received during the NOP scoping process.

VI.F.1 Transportation and Circulation

Comments related to traffic and circulation received during the NOP scoping process included concerns about the following:

- Traffic, air pollution, and global warming effects from people driving farther to walk their dogs in legal off-leash areas, if existing DPAs are closed.

In response to scoping comments, additional discussion of this resource is provided below.

Implementation of the proposed project could result in a minor increase in vehicle trips from Natural Areas Program staff vehicles and visitors due to increased use of the Natural Areas. However, as discussed in the Initial Study (Appendix A, Section E.5), the increase in vehicle trips generated by the workers, volunteers, and visitors to the Natural Areas would be minimal and would not be significant. The proposed project would result in the reduction or closure of DPAs within the Natural Areas. This could result in increased vehicle trips from people visiting other available DPAs that are not within walking distance of the closed DPA. The DPAs that would be affected by the proposed project are at Bernal Hill, McLaren Park, and Lake Merced. The existing DPA at Bernal Hill is approximately 21 acres. The proposed project would partially modify this area by reconfiguring and reducing it by 17 percent. At McLaren Park, DPAs would be reduced by 14 percent. The existing DPAs at this park are 61.7 acres. At Bernal Hill and McLaren Park, the reduction in the DPAs would not result in substantial changes in access or allowed uses. Therefore,

it is not anticipated that users of these DPA would have to access other DPAs in the area and result in new or modified vehicle trips.

At Lake Merced, a designated five-acre DPA is located at the north side of the East Lake. This DPA would be closed as a result of the project. This closure may prompt users to access another DPA in the area. Fort Funston, located approximately 8,000 feet (about 1.5 miles) from the existing Lake Merced DPA, has approximately 200 acres open for off-leash dog use. Current users of the Lake Merced DPA could either walk or drive to the Fort Funston dog area. This could result in a slight increase in the number of vehicles along Lake Merced Boulevard. However, this increase would be minimal considering that the number of dog owners presently using this DPA is minor (San Francisco Dog Owners Group 2009). Also, dog owners could use the Pine Lake DPA, approximately half a mile north of Lake Merced. Therefore, the closure of the five-acre DPA would not significantly increase the number of vehicle trips in the vicinity. As such, reducing or reconfiguring the DPAs as part of this proposed project would not result in significant traffic impacts from increased vehicle trips.

The Natural Areas could experience increased use because of the improved trail system. However, it is expected that the increase use would mostly be from users living near the Natural Areas. Those users would either walk or drive for very short distances using secondary roads. Therefore, the potential increase in the number of users of the Natural Areas would not significantly increase the number of vehicle trips in the vicinity. As such, transportation impacts of the proposed project would be less than significant.

VI.F.2 Noise

Comments related to noise received during the NOP scoping process included concerns about the following:

- The effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion.

In response to scoping comments, additional discussion of this resource is provided below.

Implementation of the proposed project would result in temporary noise sources generated from equipment use. However, as discussed in the Initial Study (Appendix A, Section E.6), it would not result in significant noise impacts because project implementation would not require extensive use

of heavy equipment, and equipment use is expected to be discontinuous and of very short duration during the daytime. Heavy equipment, such as haulers, may be used during trail construction. However, use of this equipment would also be of short duration during the daytime. Use of noise-generating heavy equipment would be temporary and limited in duration; therefore, noise impacts would be less than significant.

Removal of trees at Mount Davidson could increase the long-term noise levels for nearby residents. A total of 1,600 trees would be removed at Mount Davidson. Trees to be removed would be located in the middle of the forest and within an area close to Juanita Way. As described in the Urban Forestry Statements of the SNRAMP, trees to be removed would be individually selected. If trees to be removed are selected in groups, group selection implemented to create openings within dense forests would leave the rest of the forest intact. Trees to be removed in the middle of the forest are located in the center of Mount Davidson at approximately 400 feet from residences. Although trees to be removed near Juanita Way are located at approximately 50 feet from nearby residences, those trees are surrounded by a very dense forest that extends more than 300 feet. Tree removal at Mount Davidson would not affect the density or the depth of the forest. Further, tree removal at Mount Davidson would not expose the residents to a nearby noise source such as a highway or a busy road. Portola Drive, located at approximately 150 feet north of Mount Davidson, and the residences along Juanita Way experience noise levels above 70 decibels. Tree removal at Mount Davidson would be to the west and south of Juanita Way and would not increase the noise exposure of the residences along Juanita Way from Portola Drive. Therefore, removal of the trees at Mount Davidson would not expose the nearby residences to new, long-term noise sources. Long-term noise impacts on noise-sensitive receptors would be less than significant.

VI.F.3 Greenhouse Gas Emissions

This section covers the analysis of GHG emissions because this proposed project was analyzed in the Initial Study prior to the adoption of new CEQA thresholds of significance for greenhouse gas emissions on March 18, 2010 and the BAAQMD's 2011 *CEQA Air Quality Guidelines* (BAAQMD 2011a). BAAQMD's 2011 *CEQA Air Quality Guidelines* do not define a project-level GHG threshold for construction-related emissions. The operational GHG emissions threshold for non-stationary sources is compliance with a qualified GHG reduction strategy or a quantitative metric of 1,100 metric tons of carbon dioxide equivalents (CO_2e)[1] per year, or 4.6 metric tons CO_2e per service

[1] Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

population.[2] The proposed project was reevaluated under these revised significance criteria, and as discussed below, potential GHG impacts would continue to be less than significant.

GHG emissions for the SNRAMP activities in San Francisco, within 31 of the 32 Natural Areas, were assessed qualitatively. The qualitative analysis included a determination of whether the SNRAMP activities in San Francisco comply with San Francisco's qualified GHG reduction strategy, *Strategies to Address Greenhouse Gas Emissions in San Francisco*. This determination was made through the completion of the *Greenhouse Gas Analysis: Compliance Checklist* for the 31 Natural Areas (CCSF 2011c). GHG emissions within the 31 Natural Areas in San Francisco were found not to be significant. The GHG checklist can be applied to all projects within San Francisco; therefore, it cannot be applied to activities at Sharp Park. For the Sharp Park Natural Area, GHG emissions resulting from the Sharp Park restoration activities were modeled and were found to be less than significant.

Operational GHG emissions of the proposed project would result from routine maintenance activities. However, because proposed operations are expected to be substantially similar to current operations, negligible changes are anticipated in the operation emissions of GHG. As a result, impacts resulting from GHG emissions during operations are expected to be less than significant.

An increase in traffic, as discussed above in Transportation and Circulation, could contribute to the cumulative impacts of global climate change. The GHG emissions of individual projects cannot be shown to have any material effect on global climate, and is therefore assessed in the cumulative context. The Intergovernmental Panel on Climate Change (IPCC 2007) has stated that "difficulties remain in attributing temperature on smaller than continental scales and over time scales of less than 50 years. Attribution at these scales, with limited exceptions, has not yet been established." As discussed under Transportation and Circulation above and in the Initial Study (Appendix A, Section E.5), the proposed project would result in a minimal increase in vehicle trips by workers, volunteers, visitors, and by users of the DPAs that would be closed or reduced within the Natural Areas. The proposed project contribution to GHG emissions would be negligible; therefore, the proposed project would not generate sufficient emissions of GHGs to contribute considerably to the cumulative effects of GHG emissions.

Comments related to greenhouse gas emissions received during the NOP scoping process included concerns about the following:

[2] Service population is defined as the total number of resident and employees.

- Native plants not being more effective in removing carbon dioxide;
- Global warming effects from tree removal;
- Traffic, air pollution, and global warming effects from people driving farther to legal off-leash areas if existing DPAs were closed;
- Uncited claims in the Initial Study that young trees have long-term carbon sequestration capacities, which results in a net greenhouse gas benefit;
- Effects of releasing carbon stored in 18,500 trees to be removed, compared to whatever benefit there may be in replacing some of the trees;
- The effects of prescribed burns on carbon release and air pollution;
- The effects on greenhouse gas emissions from converting acres of trees into grassland. The US Department of Agriculture reports that tree cover is less than 12 percent of San Francisco's area, yet trees remove about 19 percent more air pollution than shrubs in San Francisco.
- Quantification of the carbon sequestration effects of removing seedlings and saplings, in addition to the designated removal of 18,500 trees;
- Death of many native trees if sudden oak death continues to spread;
- Uncited claim that grassland above 50 degrees latitude reflects more sun than forest canopies;
- Application of the reflected light argument, which is based on the comparison between dark forests and the reflected light of snow in northern latitudes, to the local climate where there is no snow;
- Carbon sequestering abilities of the forest are not reduced by increased temperatures; and
- Lack of carbon sequestration benefit if nonnative plants and trees were removed from 25 percent of all park acreage in San Francisco and it proves impossible to successfully grow native plants in those locations.

In response to scoping comments received, additional discussion related to greenhouse gas emissions is provided below.

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The

accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor.

While the primary GHGs occur naturally in the atmosphere, CO_2, methane, and nitrous oxide are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in CO_2e units.

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity (California Climate Change Portal undated).

The ARB estimated that in 2008 California produced about 478 million gross metric tons of CO_2e ($MMTCO_2e$), or about 525 million US tons (ARB 2010b). The ARB found that transportation is the source of 37 percent of the California's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 24 percent, and industrial sources at 19 percent. Commercial and residential fuel use (primarily for heating) accounted for 9 percent of GHG emissions (ARB 2010b). In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial and commercial sectors are the two largest sources of GHG emissions, each accounting for approximately 36 percent of the Bay Area's 95.8 $MMTCO_2e$ emitted in 2007 (BAAQMD 2010b). Electricity generation accounts for approximately 16 percent of the Bay Area's GHG emissions followed by residential fuel usage at 7 percent, off-road equipment at 3 percent and agriculture at 1 percent (BAAQMD 2010b).

Regulatory Setting

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

Pursuant to AB 32, ARB adopted a Scoping Plan[3] in December 2008, outlining measures to meet the 2020 GHG reduction limits. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 "business as usual" emissions levels, or about 15 percent from today's levels (ARB 2010a). The Scoping Plan estimates a reduction of 174 $MMTCO_2e$ (about 191 million US tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors, as shown in Table 18. ARB has identified an implementation timeline for the GHG reduction strategies in the Scoping Plan (ARB 2008). Some measures may require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act.

Table 18
GHG Reductions from the AB 32 Scoping Plan Sectors

GHG Reduction Measures By Sector	GHG Reductions ($MMTCO_2e$)
Transportation Sector	62.3
Electricity and Natural Gas	49.7
Industry	1.4
Landfill Methane Control Measure (Discrete Early Action)	1
Forestry	5
High Global Warming Potential GHGs	20.2
Additional Reductions Needed to Achieve the GHG Cap	34.4
Total	**174**
Other Recommended Measures	
Government Operations	1-2
Methane Capture at Large Dairies	1
Water Sector Measures	4.8
Green Buildings	26
High Recycling/Zero Waste • Commercial Recycling • Composting • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing	9
Total	**42.8-43.8**

Source: ARB 2008

[3] As of this writing, a California superior court ruling was pending that holds that ARB failed to comply with CEQA when it adopted the Scoping Plan. The ruling, if finalized, would prohibit implementation of the Scoping Plan until ARB fulfills its CEQA requirements, which could delay implementation of AB 32, scheduled for January 2012 (Horowitz 2011).

AB 32 also anticipates that local government actions will result in reduced GHG emissions. ARB has identified a GHG reduction target of 15 percent from current levels for local governments themselves and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

The Scoping Plan relies on the requirements of SB 375 to implement the carbon emission reductions anticipated from land use decisions. SB 375 was enacted to align local land use and transportation planning to further achieve the state's GHG reduction goals. SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations, to incorporate a "sustainable communities strategy" in their regional transportation plans that would achieve GHG emission reduction targets set by ARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 would be implemented over the next several years and the Metropolitan Transportation Commission's 2013 Regional Transportation Plan would be its first plan subject to SB 375.

Senate Bill 97 (SB 97) required the Office of Planning and Research to amend the state CEQA guidelines to address the feasible mitigation of GHG emissions or the effects of GHGs. In response, the Office of Planning and Research amended the CEQA guidelines to provide guidance for analyzing GHG emissions. Among other changes to the CEQA Guidelines, the amendments add a new section to the CEQA Checklist (CEQA Guidelines Appendix G) to address questions regarding the project's potential to emit GHGs.

BAAQMD is the primary agency responsible for air quality regulation in the nine county San Francisco Bay Area Air Basin. As part of its role in air quality regulation, BAAQMD has prepared CEQA air quality guidelines to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin. The guidelines provide procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. In May 2011, the BAAQMD released updated *CEQA Air Quality Guidelines* that include thresholds of significance for GHG emissions. The Office of Planning and Research's amendments to the CEQA Guidelines as well as BAAQMD's *CEQA Air Quality Guidelines* and thresholds of significance have been incorporated into this analysis accordingly.

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include

GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations.

The proposed SNRAMP activities would include the use of heavy equipment for trail construction, slope stabilization, tree removal, and other activities that use fuels**.** Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased operations associated with energy use.

As discussed above, the BAAQMD has adopted CEQA thresholds of significance for projects that emit GHGs, one of which is a determination of whether the proposed project is consistent with a Qualified Greenhouse Gas Reduction Strategy, as defined in the *CEQA Air Quality Guidelines*. On August 12, 2010, the San Francisco Planning Department submitted a draft of the City and County of San Francisco's *Strategies to Address Greenhouse Gas Emissions* to the BAAQMD; the document was finalized in November 2010 (CCSF 2010c). This document presents a comprehensive assessment of policies, programs and ordinances that collectively represent San Francisco's Qualified Greenhouse Gas Reduction Strategy in compliance with the BAAQMD's *CEQA Air Quality Guidelines* and thresholds of significance.

San Francisco's GHG reduction strategy identifies a number of mandatory requirements and incentives that have measurably reduced greenhouse gas emissions including, but not limited to, increasing the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of a green building strategy, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City's transportation fleet (including buses and taxis), and a mandatory composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions.

San Francisco's climate change goals as identified in the 2008 Greenhouse Gas Reduction Ordinance are as follows:

- By 2008, determine the City's 1990 GHG emissions, the baseline level with reference to which target reductions are set;
- Reduce GHG emissions to 25 percent below 1990 levels by 2017;
- Reduce GHG emissions to 40 percent below 1990 levels by 2025; and
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.

The City's 2017 and 2025 GHG reduction goals are more aggressive than the State's GHG reduction goals as outlined in AB 32 and are consistent with the state's long-term (2050) GHG reduction goals. San Francisco's *Strategies to Address Greenhouse Gas Emissions* identifies the City's actions to pursue cleaner energy, energy conservation, alternative transportation and solid waste policies, and concludes that San Francisco's policies have resulted in a reduction in GHG emissions below 1990 levels, meeting statewide AB 32 GHG reduction goals. As reported, San Francisco's 1990 GHG emissions were approximately 8.26 $MMTCO_2e$ and 2005 GHG emissions are estimated at 7.82 $MMTCO_2e$, representing an approximately 5.3 percent reduction in GHG emissions below 1990 levels.

The BAAQMD reviewed San Francisco's *Strategies to Address Greenhouse Gas Emissions* and concluded that the strategy meets the criteria for a Qualified GHG Reduction Strategy as outlined in BAAQMD's CEQA Guidelines and stated that San Francisco's "aggressive GHG reduction targets and comprehensive strategies help the Bay Area move toward reaching the State's AB 32 goals, and also serve as a model from which other communities can learn (BAAQMD 2010c)."

Based on the BAAQMD's 2011 *CEQA Air Quality Guidelines*, projects that are consistent with San Francisco's *Strategies to Address Greenhouse Gas Emissions* would result in a less than significant impact with respect to GHG emissions. Furthermore, because San Francisco's strategy is consistent with AB 32 goals, projects that are consistent with San Francisco's strategy would also not conflict with the state's plan for reducing GHG emissions. Applicable requirements are shown in Table 19.

In addition to complying with the City's regulations, the 2008 Greenhouse Gas Reduction Ordinance requires that all City Departments prepare an annual department-specific climate action plan.

The SFRPD actions to reduce operational greenhouse gas emissions toward the City's goal of an 80 percent reduction by 2050 include the following:

- Energy Efficiency and Conservation: The SFRPD is working with the Energy Efficiency Services of the SFPUC to reduce energy use through the selection of operational equipment such as electrical fixtures and sprinkler heads, design standards enforcement, and use of the San Francisco Greening Checklist for exterior spaces.
- Renewable Energy Generation: The SFRPD is working with the SFPUC to assess its facilities' solar potential and identify potential co-generation sites.

Table 19
Regulations Applicable to the Proposed Project

Regulation	Project Requirement
Mandatory Recycling and Composting Ordinance (Environment Code, Chapter 19)	Minor quantities of solid waste and recyclable material would be generated during the management of the Natural Areas. Unless it can be used to create wildlife habitat, all large woody debris generated by the Natural Areas Program would be composted in Golden Gate Park; vegetation debris from Sharp Park would be disposed of at the Sharp Park organic dump. The wood chips may be used to suppress understory invasive vegetation or could be used as beneficial mulch on other revegetation projects in the Natural Areas. Also, large tree trunks may be left on site if they provide habitat value, or they may be used for recreational or maintenance purposes within the Natural Area.
San Francisco Green Building Requirements for construction and demolition debris recycling (SF Building Code, Chapter 13C)	Minor quantities of solid waste and recyclable material would be generated during the management of the Natural Areas.
San Francisco Clean Construction Ordinance (Ordinance 70-07)	Contractors on public works construction projects that take 20 days or more to complete must reduce vehicle emissions that contribute to GHG accumulation by (1) using a blend of at least 20 percent biodiesel in off-road vehicles and construction equipment and (2) using construction equipment with engines that meet Tier 2 standards or use best available control technology.

- Information Technology: Information technology energy conservation measures include power management tools for all personal computers and monitors. The SFRPD plan includes full compliance by the third quarter of fiscal year 2010 with the City's adopted policy of the Committee on Information Technology.
- Green Building: The SFRPD plan includes compliance with the City's Environmental Code to achieve Leadership in Energy and Environmental Design certification.
- Fleets and Fuel: The SFRPD has identified specific plans to retire older vehicles to achieve fuel savings, maintenance cost savings, and lower residual costs for older vehicles. Further, the SFRPD only purchases clean light-duty passenger cars and trucks.
- Employee Commute: The SFRPD plan includes measures to reduce vehicle trips traveled by promoting alternative transportation incentives to its employees.
- Zero Waste: The SFRPD is close to realizing its goal of 100 percent compliance with the City's recycling initiative.
- Green Product Purchasing: The SFRPD uses the City's Approved Catalog to purchase environmentally conscious products.

- Carbon Sequestration: The SFRPD promotes the City's urban forestry program through tree planting campaigns and supports other City departments in their participation in the urban forestry program.
- Community Wide Emissions: The SFRPD actions include providing community support to reduce greenhouse gas emissions through programs related to recycling, biodiversity, bicycling, and community education. To encourage recycling, the SFRPD is currently posting signs at all facilities to educate users on the importance of recycling and directing them on where to place their recyclables. For biodiversity, the NAP and SFRPD volunteer programs maintain and enhance natural biodiversity at many of our park sites. Related to bicycling, the SFRPD will promote bicycling to and within SFRPD facilities by installing bike parking racks and SF Bicycle Route maps at all facilities and by providing bicycle access and program information on the SFRPD website and other publications. The community education efforts include holding recycling education seminars at SFRPD recreation facilities.

Depending on a proposed project's size, use, and location, a variety of controls are in place to ensure that a proposed project would not impair the state's ability to meet statewide GHG reduction targets outlined in AB 32, nor impact the City's ability to meet San Francisco's local GHG reduction targets. Given that: (1) San Francisco has implemented regulations to reduce greenhouse gas emissions specific to municipal projects; (2) San Francisco's sustainable policies have resulted in the measured success of reduced greenhouse gas emissions levels; (3) San Francisco has met and exceeded AB 32 greenhouse gas reduction goals for the year 2020; (4) current and probable future state and local GHG reduction measures will continue to reduce a project's contribution to climate change; and (5) San Francisco's *Strategies to Address Greenhouse Gas Emissions* meets BAAQMD's requirements for a Qualified GHG Reduction Strategy, projects that are consistent with San Francisco's regulations would not contribute significantly to global climate change. The proposed project would be required to comply with these requirements, and was determined to be consistent with San Francisco's *Strategies to Address Greenhouse Gas Emissions.* As such, the proposed SNRAMP activities within San Francisco would result in a less than significant impact with respect to GHG emissions.

The proposed activities for the Sharp Park restoration include the use of heavy equipment for creating shallow pools within existing wetlands, dredging excess sediments, and grading to prevent flooding. GHG emissions resulting from the Sharp Park restoration were calculated using URBEMIS. The URBEMIS model is populated with assumptions regarding timing of restoration activities and the number, type, and operating hours of equipment are based on the number and

type of equipment as specified by the project sponsor. The model returns the CO_2 emission rates for all equipment, deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use. For other GHGs, such as methane and nitrous oxide rates are assumed to comprise 95 percent of CO_2e emissions based on the Environmental Protection Agency findings (EPA 2005). In addition, this analysis assumed that all heavy duty construction equipment is diesel or gasoline powered and no substantial electrically-powered pieces of construction equipment are envisioned as necessary, based on the project description. The results indicate that approximately 21,777 pounds per day of CO_2e would be emitted during the implementation of these activities. The proposed Sharp Park restoration would increase the activity on site with the activities spanning potentially 5.5 months. With the increased activity, the proposed project would contribute to annual long-term increases in GHG emissions. Increased GHG emissions occur as a result of increased heavy duty vehicle and equipment associated with construction activities. During the 5.5-month construction period, the Sharp Park wetland restoration project would emit 21,777 lbs per day of CO_2e, which is equivalent to a total of 1,630 metric tons of CO_2e. Because BAAQMD's 2011 *CEQA Air Quality Guidelines* do not define a project-level GHG threshold for construction-related emissions, there is no applicable significance threshold to which to compare this estimate. Thus, GHG emissions of the Sharp Park restoration would result in a less than significant impact. The Sharp Park restoration is considered the largest of the programmatic projects. Therefore, GHG emissions resulting from other individual programmatic projects in the Sharp Park Natural Area are expected to be less than those resulting from the restoration project.

Routine maintenance activities would be similar to current activities and would not result in a net increase of GHG emissions. As such, routine maintenance activities would result in less than significant GHG impacts.

Vegetation Sequestration of Carbon

Removal of urban trees could have a GHG impact. Urban trees can help mitigate climate change by sequestering atmospheric carbon in tissue and by reducing energy use in buildings, consequently reducing carbon dioxide emissions from fossil fuel-based power plants. However, net carbon sequestration[4] can be negative if carbon emissions from decomposition are greater than the amount sequestered by healthy trees. An estimated 117,453 trees are within the project area. The project includes removal and replacement of approximately 18,448 trees, 97 percent of which are within the

[4]Carbon sequestration—the removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests, and soils) through physical or biological processes, such as photosynthesis.

MA-1[5] and MA-2[6] urban forests. Trees would be removed to promote forest health, and removal would focus on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees whose growth is suppressed by overcrowding. Large tree trunks may be left on site if they provide habitat value, or they may be used for recreation or maintenance within the Natural Areas. Unless it can be used to create wildlife habitat, for erosion control, or trail maintenance, all large woody debris generated by the Natural Areas Program would be composted in Golden Gate Park. Although old large trees are good at storing carbon, they are not as effective as young trees at taking up carbon (Oxarart and Monroe 2007). Replacing dead, dying, and diseased trees that have limited capability to sequester carbon with young saplings that have long-term carbon sequestration capabilities would result in a net GHG benefit.

Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur (SFRPD 2006). The long-term goal in MA-1 and MA-2 is to slowly convert those areas to native scrub, grassland habitats, or oak woodlands. According to an urban forest assessment for San Francisco, the total number of trees in San Francisco is 669,000. San Francisco trees and shrubs remove an estimated 260 tons of air pollution (carbon monoxide, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide) per year. San Francisco trees sequester 5,200 tons of carbon dioxide annually, which is equivalent to the annual amount of carbon emitted by 3,100 cars (USDA 2007). San Francisco trees are estimated to store 196,000 tons of carbon, or the annual amount of carbon emitted by 118,000 cars (USDA 2007).

As trees die and decay, they release much of the stored carbon to the atmosphere. Thus, carbon storage is an indication of the amount of carbon that can be lost if trees are allowed to die and decompose. Of all the species in San Francisco, eucalyptus trees store and sequester the most carbon (approximately 24.4 percent of the total carbon stored and 16.3 percent of all sequestered carbon). Trees removed in the Natural Areas in San Francisco would be replaced at a one-to-one ratio, although not necessarily in the same location. Eucalyptus trees would be replaced with native trees. Although the net effect on carbon sequestration capacity is unknown for the proposed replacement of mature eucalyptus with native saplings, replacing dying trees with healthy trees typically enhances the carbon sequestration process. In fact, one of the urban forest management strategies to help improve air quality is to increase the number of healthy trees. Further, among mitigation measures recommended by the Intergovernmental Panel on Climate Change is forest management,

[5]MA-1 represents the priority areas for conservation and management activities.
[6]Areas designated MA-2 are comparatively more resilient to human disturbance than MA-1 areas.

and particularly selection of tree species that sequester the most carbon (IPCC 2007). As such, tree replacement is expected to result in a net increase in the amount of carbon sequestered within the Natural Areas. The total number of trees would not change within the Natural Areas of San Francisco and the amount of carbon sequestered would increase in the long term from replacing dead, dying, or diseased trees. According to the California Registry, dead trees must be replaced within one year of removal. This timeframe allows for planting to occur at the appropriate time of the year. Therefore, the project would not conflict with San Francisco's Greenhouse Gas Ordinance. Further, the project would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB32[7]. Therefore, the proposed project would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.

Trees removed in Sharp Park would be replaced with native grassland and scrub species. The California Registry is developing flexible mechanisms to address reversals if removed trees are not compensated by planting replacement trees. According to a study presented at the American Geophysical Union's meeting, grasslands above 50 degrees latitude reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius (Jha 2006). However, in the tropics, forests cool the planet by an average of 0.7 degree Celsius (Jha 2006). Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink (Hu et al. 2001; Conant et al. 2001). Therefore, replacing the trees to be removed in Sharp Park with grassland and scrub habitat would not result in a substantial increase in GHG emissions from the loss of CO_2 sequestration, and impacts from GHG emissions would be less than significant.

VI.F.4 Utilities and Service Systems

Comments related to utilities and service systems received during the NOP scoping process included concerns about the following:

- Addressing the requirements of Administrative Code Chapter 63, including reporting, planning, and receiving approval from the San Francisco Public Utilities Commission; and
- Analysis of additional water use, as any irrigation in Natural Areas would be new and incremental.

[7] In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

In response to scoping comments, additional discussion of this resource is provided below.

While no data has been collected on water use specific to the Natural Areas, recently compiled data on water consumption by the parks in which Natural Areas are located provide a general indication of water consumption levels. For the 18 Natural Areas parks for which data were available, the average daily demand for the peak month was 4.815 million gallons per day; the annual average daily demand was 2.831 million gallons per day (SFRPD 2009b). Also, the capacity of the irrigation water systems and the water supplies serving the Natural Areas has not been quantified. However, no problems have been reported regarding overconsumption of available resources, and no restrictions have been placed on water use within the Natural Areas. Because the level of management activities is expected to vary throughout the 20-year implementation period for the SNRAMP, it is not possible to quantify the increase in water demand or the increase in the size of the areas requiring irrigation. Most management activities are expected to require only short-term irrigation; for example, reintroducing native plant species and replacing trees would involve irrigation only until the plants become established. This short-term irrigation would be accomplished using water trucks because most Natural Areas do not have irrigation systems. Native species are more adapted to local climate and tend to be more drought resistant and require less irrigation. The anticipated irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources.

The proposed project would require additional irrigation water only to establish vegetation and would not require water for the ongoing maintenance of currently landscaped areas, and would not involve applying for an irrigation water meter; therefore, it is not required to comply with Chapter 63, *Limitation on Water Use for Landscaping in New Developments and Landscaping Renovations*[8] of the San Francisco Administrative Code and the proposed project would have less than significant impacts on utilities and service systems.

[8] The purpose of Chapter 63 of the San Francisco Administrative Code is to promote efficient water use in new and renovated landscaping by utilizing proper landscape design, management and efficient irrigation equipment and techniques. This ordinance also satisfies the requirements of the Government Code concerning Water Conservation.

VI.F.5 Geology and Soils

Comments related to geology and soils received during the NOP scoping process included concerns about the following:

- The effects at Pine Lake (and likely Buena Vista Park, Lake Merced, and McLaren Park), including off-leash dogs that cause erosion and destroy restoration sites and dog and feral cat waste that contaminates soil and water;
- The effects at Lake Merced that result from leaving cypress and pine trees along steep banks that cannot support them and resulting soil removal and erosion caused by them falling;
- The effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion
- The erosion effects on neighboring homes from tree removal;
- The erosion effects of removing 54,000 trees in Sharp Park;
- The landslides and earth movement that would result from tree removal at Mount Sutro Forest;
- The need for a forester to evaluate the erosion impacts from cutting trees down;
- The erosion effects from removing trees and nonnative plants;
- The benefits of eucalyptus trees, including that they actually grow in the sandy soil and withstand the fierce winds blowing off the Pacific Ocean. Studies have shown that eucalyptus trees slow the wind down at least 30 percent in the Presidio;
- The erosion effects in Sharp Park, including that from the plan to remove 15,000 trees; and
- The effects on the surrounding neighborhoods from tree removal and sand hill destabilization.

In response to scoping comments, additional discussion of this resource is provided below.

Geology and soils existing conditions and impacts of the project were evaluated in the Initial Study, and the project was found to have either no impact or less than a significant impact for all of the significance criteria. The main activities of the project that might impact geology and soils include implementing erosion control measures; removing nonnative trees and other vegetation and replacing them with native and special status species; and regrading, recontouring, or repaving roads. The Natural Areas at greatest risk of soil erosion due to project activities include Bayview

Park, Glen Canyon Park and O'Shaughnessy Hollow, India Basin Shoreline Park, and Lake Merced. BMPs that would be implemented as part of the project are identified in the SNRAMP and discussed briefly in Chapter III (Project Description) of this EIR. These include the following:

- Straw mulch, wood mulch, and rolled erosion control products to protect exposed soil from water and wind erosion
- Silt fences, fiber rolls, and straw bales, which would be placed around the contours of slopes to intercept sediment-laden sheet flow to remove sediment from the runoff. Fiber rolls may also be placed around storm drain inlets to reduce the amount of sediment discharging to those inlets.

In addition to these BMPs, additional practices outlined in the SNRAMP specifically designed to minimize erosion include removing only small areas of vegetation at any one time (GR-1c), and, to the extent possible, performing work that involves exposure of large areas of soil during the dry season (GR-12b). None of the geology and soils effects were found to be significant.

VII. ALTERNATIVES

CEQA requires that an EIR include sufficient information about each alternative to allow meaningful analysis and comparison with the proposed project. It also requires discussion of the effects of the alternatives, but in less detail than for the proposed project. As such, both the description of the alternatives and the discussion of the impacts of those alternatives focus on their similarities and differences from those of the proposed project.

The alternatives for this EIR took into account the suggestions received during the EIR scoping process related to modifying the proposed project. They were developed in accordance with CEQA Guidelines, Section 15126.6, and provide a reasonable range of alternatives that feasibly attain most of the basic project objectives but would avoid or substantially lessen the significant impacts of the SNRAMP.

The purpose of the alternatives analysis under CEQA is to consider potentially feasible alternatives to the proposed project that are capable of avoiding or substantially lessening the significant effects of the project and that will foster informed decision making and public participation.

The alternatives presented and analyzed in this chapter were developed to meet most, but may not meet all, of the CEQA-defined project objectives identified in Section III.C and are generally potentially feasible. This EIR identifies four alternatives to the proposed project—the Maximum Restoration Alternative, the Maximum Recreation Alternative, the Maintenance Alternative, and the No Project Alternative (the last of which is required under CEQA Guidelines, Section 15126.6). In the sections that follow, these alternatives are described and analyzed for each of the CEQA environmental topics. In Section VII.F is a discussion of the alternatives considered but rejected.

Table 20 provides a general description of the project alternatives compared to the proposed SNRAMP. They are alternatives to the proposed project's programmatic actions, as well as alternatives to the Sharp Park project, covered at the project-level in this EIR. These differences would be articulated in modifications to the SNRAMP if an alternative was selected. Routine maintenance was found to result in less than significant impacts, or less than significant with mitigation, so the alternatives do not include different maintenance level activities. Additionally, dead, diseased, and hazardous trees removed under all alternatives would be consistent with tree maintenance health and safety goals of the Natural Areas Program. No new DPAs would be created under any of the project alternatives, consistent with the SFRPD's current moratorium on new DPAs.

Table 20
SNRAMP Alternatives Comparison

Management Actions	Proposed SNRAMP Project	No Project	Maximum Restoration	Maximum Recreation	Maintenance
SNRAMP Project Alternatives					
Habitat restoration	Habitat would be restored, as described for each of the Natural Areas in the SNRAMP.	Habitat would be restored, as described in the 1995 management plan. The No Project Alternative would promote indigenous plant species, would remove exotic species, and would enhance riparian areas on a smaller scale than under the proposed project, but it would be more general throughout the Natural Areas.	The Maximum Restoration Alternative includes more programmatic restoration and would extend focused restoration of native plant communities to not only MA-1 areas but also more aggressively in MA-2 and MA-3 areas. MA-3 areas under this alternative would include reintroduction of native plants and habitats where appropriate.	Under the Maximum Recreation Alternative, habitat would be restored as described for each Natural Area in the SNRAMP, except that funding would be prioritized for recreation and over time would result in implementing less of the restoration projects identified by the Natural Areas Program. Restoration for the Sharp Park wetland complex is discussed below.	The Maintenance Alternative includes less restoration work than under the proposed project. Restoration work under the Maintenance Alternative would be designed to preserve the existing distribution and abundance of vegetation assemblages.
Invasive tree and vegetation removal	The proposed project includes 5 percent invasive tree removal in San Francisco Natural Areas and 28 percent removal at Sharp Park. The SNRAMP also would remove other invasive vegetation. Additional vegetation and trees would be removed during implementation of programmatic projects.	The No Project Alternative does not include the programmatic projects identified for the proposed project, and management actions would be driven by the 1995 management plan. Therefore, the No Project Alternative would result in moderately less invasive tree removal, compared to the proposed project. Tree removal would be limited to invasive trees that could adversely affect indigenous plant growth.	The Maximum Restoration Alternative includes moderately more invasive and exotic tree and vegetation removal, compared to the proposed project.	The Maximum Recreation Alternative includes substantially less invasive tree and vegetation removal, compared to the proposed project. Tree removal would be limited to those necessary to meet the Natural Areas Program tree health and safety goals and those trees required to be removed to create new trails or other recreation facilities.	The Maintenance Alternative includes moderately less invasive tree and vegetation removal, compared to the proposed project. The goals of tree and vegetation removal would be to maintain the existing distribution and abundance of vegetation assemblages.

Table 20
SNRAMP Alternatives Comparison

Management Actions	Proposed SNRAMP Project	No Project	Maximum Restoration	Maximum Recreation	Maintenance
Public access and trail modifications	The proposed project includes closing 54,411 feet of trails and creating 5,897 feet of new trails.	The No Project Alternative includes substantially less trail closure and no new trail creation.	The Maximum Restoration Alternative includes closing additional trails in MA-1 and MA-2 areas. Access to most trails would remain within MA-3 areas. The Maximum Restoration Alternative does not include any new trail creation.	The Maximum Recreation Alternative includes closing some but not all informal and social trails, as described for the proposed project. This alternative would result in moderately more trail creation in MA-2 and MA-3 areas and would allow for greater multiuse of trails in Natural Areas, compared to the proposed project.	The Maintenance Alternative would maintain the current trail system, and no trails would be closed or created.
DPA reductions	The proposed project includes a 20 percent reduction in DPA acreage.	The No Project Alternative would not close or reduce the acreage of existing DPAs.	The Maximum Restoration Alternative includes moderately greater reduction in DPA acreage, focusing on reducing DPA acreage in MA-1 and MA-2 areas.	The Maximum Recreation Alternative would not close or reduce the acreage of existing DPAs. There would be no new DPAs, in accordance with the City's moratorium on new DPAs.	The Maintenance Alternative would not close or reduce the acreage of existing DPAs.
Project Level Alternatives					
Sharp Park Wetland Complex Restoration at Laguna Salada	Restoration would occur as described in the SNRAMP; loss of 5.5 acres of wetlands, dredging of Laguna Salada, modification of 19 acres of the Sharp Park Golf Course to provide upland habitat for the San Francisco garter snake.	The No Project Alternative does not include restoration of Laguna Salada. However, existing conditions would be maintained at Laguna Salada by removing any additional accumulated sediment and tules during the April 15 to October 15 dry season. Natural Areas Program staff would continue	The Maximum Restoration Alternative includes more aggressive restoration of the Laguna Salada wetland complex, compared to the proposed project. This alternative would extend restoration outside the Natural Area boundary and would restore an additional five acres of habitat for the California red-legged frog and San Francisco garter	The Maximum Recreation Alternative includes restoring Laguna Salada, but restoration would be confined to the geographic limits of the Natural Area and would not encroach into the Sharp Park Golf Course. Laguna Salada would be dredged under this alternative.	The Maintenance Alternative does not include restoration of Laguna Salada, but existing conditions would be maintained at Laguna Salada by removing any additional accumulated sediment and tules during the April 15 to October 15 dry season. Natural Areas Program staff would continue

Table 20
SNRAMP Alternatives Comparison

Management Actions	Proposed SNRAMP Project	No Project	Maximum Restoration	Maximum Recreation	Maintenance
		monitoring and relocating California red-legged frogs during the rainy season. The No Project Alternative would continue with restoration outside the Natural Area boundary at Horse Stable Pond, in accordance with the GGNRA Biological Opinion.	snake, for a total of approximately 24 acres of restored habitat. Compared to the proposed project, this alternative would result in additional upland habitat on the northeast edge of Laguna Salada and additional dredging of the Laguna Salada wetland complex water bodies.		monitoring and relocating California red-legged frogs during the rainy season. The Maintenance Alternative would continue with restoration outside the Natural Area boundary at Horse Stable Pond, in accordance with the GGNRA Biological Opinion.

VII.A NO PROJECT ALTERNATIVE

VII.A.1 Description

Under this alternative, the SFRPD would continue with management activities authorized under the 1995 management plan (Appendix E and incorporated by reference into this description of the No Project Alternative). This alternative includes activities similar to those outlined for the proposed project. However, the No Project Alternative differs from the proposed project in that programmatic projects would not occur under the 1995 management plan. Therefore, habitat restoration and invasive tree and vegetation removal under the No Project Alternative would likely be smaller in scale. The No Project Alternative would result in fewer trails closed and no new trails created. The No Project Alternative would not close or reduce the size of DPAs. Over time, this alternative likely would result in Natural Areas with characteristics largely similar to those under the proposed project; however, restoration and enhancement actions would be smaller in scale under the No Project Alternative. Activities at Laguna Salada in the Sharp Park Natural Area would be limited to removing accumulated sediment and tules by hand or other low-impact means during the April 15 to October 15 dry season. Laguna Salada would not be dredged, and during the rainy season Natural Areas Program staff would continue monitoring for the California red-legged frog, in compliance with the state and federal ESAs. The No Project Alternative would continue, with restoration work outside the Natural Area near Horse Stable Pond, as authorized by the GGNRA Biological Opinion. These activities include removing invasive plant species by hand. Restoration also includes revegetating the site with coastal grassland and scrub habitat that is optimal habitat for the San Francisco garter snake.

The No Project Alternative would not meet the project objectives because it would not implement a comprehensive program for managing the Natural Areas to maintain and enhance biodiversity and provide appropriate recreation opportunities. Moreover, the No Project Alternative would not restore Laguna Salada, as stated in the project objectives.

Below is a summary of the 1995 management plan's general policies and management actions (SFRPD 1995).

- **Vegetation**
  - Maintain or promote indigenous plant species
  - Control or remove invasive species

- Provide fire breaks where appropriate and maximize indigenous vegetation for fire control
- Use indigenous vegetation for erosion control
- Protect species listed as rare, threatened, or of special concern
- Remove exotic plants, which adversely affect indigenous plant growth
- Enhance riparian areas
- Reforest or replant areas to maintain diversity
- Preserve habitat that supports wildlife

- **Wildlife**
  - Monitor wildlife
  - Consult with other agencies on habitat enhancement
  - Cooperate with other agencies to address issues of such species as feral cats, domestic dogs, and feral geese
  - Develop educational programs with other agencies for wildlife protection
- **Water Resources**
  - Maintain or improve water quality
  - Protect riparian zones from erosion and sedimentation
  - Maintain drainage and erosion prevention devices along roads and service trails
  - Control drainage and runoff from roads
  - Establish and maintain tule encroachment zone around lakes
  - Use proper controls when applying aquatic herbicides
- **Geotechnical/Soils**
  - Minimize erosion along roads and trails
  - Seed or plant bare soils with indigenous vegetation
  - Stabilize embankments where not in conflict with habitat
  - Minimize access on unstable slopes
  - Cooperate with adjacent property owners to minimize erosion and runoff issues

- Clear landslide debris on park property
- Install retaining devices where necessary to stabilize slopes

- **Education**
  - Promote natural resource management among SFRPD staff
  - Develop nature programs to promote recreational and educational values
  - Develop education programs aimed at private property owners
  - Develop education programs with San Francisco Unified School District
- **Public Use**
  - Develop guidelines for pathways and interpretive signs for trails
  - Control dirt bike and off-road use
  - Encourage community participation in a public stewardship program

Compared to the proposed project, the No Project Alternative would involve moderately less invasive tree and vegetation removal and closure of fewer trails. The No Project Alternative would not result in new trails because routine maintenance would be limited to that described in Section III.F.2. Consistent with the SFRPD moratorium,[1] the No Project Alternative would not create any new DPAs.

VII.A.2 Impacts

Land Use and Land Use Planning

The No Project Alternative consists of a continuation of the recommendations in SFRPD's 1995 plan, which identified 28 Natural Areas and defined objectives, policies, and management actions. No site-specific management plans for the 32 Natural Areas would be implemented under the No Project Alternative. Activities would be similar in scale to the routine maintenance activities described for the proposed project and that currently occur under the Natural Areas Program. This alternative would not physically divide an established community, would not conflict with an applicable land use plan, policy, or regulation, and would not impact the character of the vicinity. This alternative would have no impact on land use and land use planning.

[1] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

Aesthetics

The No Project Alternative would improve the presence of native vegetation and would decrease the presence of invasive nonnative vegetation. Compared to the proposed project, the No Project Alternative would moderately reduce the total amount and scale of invasive tree and vegetation removal because the scope of those activities would be limited to levels similar to those described in Section III.F.2 for routine maintenance. Tree removal would be limited to dead, diseased, and hazardous trees and those necessary to meet the goals of the 1995 Management Plan (1995 Management Plan action: Remove exotic plants that adversely affect indigenous plant growth) and would continue to promote conversion to landscape elements found naturally in the Natural Areas. As with the proposed project, this alternative would not have a substantial adverse effect on a scenic vista or substantially degrade the visual character or quality of the site and its surroundings. Additionally, project activities would not substantially damage scenic resources of the natural or built environment, and aesthetic impacts of the No Project Alternative would be less than significant.

Cultural and Paleontological Resources

Under the No Project Alternative, management of the Natural Areas and the cultural and paleontological resources in them would continue under the current management plan, which does not include the mitigation measures afforded those resources under the proposed project. The No Project Alternative does not include programmatic projects and therefore would result in fewer soil-disturbing activities and less potential to affect cultural and paleontological resources. Without implementation of the mitigation measures identified for the proposed project, specifically mitigation measure M-CP-12, which was developed for routine maintenance activities, this alternative would result in greater impacts on cultural and paleontological resources, with respect to ground-disturbing activities. These potentially significant impacts could be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project.

The No Project Alternative includes vegetation management activities that are similar in size and scale to routine maintenance activities identified for the proposed project. As with the impacts of routine maintenance identified for the proposed project, vegetation removal and restoration under the No Project Alternative would have less than significant impacts on historic landscapes and the Golden Gate Park Historic District.

The No Project Alternative does not include the restoration of the Laguna Salada wetland complex, and actions at Laguna Salada would be limited to hand removal of accumulated sediments, tules,

and invasive plants; therefore, the No Project Alternative would not affect buried or submerged cultural and paleontological resources. Furthermore, the No Project Alternative would not encroach into the Sharp Park Golf Course or modify the golf course in any way and would therefore have no effect on the historical character of the Sharp Park Golf Course.

Wind and Shadow

Under this alternative, altering wind patterns in and near the Natural Areas is expected to be slightly less than that described under the proposed project because this alternative does not include large-scale (greater than half an acre) tree removal. Although this alternative seeks to remove invasive and exotic vegetation, it also calls for replanting native vegetation to maintain diversity; however, such restoration would likely occur on a smaller scale. As with the proposed project, this alternative would not result in significant ground-level wind hazards or wind throw impacts. Selected trees would be removed, which would not result in high ground-level wind speeds. Additionally, dead, diseased, and hazardous trees would be removed under the No Project Alternative, consistent with tree maintenance health and safety goals of the Natural Areas Program; therefore, this alternative would have less than significant wind impacts. Similar to the proposed project, the No Project Alternative does not include any aboveground structures that would create new shadows; therefore, the No Project Alternative would not result in any shadow impacts.

Recreation

Under this alternative, the management direction outlined in the 1995 plan would continue to be implemented. The public use management actions identified in the 1995 management plan have three guidelines for recreation facility management: develop guidelines for pathways and interpretive signs for trails, control dirt bike and off-road use, and encourage community participation in a public stewardship program. These recreation-specific management actions are general and are not site specific, compared to the management actions outlined in the SNRAMP. However, the No Project Alternative does not include programmatic projects and therefore would not result in new trail creation. In the long term, the No Project Alternative may result in a similar number of trail miles within the Natural Areas, as compared to the proposed project, because although the No Project Alternative would not result in new trails, it would close substantially fewer trails. As with the proposed project, the No Project Alternative would not increase the use of neighborhood or regional parks such that these resources would be substantially deteriorated. The No Project Alternative would continue maintaining trails, so trail-related activities would not result in the physical deterioration of recreational resources. As a result, the No Project Alternative would have less than significant impacts on recreation.

The No Project Alternative would not close or reduce any of the existing DPAs and would therefore not increase the use of other DPAs or result in the physical deterioration of recreation facilities. The DPAs identified for closure or reduction have been identified as those that experience the greatest impacts from dogs on sensitive plant and wildlife species and their habitats. (The impact of the No Project Alternative on biological resources is discussed below.) In addition, the GGNRA Dog Management Plan would restrict dogs on GGNRA lands, which may result in potentially significant and unavoidable cumulative impacts from the deterioration of the Natural Areas DPAs. However, the No Project Alternative would not reduce the size or number of DPAs in the Natural Areas and so would contribute considerably to potentially significant cumulative recreation impacts from deterioration of the Natural Areas as a result of dog restrictions.

Under the No Project Alternative, minor maintenance would be conducted in Laguna Salada in the Sharp Park Natural Area and at Horse Stable Pond. This would not encroach on the golf course or otherwise modify the golf course, which would retain its playability. Therefore, the No Project Alternative would have no impact on recreation resources at Laguna Salada from restoration. While the proposed project would have a significant impact on the golf course, it would be mitigated by M-RE-6 and so is not a significant unavoidable impact of the project. However, without the restoration proposed under the SNRAMP, the Sharp Park Golf Course would continue to be flooded during the rainy season and would continue to require seasonal closures.

Biological Resources

Under this alternative, the current management program would continue, allowing for some habitat improvements and routine maintenance as time, staffing, and money allow; however, this would be on a smaller scale than under the proposed SNRAMP because the No Project Alternative does not include the programmatic projects that were identified for the proposed project. Wildlife and vegetation could be disturbed in the short term through habitat improvement activities, such as promoting indigenous species and controlling invasive species. Long-term habitat improvements under the No Project Alternative would continue, but because these activities would be smaller in scale, the No Project Alternative would be less effective at maintaining native plant communities and controlling invasive vegetation. Under the No Project Alternative, no new trails would be created and the acreage of DPAs would not be reduced. Activities at Laguna Salada would include hand removal of tules and accumulated sediment during the dry season and monitoring and relocation of California red-legged frog egg masses during the rainy season. Invasive plant removal and revegetation near Horse Stable pond would continue according to the GGNRA Biological Opinion.

The following is a discussion of the potential biological resources impacts of the No Project Alternative on special status plant and wildlife species, nesting birds, sensitive natural communities and wetlands, and fish and wildlife movement.

Special Status Plant Species. Special status plant species occur throughout the Natural Areas, as discussed in Section V.G., Biological Resources. The No Project Alternative does not include large-scale programmatic projects, and restoration would be smaller in scale and similar to that described for routine maintenance under the proposed project. This alternative includes some vegetation removal and restoration activities that could affect both protected plant species and locally significant plant species through inadvertent removal. Given that the No Project Alternative does not include large-scale programmatic projects and would therefore not require the use of heavy equipment for restoration, impacts on special status plant species from habitat restoration and invasive plant removal would be substantially less under the No Project Alternative. However, it is possible that Natural Areas Program staff or their volunteers may inadvertently remove or destroy special status plant species during maintenance and restoration. These impacts would be mitigated to less than significant by incorporating M-BI-1a and M-BI-1b, which would require the SFRPD to conduct an annual biological training program identifying the types and location of special status plant species that occur throughout the Natural Areas and avoiding direct impacts on those species.

The No Project Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Observation indicates that off-leash dog play and exercise, such as running at high speed, is causing soil erosion and plant damage that affects special status plant species in the DPAs. Use of DPAs at Lake Merced and Bernal Hill could impact protected plant species. Continued use of these DPAs by off-leash dogs would continue to impact special status plant species, resulting in significant impacts on special status plants. Impacts on special status plant species could be reduced or avoided by actions identified in the SNRAMP to close DPAs or modify areas to on-leash dog use only. However, without those specific actions identified in the SNRAMP to close or reduce off-leash dog use, impacts on special status plant species from dogs would continue.

As discussed above, the No Project Alternative does not include large-scale programmatic habitat restoration or invasive species removal; therefore, habitat restoration under the No Project Alternative would be less effective. Encroachment of invasive species and conversion of native habitat to nonnative habitat would be more likely under the No Project Alternative and could threaten the continued existence of sensitive plant species, especially those of limited distribution in the Natural Areas. This potentially significant impact of the No Project Alternative could be

mitigated only by implementing the restoration activities identified in the SNRAMP; therefore, the long-term impacts on special status plant species would be potentially significant.

No special status plant species occur in the Laguna Salada wetland complex in the Sharp Park Natural Area; therefore, restoration at Laguna Salada under the No Project Alternative would have no effect on special status plant species.

Special Status Wildlife Species. Special status wildlife species in the Natural Areas include the mission blue butterfly at Twin Peaks and McLaren Park, the California red-legged frog and San Francisco garter snake at Laguna Salada in Sharp Park, the California red-legged frog, San Francisco garter snake, and San Francisco dusky-footed woodrat in the upper canyon of Sharp Park, the western pond turtle at Sharp Park and Lake Merced, and the western red bat in Golden Gate Park Oak Woodlands, Mount Davidson, Twin Peaks, Pine Lake, and McLaren Park. The Natural Areas also support nesting special status bird species, which include the double-crested cormorant at Lake Merced and the salt marsh common yellowthroat at Lake Merced and Sharp Park.

The No Project Alternative includes smaller scale restoration activities and vegetation removal. These activities, although smaller in scale and without heavy equipment, could still affect special status wildlife species. For example, removing trees in the upper canyon of the Sharp Park Natural Area could disturb or otherwise affect the San Francisco dusky-footed woodrat or its habitat. Impacts on special status species could be reduced to less than significant by implementing Mitigation Measure M-BI-5, which would require the SFRPD to conduct an annual biological training program, identifying the types and location of special status wildlife species that occur throughout the Natural Areas and avoiding impacts on those species. In addition, implementing management action GR-4b, identified for the proposed project, would be required to reduce impacts on special status bird species and to comply with the federal MBTA. Implementing management action GR-4b requires vegetation management to be conducted outside the nesting season to the extent possible. If this is not possible, GR-4b would require a bird survey to be conducted before vegetation removal and to avoid active nests. Implementing M-BI-1a and GR-4b would reduce impacts on special status bird species to less than significant.

The No Project Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Dog use in the DPAs may affect special status wildlife species, including special status birds at Lake Merced and McLaren Park. Continued use of these DPAs by off-leash dogs would continue to impact special status wildlife species, resulting in significant impacts. Impacts on wildlife species could be reduced or avoided by actions identified in the SNRAMP to close DPAs or to modify areas

to be for on-leash dogs only. However, without those specific actions identified in the SNRAMP to close or reduce off-leash dog use, impacts on special status wildlife species from dogs would otherwise be considered significant and unavoidable.

Activities at Sharp Park would continue as they do currently, and restoration would be limited to removing tules and accumulated sediment by hand. The No Project Alternative also calls for removing invasive vegetation and restoring the area near Horse Stable Pond, which is outside the boundaries of the Sharp Park Natural Area. Impacts on protected species at Laguna Salada from these activities could be avoided by implementing M-BI-6a, which would require the SFRPD to conduct an annual biological training program identifying the types and location of special status wildlife species that occur at Laguna Salada and avoiding impacts on those species. Avoidance would include removing tules and sediment during the dry season when the special status species at Sharp Park are less likely to be present.

If the SFRPD decides to take no action, as a result of ongoing natural processes, conditions at the Laguna Salada wetland complex would continue to degrade and be less hospitable to the western pond turtle, California red-legged frog, and San Francisco garter snake, due to increased sedimentation and eutrophication (a condition of dissolved nutrients in a water body promoting plant life, such as algae, which deplete the water's oxygen levels). Substantial deterioration of California red-legged frog, San Francisco garter snake, and western pond turtle habitat could affect the habitat elements required by the species to maintain a viable breeding population. Restoration of the Laguna Salada wetland complex on the scale of the proposed project (which is not included as part of the No Project Alternative), with implementation of mitigation measures developed for the proposed project, is intended to enhance the special status species habitat that may continue to degrade if no action is taken.

Direct impacts on California red-legged frog could occur from continued flooding of the golf course during the rainy season, which may result in red-legged frog egg masses being produced in the high water and stranded after rainstorms. If reauthorized by the USFWS and the CDFG, the SFRPD would continue to monitor and move egg masses deposited outside the Laguna Salada wetland complex to suitable habitat within the wetland complex during the rainy season if flooding results in a risk of stranding.

Migratory Birds. Tree and vegetation removal under the No Project Alternative would be smaller in scale and would not require the use of heavy equipment. The No Project Alternative would also not create new trails, so impacts on migratory birds would be less than those identified for the proposed

project. However, these activities could still disturb migratory birds and destroy active nests. As with the proposed project, the No Project Alternative would be required to comply with the federal MBTA, which prevents the take or destruction of birds and their nests. Compliance with the MBTA would reduce impacts on migratory birds to less than significant. Implementation of management action GR-4b requires vegetation to be removed outside the breeding season to the extent possible and, if that is not possible, requires a pre-construction nesting bird survey and avoidance measures. This would ensure compliance with the MBTA. By implementing these measures and compliance with the MTBA, impacts on migratory birds, including special status bird species, would be less than significant.

Sensitive Natural Communities and Wetlands. The No Project Alternative includes smaller scale restoration activities and vegetation removal. Although they would be smaller in scale and would not include the use of heavy equipment, these activities could still affect sensitive natural communities and wetlands through direct removal of vegetation that comprises the sensitive natural community. Impacts on sensitive natural communities and wetlands would be temporary and in the long term would result in beneficial impacts. That is because the goals of the Natural Areas Program are to protect and enhance native ecosystems, including sensitive natural communities. However, because restoration activities would be smaller in scale, they would be less effective at controlling invasive vegetation, and, in the long-term, impacts on sensitive natural communities and wetlands would be less beneficial than under the proposed project. Temporary impacts of restoration and vegetation removal in sensitive natural communities would be reduced by implementing the following management actions identified in the 1995 management plan:

- Maintain or improve water quality
- Protect riparian zones from erosion and siltation
- Seed or plant bare soils with indigenous vegetation
- Stabilize embankments where not in conflict with habitat
- Install retaining devices where necessary to stabilize slopes
- Enhance riparian areas

In addition, work in the riparian zone or wetlands would require permits from the RWQCB, USACE, or CDFG, which would include avoidance and minimization measures. Impacts on riparian and wetland habitats, sensitive natural communities, and wetlands would be reduced to less than significant by implementing Mitigation Measures M-BI-1a and M-BI-1b. These require that measures

be taken to avoid and minimize impacts on wetlands by limiting construction and vehicle traffic to the maximum extent. Temporary exclusion fencing would be used to protect wetland habitat, and projects would be conducted during the spring and summer to avoid saturated or ponded wetlands and streams.

The No Project Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Dogs observed in the DPAs are affecting sensitive natural communities, including riparian habitat at McLaren Park. Continued use of these DPAs by off-leash dogs would continue to impact sensitive natural communities, resulting in significant impacts. Impacts on sensitive natural communities could be reduced or avoided by actions identified in the SNRAMP to close DPAs or to modify areas to on-leash dog use only. However, without those specific actions identified in the SNRAMP to prohibit or reduce off-leash dog use, impacts on sensitive natural communities from dogs would otherwise be considered significant and unavoidable.

Fish and Wildlife Movement. The No Project Alternative includes restoration and vegetation removal similar in scale to that identified under the proposed project as routine maintenance. As with the proposed project, these activities would occur regularly in the Natural Areas and would not significantly alter nursery sites, habitat corridors, or wildlife movement. Actions identified in the No Project Alternative are intended to enhance riparian areas and indigenous plant species and would result in long-term beneficial impacts. Due to the limited size of restoration activities and ground disturbance under the No Project Alternative, potential impacts on migratory corridors, wildlife movement, and nursery sites would be less than significant.

Cumulative Impacts. Cumulative impacts on biological resources from the GGNRA Dog Management Plan are similar to those under the proposed project. Under the No Project Alternative, impacts on biological resources in DPAs identified for closure or reduction under the SNRAMP would continue. However, because the No Project Alternative would not close or reduce any of the DPAs, there would be no increase in use of other DPAs attributable to the project. Because of this, any additional impacts on biological resources from the project in Natural Area DPAs would not occur, so impacts on biological resources would be less than cumulatively considerable under the No Project Alternative.

Hydrology and Water Quality

Under this alternative, the current management program would continue, providing some erosion control and water quality protection for the Natural Areas. Programmatic actions, such as large-scale tree removal, slope stabilization, and trail creation, would not occur under the No Project

Alternative. Impacts on water quality, the quality of stormwater runoff, erosion, and siltation are similar to those described under routine maintenance for the proposed project. Under the No Project Alternative, the scale of restoration activities are similar to those for routine maintenance under the proposed project. Those activities would not result in significant impacts on hydrology or water quality by implementing those measures identified for the proposed project. Specifically, even minor restoration, using gasoline-powered equipment, such as chainsaws and weed whackers, could result in the accidental release of gasoline or other fluids. Accidental release of these fluids during restoration near water bodies could result in significant impacts on water quality or stormwater runoff. However, by implementing Mitigation Measure M-HZ-14 identified for the proposed project, which requires the SFRPD to develop and implement an emergency response plan for the accidental release of fuels and other hazardous fluids, these impacts would be mitigated to less than significant.

The No Project Alternative also includes measures to control erosion along roads and trails, to minimize access to unstable slopes, and to seed or plant bare soils with indigenous vegetation, resulting in less than significant erosion and sedimentation impacts.

As a result of ongoing natural processes, water quality conditions at the Laguna Salada wetland complex would continue to degrade due to increased sedimentation and eutrophication (a condition of dissolved nutrients in a water body promoting plant life, such as algae, which deplete the water's oxygen levels), resulting in potentially significant long-term impacts on the water quality of Laguna Salada. These long-term impacts could be reduced to less than significant by implementing the proposed restoration of Laguna Salada. Additionally, the No Project Alternative would not relieve the incidence of golf course flooding, resulting in seasonal flooding and closure of the golf course, as discussed in the analysis of the impacts of the No Project Alternative on recreation resources. The No Project Alternative does not include dredging Laguna Salada, so associated impacts on water quality would not occur.

Hazards and Hazardous Materials

Under this alternative, impacts from hazardous materials are similar to those described for routine maintenance under the proposed project. As with the proposed project, restoration activities that require the use of gasoline-powered equipment, including chainsaws and weed whackers, could result in the accidental release of gasoline. This could result in potentially significant impacts on vegetation and water courses. Impacts from the accidental release of hazardous materials could be reduced to less than significant by implementing an emergency response plan, as identified in mitigation measure M-HZ-14. Further, impacts from the use of pesticides and herbicides, lead

contamination, and wildfires are also similar to those described under routine maintenance activities for the proposed project. This is because the SFRPD would be implementing similar management practices while using pesticides that would reduce the potential to impact nearby human populations, wildlife, and groundwater to less than significant.

Reforestation under the No Project Alternative could increase the potential for wildfires. However, this alternative would provide fire breaks and vegetation with low flammability or low fuel volume in areas of high fire hazards. Therefore, the No Project Alternative would result in less than significant wildfire impacts.

At Laguna Salada, under the No Project Alternative, tule stands would be removed by hand. The actions at Laguna Salada would be limited in scale and are anticipated to be less effective at controlling tules, thereby continuing to provide habitat for tule mosquitoes. The San Francisco Department of the Environment and the San Mateo County Mosquito and Vector Control District would continue to implement their programs for controlling and preventing mosquitoes, ticks, and insect-borne diseases, which would reduce the potential for insect-borne diseases to less than significant.

Agriculture and Forest Resources

Similar to the proposed project, this alternative would have no impacts on agricultural resources. The No Project Alternative would remove dead, dying, and diseased trees or trees that pose a public safety hazard. In addition, this alternative would remove exotic trees that could adversely affect indigenous plants species. Overall, this alternative includes moderately less tree removal and seeks to maintain diversity through reforestation. As with the proposed project, this alternative would have less than significant agriculture and forest resources impacts.

Air Quality

The types of air quality impacts under the No Project Alternative would be similar to those described for the routine maintenance under the proposed project. This is because restoration activities would be similar in scale and do not include long-term programmatic projects that would require the use of heavy equipment. As described under the proposed project, routine maintenance activities are similar to current activities conducted in the Natural Areas and therefore would not result in a net increase of fugitive dust, criteria air pollutant emissions, or health risks. As such, air quality impacts under the No Project Alternative would be less than significant. Cumulative air quality impacts could occur from other ongoing or reasonably foreseeable projects near the Natural

Areas. However, as the No Project Alternative would not result in a net increase in air pollutants, this alternative would not result in a considerable contribution to cumulative air quality impacts.

Other Resource Areas

Population and Housing

As with the proposed project, the No Project Alternative does not involve activities that would induce substantial population growth or create the need for constructing replacement housing. There would be no population and housing effects from this alternative.

Transportation and Circulation

Transportation and circulation impacts from implementing this alternative are slightly less than those described under the proposed project. As the No Project Alternative would not reduce or close any DPAs, no additional vehicle trips are expected as a result of people traveling by car to other DPAs.

Noise

Noise impacts under this alternative are less than those described under the proposed project because the No Project Alternative does not include programmatic projects that would require the use of heavy equipment for large-scale projects. The continued use of gasoline-powered equipment, including chainsaws and weed whackers, would be similar in duration and intensity to current activities and to those described under routine maintenance for the proposed project. Therefore, noise impacts under this alternative would be less than significant.

Greenhouse Gas Emissions

Activities under the No Project Alternative are similar to those described for the routine maintenance under the proposed project and similar types and amounts of gasoline-powered equipment would be used. As described under the proposed project, routine maintenance activities would be similar to current activities conducted in the Natural Areas and therefore would not result in a net increase of GHG emissions. Therefore, the No Project Alternative would result in less than significant impacts from GHG emissions.

Utilities and Service Systems

As with the proposed project, reintroducing native species and replacing trees would require irrigation until they become established; however, irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. Water use for irrigation would be slightly lower under the No Project Alternative because restoration would be

smaller in scale. The No Project Alternative does not involve activities that would affect landfill capacity, solid waste regulations, and operation or relocation of local utilities. Impacts of the No Project Alternative on utilities and service systems be less than significant.

Public Services

As with the proposed project, the No Project Alternative does not involve activities that would require construction or modification of public service facilities, nor would activities under the No Project Alternative increase police or fire emergency response times. Therefore, there would be no public services impacts from the No Project Alternative.

Geology and Soils

The No Project Alternative includes restoration activities and vegetation removal that are similar in scale to routine maintenance activities under the proposed project. These activities would not increase seismic or landslide hazards, would not cause a geologic unit to become unstable, would not substantially change the topography of a Natural Area, and would not result in substantial soil erosion.

As with the proposed project, there is a potential for strong ground shaking at all Natural Areas from a nearby earthquake. The No Project Alternative does not include any activities that would increase the exposure of people or structures to adverse effects from seismic ground-shaking or seismic failure. Similar to the proposed project, this alternative would not have the potential to increase landslide hazards because restoration activities and vegetation removal would be limited in scale to activities similar to those described under routine maintenance for the proposed project. In addition, the No Project Alternative would result in beneficial impacts by reducing the risk from potential landslides through management actions identified for minimizing erosion and stabilizing slopes and other embankments.

The No Project Alternative includes measures to minimize erosion and revegetate bare soils. While restoration under this alternative would initially disturb soils, those activities would not cause a geologic unit or soil to become unstable, resulting in a less than significant impact. While this alternative includes activities that would disturb the ground, the magnitude and location of those activities would not be sufficient to substantially change the topography, to impact any unique geologic or physical features of the Natural Areas, or to result in substantial soil erosion. Therefore, impacts of the No Project Alternative on geology and soils would be less than significant.

Mineral and Energy Resources

As with the proposed project, use of motorized equipment and vehicles for management activities under this alternative would consume fuel (diesel and gasoline), but those consumption amounts are expected to be minor and similar to current consumption levels. None of the activities under this alternative would result in the loss of availability of a mineral resource or mineral resource recovery site. Similar to the proposed project, the mineral and energy resources effects of the No Project Alternative would be less than significant.

VII.B MAXIMUM RESTORATION ALTERNATIVE

VII.B.1 Description

Under this alternative, the SFRPD would restore native habitat and convert nonnative habitat to native habitat wherever possible throughout the Natural Areas, including all management areas. The Maximum Restoration Alternative prioritizes activities related to endangered species protection and recovery and maximum enhancement of biodiversity. Compared to the proposed project, this alternative emphasizes the restoration of native habitat over recreational uses and nonnative habitat. Over time, this alternative would likely result in Natural Areas with a greater amount of native habitat and habitat supporting native species and special status plants and wildlife, not only in MA-1 management areas but also in MA-2 and MA-3 areas. As the Maximum Restoration Alternative would prioritize habitat restoration over recreation, this alternative would close additional trails in MA-1 and MA-2 areas, with most trails in the MA-3 areas. No new trails would be created under this alternative.

Under the Maximum Restoration Alternative, programmatic projects would focus on restoring habitat and removing invasive species. The Natural Areas Program would extend focused restoration of native plant communities not only to MA-1 areas but would more aggressively restore native plant communities in MA-2 and MA-3 areas; the reintroduction of native plants and habitats would extend into MA-3 areas. The Maximum Restoration Alternative would increase the amount of invasive tree and vegetation removal, replacing these areas with native plants.

The Maximum Restoration Alternative would further reduce the amount of DPA acreage, as compared to the proposed project, focusing on closing or reducing the DPA acreage in MA-1 and

MA-2 areas. Consistent with the SFRPD moratorium[2] on new DPAs, this alternative would not add any new DPAs to the Natural Areas.

The Maximum Restoration Alternative includes more extensive habitat restoration at the Laguna Salada wetland complex than the proposed project. Similar to the proposed project, this alternative would extend restoration outside the Natural Area boundary but also would restore up to an additional five acres of habitat for the California red-legged frog and San Francisco garter snake. In total, the Maximum Restoration Alternative would restore approximately 24 acres of land for the benefit of these threatened and endangered species. The more extensive recovery efforts include creating additional upland habitat on the northeast edge of Laguna Salada and additional dredging of the water bodies at the Laguna Salada wetland complex.

In summary, the Maximum Restoration Alternative would accomplish the following:

- Reduce off-leash dog use
- Reduce public access
- Increase removal of nonnative trees and other nonnative vegetation
- Include a greater amount of coastal scrub, native grassland, wetland and riparian and oak/native woodland habitat restoration
- Increase the ability for the Natural Areas to support native plants and special status plants and wildlife
- Expand restoration of the Laguna Salada marsh complex

The Maximum Restoration Alternative meets some, but not all, of the project objectives presented in Section III.C. Specifically, the Maximum Restoration Alternative does not meet the objective related to recreation, as the Maximum Restoration Alternative would provide additional restrictions on public use and access of the Natural Areas.

[2] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

VII.B.2 Impacts

Land Use and Land Use Planning

The Maximum Restoration Alternative would result in the greatest amount of restored, created, and enhanced native habitat in all three types of management areas (MA-1, MA-2 and MA-3) and a reduction in the amount of land devoted to recreation. Recreation would still occur in all Natural Areas, but informal trails and social trails in the most sensitive areas would be closed. Routine maintenance under this alternative would be similar in scale to that described for the proposed project and that currently occurs under the Natural Areas Program. As with the proposed project, this alternative would not physically divide an established community, conflict with applicable land use plans, policies, or regulations, or have a substantial impact on the character of the vicinity. This alternative would have less than significant land use and land use planning impacts.

Aesthetics

The Maximum Restoration Alternative would have aesthetic impacts similar to those under the proposed project but with moderately more invasive vegetation and tree removal projects. Therefore, although the types of aesthetic impacts are similar to those of the proposed project, the magnitude of those impacts on scenic resources in the Natural Areas and on the visual character or quality of the Natural Areas would be greater than under the proposed project because the Maximum Recreation Alternative would result in more changes to vegetation. However, invasive tree and vegetation removal would be followed by revegetation with native plants, so, overall, the Natural Areas would continue to be characterized as relatively undeveloped landscapes that allow for recreation. As evidenced in the visual simulations under the proposed project at Sharp Park and Mount Davidson, tree removal would not result in noticeable changes to the visual character or quality of the Natural Areas and would not have a substantial adverse effect on a scenic vista. Even with a moderately greater number of trees removed, as proposed under the Maximum Restoration Alternative, tree removal, which would be followed by revegetation with native trees and other native plants, would not significantly affect scenic views or vistas and would not result in a substantial demonstrable impact on the visual character or quality of the Natural Areas. Similar to the proposed project, under the Maximum Restoration Alternative, new trees would be placed in the Natural Areas to preserve important viewsheds and vistas. As such, the Maximum Restoration Alternative would have less than significant aesthetics impacts.

Cultural and Paleontological Resources

Under the Maximum Restoration Alternative, impacts on cultural and paleontological resources are similar to those under the proposed project and possibly greater as a result of more aggressive habitat restoration, which would remove more nonnative and invasive vegetation. However, those

impacts resulting from recreation aspects of the SNRAMP, such as trail construction, would be removed, so impacts on cultural and paleontological resources under the Maximum Restoration Alternative would be relatively similar to those of the proposed project. Programmatic large-scale projects and routine maintenance activities would continue to have the potential for significant impacts on cultural and paleontological resources; however, these impacts would be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project.

The Maximum Restoration Alternative includes would remove more invasive trees and vegetation than the proposed project and would revegetate these areas with native plants, resulting in greater alterations to the vegetation in the Natural Areas. However, the scale of vegetation changes in potentially eligible historic landscapes or forests would be relatively minor in a given Natural Area and would not result in a substantial adverse impact on the Golden Gate Park Historic District or contributing sites. Implementation of programmatic projects, such as the construction of erosion control structures, could result in a substantial adverse change to the significance of a historic resource. However, impacts on historic resources from programmatic projects would be mitigated to less than significant by implementing M-CP-1, which would require the SFRPD to avoid installing any such structures that would have an adverse effect on any potentially eligible historic resources.

Under the Maximum Restoration Alternative, the magnitude of impacts on the Sharp Park Golf Course's historical architectural resources would be greater than under the proposed project because the conversion of additional land to Natural Areas would increase the magnitude of the alterations to the historical character-defining features of the Sharp Park Golf Course. As for the proposed project, the available mitigation measures would not sufficiently reduce this impact below the level of significance, resulting in significant and unavoidable impacts. The significant impacts of the Sharp Park restoration under this alternative on eligible and identified historic resources are similar to those under the proposed project, although greater in magnitude, and could be reduced by implementing mitigation measures similar to those developed for the proposed project. However, Mitigation Measure M-RE-1 and Measure CP-7 would not reduce impacts to less than significant, and, similar to the proposed project, impacts of the Maximum Restoration Alternative on the character-defining features of the Sharp Park Golf Course would be significant and unavoidable.

Impacts on archaeological and paleontological resources at the Sharp Park Natural Area could be greater in magnitude, given that the restoration project area outside of the proposed Natural Area boundary has not been studied, and the presence or sensitivity of the additional area is unknown. The additional ground-disturbing activities associated with restoration under this alternative could

have significant impacts on subsurface resources, but they could be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project.

Wind and Shadow

Under this alternative, there would be a greater potential increase in the alteration of wind patterns within and near the Natural Areas, due to increased invasive tree removal. However, implementation of this alternative would also adhere to the tree removal guidelines in Section III.E, including one-for-one replacement of trees in San Francisco Natural Areas, and would follow the Urban Forestry Statements of the SNRAMP for tree removal techniques and system-wide practices. Therefore, although the potential for altering wind patterns would be higher than under the proposed project, the estimated impacts would still be less than significant. Similar to the proposed project, this alternative does not include any aboveground structures that would create new shadows; therefore, it would result in no shadow impacts.

Recreation

This alternative has impacts similar to those discussed for the proposed project. However, implementing management actions that restore native habitat throughout all Natural Areas would take precedent over implementing management actions for recreation facilities. Compared to the proposed project, this alternative involves no new trails in the Natural Areas, thereby providing reduced recreation opportunities. The Natural Areas Program would continue to promote passive recreation.

This alternative would further reduce the size of existing DPAs, so it could increase the use of the remaining DPAs, potentially resulting in greater physical deterioration of recreation facilities, compared to the proposed project. As with the proposed project, these impacts are expected to be less than significant. Within the cumulative timeframe, the GGNRA Dog Management Plan also would restrict dog use on GGNRA lands that may result in potentially significant and unavoidable cumulative impacts associated with the physical deterioration of the Natural Areas DPAs. As with the proposed project, this alternative could make a considerable contribution to the cumulative recreation impact of increased dog use on recreation resources, resulting in a significant and unavoidable impact.

As with the proposed project, while the amount of trail coverage would be reduced, trail access would be maintained in all Natural Areas, resulting in less than significant impacts on those recreation facilities. The impacts on the Sharp Park Golf Course identified under the proposed project would be greater under this alternative because of the increased amount of golf course

property converted to Natural Area for wetland restoration; this potentially significant impact could be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project.

Biological Resources

This alternative would have the greatest long-term beneficial impacts on biological resources compared to the other alternatives. The greatest extent of land would be restored from nonnative to native habitat, thus improving habitat and biodiversity for common plants and wildlife, special status species, and migratory species. This alternative involves removing moderately more invasive trees and creating no new trails. In the short term, this alternative would substantially disturb habitats by increased human presence, noise, trampling, and machinery from invasive vegetation removal and other programmatic restoration projects. Additional tree removal would increase the potential to impact nesting birds. However, as under the proposed project, the overall percentage of trees removed would still be small relative to the total number of trees left in place, so long-term impacts on birds would be less than significant. Compared to the proposed project, the Laguna Salada wetland complex restoration project would be expanded to include more habitat beyond the Natural Areas boundary (up to five acres). These restoration activities would result in short-term impacts on special status species and sensitive wetland and riparian habitat during construction but would result in long-term beneficial impacts on California red-legged frog and San Francisco garter snake species by increasing their habitat through additional wetland conversion and habitat restoration. The same mitigation measures discussed under the proposed project would be implemented under the Maximum Restoration Alternative, reducing impacts on biological resources to less than significant with mitigation. Cumulative impacts on biological resources as a result of the GGNRA Dog Management Plan are similar to the proposed project and could be significant; however, unlike the proposed project, this alternative is not anticipated to result in a considerable contribution to cumulative biological resources impacts because it would protect biological resources to the greatest extent.

Compared to the proposed project, this alternative includes additional restoration and management actions that would improve habitat for protected species and native species. Vegetation and wildlife could experience greater short-term disturbance and greater long-term habitat improvements from the greater amount of invasive vegetation removed and native vegetation planted.

The following discusses the potential biological resources impacts of the Maximum Restoration Alternative on special status plant and wildlife species, nesting birds, sensitive natural communities and wetlands, and fish and wildlife movement.

Special Status Plant Species occur throughout the Natural Areas, as discussed in Section V.G, Biological Resources. As with the proposed project, protected plant species could be inadvertently removed or destroyed during the programmatic and routine removal of invasive vegetation, resulting in a significant impact. These impacts would be mitigated to less than significant by incorporating M-BI-1a , M-BI-1b, and M-BI-5, which require the Natural Areas Program staff to conduct an annual biological training program identifying the types and location of special status plant species that occur throughout the Natural Areas and avoiding direct impacts on those species. For programmatic projects M-BI-1a and M-BI-1b require SFRPD to first avoid impacts on special status plants. If avoidance measures are infeasible, these mitigation measures require the SFRPD to minimize impacts on special status plants, to restore impacted areas, and to compensate for losses of protected plant species.

This alternative would further reduce DPA acreage in MA-1 and MA-2 areas, which are most sensitive. Although closing DPAs in MA-1 and MA-2 areas may increase DPA use in MA-3 areas, MA-3 areas are the least sensitive and are not likely to be near special status plant species. Overall, closing DPAs in MA-1 and MA-2 areas would protect special status plant species more than the proposed project, resulting in greater long-term beneficial impacts.

The Sharp Park restoration would not affect special status plant species because none are known to occur in the Laguna Salada wetland complex.

Special Status Wildlife Species in the Natural Areas are the Mission Blue butterfly at Sharp Park and McLaren Park; the California red-legged frog and San Francisco garter snake at Laguna Salada in Sharp Park; the California red-legged frog and San Francisco dusky-footed woodrat in the upper canyon of Sharp Park; the western pond turtle at Sharp Park and Lake Merced; and the western red bat in Golden Gate Park, Mount Davidson, Twin Peaks, Pine Lake, and McLaren Park. The Natural Areas also support special status bird species, addressed in the Migratory Birds section below.

Programmatic projects and routine maintenance under this alternative may have greater impacts on these species through short-term disturbance associated with the increased vegetation removal and revegetation. However, these impacts would be temporary and in the long term are anticipated to result in beneficial impacts on these species. Similar to the proposed project, these impacts could be reduced to less than significant by implementing Mitigation Measures M-BI-1a, which require Natural Areas Program staff to conduct an annual biological training program identifying the types and location of special status wildlife species that occur throughout the Natural Areas and avoiding direct impacts on them.

Reducing DPA acreage may increase impacts on special status wildlife species in or next to the remaining DPAs by increasing the use of those DPAs. Potential impacts on special status wildlife species could be reduced by actions identified in the SNRAMP to close DPAs or modify use of DPAs in those areas, in accordance with the SFRPD Dog Policy. On the other hand, closing DPAs in the most sensitive habitat areas, MA-1 and MA-2 areas, may also protect specific wildlife species that are likely to occur within or in proximity to DPAs in those areas.

Sharp Park restoration under this alternative may have greater short-term impacts on special status wildlife species due to the greater project area that would be disturbed during restoration. Similar to the proposed project, these impacts could be reduced to less than significant by implementing Mitigation Measure M-BI-6. Over the long term, this alternative would result in greater amount of habitat restored for protected species, in particular the San Francisco garter snake.

Migratory Birds. As under the proposed project, programmatic vegetation removal and other ground-disturbing activities may affect migratory and nesting bird species. With the increase in vegetation removal, this alternative would have a greater potential to affect migratory birds. This alternative would also include measure GR-4b in the SNRAMP, which would ensure that vegetation is managed outside the breeding season (February 1 through August 31), unless these activities had already begun before the breeding season and had already disturbed the area, or a breeding bird survey had been completed first. By implementing M-BI-1 and GR-4b, impacts on special status bird species would be reduced to less than significant. As with the proposed project, vegetation removal as part of routine maintenance also may affect migratory bird species; this impact would be reduced to less than significant by implementing measure GR-4b in the SNRAMP. Sharp Park restoration would also implement measure GR-4b of the SNRAMP before any vegetation is removed, reducing potential migratory bird impacts to less than significant.

Sensitive Natural Communities and Wetlands. The greater amount of programmatic vegetation removal and replacement under this alternative would increase short-term disturbance of sensitive natural communities and wetlands, compared to the proposed project. While these impacts would be temporary, implementing Mitigation Measure M-BI-1 would reduce temporary impacts on riparian and wetlands by requiring avoidancee and minimization measures. In addition, those projects involving work in the riparian zones or wetlands would require permits from the San Francisco Bay RWQCB, the USACE, or CDFG, which may include additional avoidance and minimization measures. Over the long term, this alternative would result in the greatest amount of protection and restoration of sensitive natural communities, particularly coastal scrub, coastal dune, and oak

woodland habitats, and may result in greater amount of wetland and riparian habitat throughout the Natural Areas.

This alternative would further reduce DPA acreage, focusing on MA-1 and MA-2 areas, which are the most sensitive. Although closing DPAs in MA-1 and MA-2 areas may increase DPA use in MA-3 areas, MA-3 areas are the least sensitive and are not likely to be near sensitive natural communities. Overall, closing DPAs in MA-1 and MA-2 areas would protect sensitive natural communities more than under the proposed project. Additionally, any observed impacts of dog use on sensitive natural communities could be reduced by actions identified in the SNRAMP to close DPAs or modify use of those areas, in accordance with the SFRPD Dog Policy.

Native grassland and coastal scrub habitat at Sharp Park would increase as a result of the efforts to create additional upland areas for the San Francisco garter snake. The Sharp Park wetland impacts under this alternative are similar to those of the proposed project and would be mitigated to less than significant by implementing Mitigation Measure M-BI-12a and M-BI-12b.

Fish and Wildlife Movement. Greater invasive vegetation removal under this alternative may have greater temporary impacts on migratory bird habitat, compared to the proposed project. This potentially significant impact would be mitigated by implementing measure GR-4b of the SNRAMP. Over the long term, the native vegetation replacement activities would likely result in beneficial impacts on migratory birds and their habitat.

As with the proposed project, short-term disturbance of the Laguna Salada wetland complex as part of Sharp Park restoration would have significant impacts on wildlife movement and migratory corridors. Implementing Mitigation Measure M-BI-6a and M-BI-6b would reduce this impact to less than significant.

Cumulative Impacts. The combined reductions in Natural Area DPAs and off-leash areas under the GGNRA Dog Management Plan would increase use of the remaining off-leash areas, resulting in cumulatively significant impacts on biological resources in or near those areas. While this alternative seeks to protect biological resources to the greatest extent, like the proposed project, this alternative would also close DPAs, which combined with the actions proposed by the GGNRA could result in concentrated dog use within the remaining off-leash areas. Increased use may result in impacts to biological resources within the Natural Areas DPAs, including disturbance of breeding birds. The cumulative combination of proposed dog management for the Natural Areas and the GGNRA project could result in indirect significant impacts on biological resources in the Natural Areas.

Similar to the proposed project, the comparative contributions of each project to this potentially significant cumulative impact cannot be determined based on the speculative nature of the behavioral and physical factors contributing to that determination, and this alternative's contribution is conservatively determined to be ***significant and unavoidable***.

Hydrology and Water Quality

This alternative involves more programmatic invasive vegetation removal and native vegetation replacement than under the proposed project. The reduction in trail coverage under this alternative would concentrate use of existing trails, possibly requiring more maintenance of those trails, but would reduce the potential for erosion from construction and use of new trails. More tree removal would expose more of the ground surface to short-term direct impacts of erosion caused by rainwater and runoff until replacement vegetation was established. This greater amount of tree removal also would increase the potential for short-term soil disturbance and resulting runoff. However, as under the proposed project, the overall percentage of trees removed would still be small relative to the total number of trees left in place. Invasive trees removed from San Francisco Natural Areas would be replaced with native trees. Also, as under the proposed project, trees would be removed gradually, using methods designed to minimize soil disturbance, root-balls would left in place, and new vegetation cover would be planted to fill exposed areas. Potential spills of gasoline or other petroleum products from motorized equipment used for the programmatic projects also may affect water quality. By implementing Mitigation Measures M-HY-1 and M-HZ-13, as discussed under the proposed project, the water quality impacts under this alternative would be reduced to less than significant.

Routine maintenance also may result in accidental releases of gasoline or other petroleum products from motorized equipment used for those activities. Implementing Mitigation Measure M-HZ-14, as discussed under the proposed project, would reduce to less than significant potential water quality impacts from the accidental release of petroleum products.

Compared to the proposed project, the Laguna Salada wetland complex would be expanded to include up to five acres of additional habitat restoration beyond the Natural Area boundary, which could result in additional short-term impacts on water quality from erosion and sedimentation; however, in the long term, reduced sediment loading is expected as adjacent areas stabilize. By implementing Mitigation Measures M-HY-1 and M-HZ-13, as discussed under the proposed project, the water quality impacts of Sharp Park restoration under this alternative would be reduced to less than significant.

Hazards and Hazardous Materials

Under this alternative, impacts related to the use of hazardous materials are similar to those described for the proposed project. Because of the similarity of programmatic activities, the impacts from mosquitoes and ticks, herbicides, and lead contamination would also be less than significant. The SFRPD would implement similar management practices for use of pesticides that would reduce the potential to impact nearby human populations, wildlife, and groundwater. Also, the San Francisco Department of the Environment and the San Mateo County Mosquito and Vector Control District would continue to implement their current programs for pesticide use and for controlling or preventing mosquitoes, ticks, and insect-borne diseases. Due to the increased vegetation removal and replacement, the impacts of wind throw and wildfires would be greater than under the proposed project but are still considered less than significant. Similar to the proposed project, this alternative's programmatic projects could increase the potential for hazardous materials release. Implementing Mitigation Measure M-HZ-13, which requires developing and implementing emergency response plans, would reduce those impacts to less than significant.

Routine maintenance also may result in accidental releases of gasoline or other petroleum products from motorized equipment. As for the proposed project, implementing Mitigation Measure M-HZ-14 would reduce this impact to less than significant.

Potential hazardous material impacts resulting from the Sharp Park restoration project under this alternative are similar to those under the proposed project and would be reduced to less than significant by implementing Mitigation Measure M-HZ-13.

Agriculture and Forest Resources

Similar to the proposed project, this alternative would have no impacts on agricultural resources. This alternative seeks the maximum amount of restoration, so more invasive trees and vegetation may be removed and replaced with native trees, grassland habitat, and scrub habitat, compared to the proposed project. This alternative would remove a greater amount of invasive trees, but it would enhance native habitat. As with the proposed project, this alternative would result in less than significant impacts from tree removal and native vegetation replacement and would have no impact from conflicting with zoning for forest land and timberland.

Air Quality

The Maximum Restoration Alternative likely would emphasize the improvement of native habitat over recreation and includes increased urban forest removal and increased restoration of areas supporting native plants and animals. This alternative could result in programmatic air quality

impacts similar to those described under the proposed project. As for the proposed project, impacts from fugitive dust emissions and health risk impacts would be less than significant; however, programmatic projects could result in significant unavoidable impacts by exceeding the BAAQMD thresholds for NOx emissions. Similar to the proposed project, the contribution from this project to regional air quality would be cumulatively considerable, resulting in a significant and unavoidable cumulative impact.

As with the proposed project, routine maintenance under this alternative is expected to occur at a level similar to what it is now and would result in less than significant air quality impacts.

The increased Sharp Park restoration would result in significant unavoidable impacts by exceeding the BAAQMD thresholds for NOx emissions, similar to the proposed project. These impacts would be reduced by implementing Mitigation Measure M-AQ-4, but not to a level of insignificance; therefore, criteria air pollutant impacts under this alternative are similar to those of the proposed project and would be significant and unavoidable. The restoration project is expected to have less than significant impacts on fugitive dust emissions and health risk impacts.

Other Resource Areas

Population and Housing

As with the proposed project, the Maximum Restoration Alternative does not involve activities that would induce substantial population growth or create the need for replacement housing. There would be no population and housing effects from this alternative.

Transportation and Circulation

Transportation and circulation impacts from implementing this alternative are similar to those described under the proposed project. However, as this alternative would seek a maximum restoration of the Natural Areas, it could result in greater closures and reductions in size of DPAs in the Natural Areas. Therefore, users of closed or reduced DPAs may be required to use other DPAs, potentially increasing the number of vehicle trips to and from them. Although the exact number of vehicle trips that would result under this alternative cannot be quantitatively estimated, a small percentage of the DPA users are expected to access other DPAs on a daily basis using personal vehicles. Therefore, the increase in vehicle trips under this alternative would be less than significant.

Noise

Noise impacts under this alternative are similar to those described under the proposed project. Similar types and amounts of equipment would be used, so noise impacts would be less than significant.

Greenhouse Gas Emissions

The Maximum Restoration Alternative would result in Natural Areas with less urban forest, compared to the proposed project. With more tree removal and less forest acreage, less carbon may be sequestered than under the proposed project; however, as discussed for the proposed project, shrubs and grasses are also significant sources of carbon sequestration. While impacts related to GHG emissions under the Maximum Restoration Alternative could be greater than those described under the proposed project, the SFRPD would comply with the *Greenhouse Gas Analysis: Compliance Checklist* for activities in the City and County of San Francisco and applicable regulations to reduce impacts from GHGs; therefore, the Maximum Restoration Alternative impacts related to GHG emissions would be less than significant.

Utilities and Service Systems

Compared to the proposed project, reintroducing native species and replacing trees would have greater short-term irrigation water needs for establishing vegetation under this alternative; however, irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. The Maximum Restoration Alternative does not involve any activities that would affect landfill capacity, solid waste regulations, and operation or relocation of local utilities. Therefore, impacts on utilities and service systems would be less than significant.

Public Services

As with the proposed project, the Maximum Restoration Alternative does not involve any activities that would require constructing or modifying public service facilities, so there would be no public service impacts from this alternative.

Geology and Soils

Compared to the proposed project, this alternative would result in greater ground disturbance from increased restoration. The resulting increased potential for soil erosion would be addressed by the erosion control measures called for in the SNRAMP. There is a potential for strong ground shaking at all Natural Areas from a nearby earthquake. Under this alternative, the increased likelihood that people or structures would experience adverse effects from strong ground shaking would be less than significant because the potential increased user population would not be exposed to an

increased potential for ground failure in the Natural Areas. This alternative would have less than significant landslide effects because it includes measures that would minimize erosion and reduce the risk from potential landslides. While activities under this alternative would disturb soils, those activities would not cause a geologic unit or soil to become unstable, resulting in a less than significant impacts. This alternative includes activities that would result in ground disturbance, but the magnitude and location of those activities would not be sufficient to substantially change the topography or any unique geologic or physical features of the Natural Areas. As a result, the geology and soils effects of this alternative would be less than significant.

Mineral and Energy Resources

Compared to the proposed project, use of motorized equipment and vehicles for management activities under this alternative would consume similar amounts of fuel as the proposed project, and those consumption amounts are expected to be minor. None of the activities under this alternative would result in the loss of availability of a mineral resource or mineral resource recovery site. The mineral and energy resources effects of this alternative would be less than significant.

VII.C MAXIMUM RECREATION ALTERNATIVE

VII.C.1 Description

The Maximum Recreation Alternative would restore and improve access to the Natural Areas for recreation wherever it does not interfere with the continued existence of native vegetation and federally or state-listed sensitive species. Compared to the proposed project, this alternative focuses restoration in MA-1 areas and prioritizes recreation opportunities in MA-2 and MA-3 areas. Over time, less habitat identified by the SNRAMP would be restored, while all or most of the recreation-related projects, such as trail network improvement, would be implemented. As such, the Maximum Recreation Alternative includes substantially less invasive tree and vegetation removal, thereby resulting in a long-term increase in the presence of nonnative species and a reduction in native habitat. Tree and vegetation removal would be limited to that necessary to meet the Natural Areas Program tree maintenance health and safety goals and those trees required to be removed for trail creation or other projects providing additional recreation facilities (picnic areas and playgrounds).

The Maximum Recreation Alternative would close informal and social trails in MA-1 areas but not all informal and social trails in MA-2 and MA-3 areas. This alternative includes moderately more trail creation in MA-2 and MA-3 areas than the proposed project and would also allow mountain biking and horseback riding where those uses would not conflict with special status species and their habitats (both protected species and locally significant species). Over time, the Maximum

Recreation Alternative would result in Natural Areas with a greater amount of trail coverage, less native plant and animal habitat, and a greater amount of nonnative urban forest coverage. The Maximum Recreation Alternative would not close or reduce DPAs, but no new DPAs would be created in the Natural Areas, consistent with the SFRPD moratorium[3] on new DPAs. Large-scale programmatic projects would occur under this alternative, but most of those projects would be to provide new trails or other recreation facilities in the Natural Areas.

The Maximum Recreation Alternative includes restoration of the wetland complex at Laguna Salada. However, restoration would differ from the proposed project in that it would be limited to the geographic limits of the Natural Area; restoration would not encroach on the golf course operations, except as required for temporary construction. The primary focus of restoration at the Laguna Salada wetland complex under this alternative is to remove tules, cattails, and excess sediment and organic matter, requiring dredging of Laguna Salada. Sediment traps or a sediment basin, or both, would be installed at Laguna Salada. Compared to the proposed project, this alternative would result in less edge and upland habitat for the San Francisco garter snake.

In summary, the Maximum Recreation Alternative would:

- Not close or reduce existing DPAs
- Add trails to inaccessible areas, such as the west slope of Glen Canyon
- Preserve some of the social trails identified in the SNRAMP for decommissioning
- Create or modify trails to increase multiuse activities, such as mountain biking and horses
- Establish new recreation facilities, such as playgrounds and picnic areas
- Restore less habitat, resulting in a greater presence of nonnative vegetation
- Restore only the areas in the geographic limits of the Natural Area surrounding the Laguna Salada marsh complex

The Maximum Recreation Alternative meets some, but not all, of the project objectives presented in Section III.C. In particular, the Maximum Recreation Alternative does not meet the objective related to enhancement of the native ecosystem and biodiversity because this alternative would result in an

[3] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

overall decrease in habitat restoration and management of the Natural Area's resources as compared to the proposed project. The Maximum Recreation Alternative would only include restoration/enhancement of Laguna Salada within the geographic limits of that Natural Area, providing more limited benefits to special status species, as compared to the proposed project.

VII.C.2 Impacts

Land Use and Land Use Planning

The Maximum Recreation Alternative provides maximum recreational use in Natural Areas and would result in less habitat restoration. This alternative would not physically divide an established community. Similar to the Maximum Restoration Alternative, this alternative would impact only the internal use of the Natural Areas by prioritizing recreation.

By prioritizing recreation and providing greater opportunities for a wider variety of recreation, the Maximum Recreation Alternative would restore less habitat, potentially conflicting with San Francisco Recreation and Open Space Element Policy 2.13, which states that "native plant habitats should be preserved and efforts undertaken to remove exotic plant species from these areas." If recreation goals are prioritized, resulting in less habitat restored, preservation of habitats supporting native plants and animals may be reduced. Additionally, Policy 2.13 of the Recreation and Open Space Element references the 1995 plan as containing "policies governing access and recreational use and enjoyment of protected natural areas to ensure that the natural resource values are not diminished or impacted by public use." However, Policy 1 of the Environmental Protection Element calls for achieving "a proper balance among the conservation, utilization, and development of San Francisco's natural resources." While the Recreation and Open Space Element protects native habitats in the Natural Areas, the General Plan also contains policies to ensure a balance between the protection of natural resources and access to those resources. The Maximum Recreation Alternative would increase in recreation opportunities, which could result in less habitat protection and restoration to the extent that management goals do not interfere with the continued existence of special status species, including federally or state-listed species. Although portions of some of the Natural Areas may eventually accommodate more recreational uses, this alternative, as proposed, would not result in a significant impact from conflicting with General Plan policies or other policies or regulations governing the protection of natural resources.

The Maximum Recreation Alternative would increase recreation opportunities in Natural Areas. Given that recreation is a current use in the Natural Areas, providing additional recreation opportunities would not result in substantial changes to the land use, and there would be no

substantial impact on the character of the Natural Areas or their vicinity. This alternative would have less than significant land use and land use planning impacts.

The proposed restoration at Laguna Salada in the Sharp Park Natural Area would not physically divide an established community, conflict with an applicable land use plan, policy, or regulation, or impact the character of the vicinity. The Laguna Salada restoration, as proposed under this alternative, would have no impact on land use and land use planning.

Aesthetics

The Maximum Recreation Alternative would improve recreational access to the Natural Areas wherever this does not interfere with the continued existence of special status species and their habitats. Compared to the proposed project, this alternative would result in additional recreation facilities (e.g., additional trails and picnic areas) and in some Natural Areas would allow for additional recreation opportunities, including mountain biking and horseback riding, resulting in greater use of the Natural Areas over time. This alternative would also result in less invasive tree and vegetation removal and less large-scale habitat restoration projects, including invasive species removal. Under the Maximum Recreation Alternative, the visual character of the Natural Areas would consist of a greater presence of recreation and nonnative vegetation. Although this outcome may be undesirable from the perspective of preserving the native vegetation in the Natural Areas, it would not substantially degrade the visual character of the Natural Areas because the Natural Areas would continue to be characterized as relatively undeveloped landscapes that provide recreation opportunities. The Natural Areas Program would continue routine maintenance, which would ensure that recreation would not substantially degrade the visual quality of the Natural Areas. As with the proposed project, construction of recreation facilities would require subsequent environmental review; however, new trails and other similar facilities, such as picnic areas, would not substantially damage scenic resources of the natural or built environment. Similar to the proposed project, the Maximum Recreation Alternative would not result in a substantial adverse effect on a scenic vista, and impacts on aesthetic resources under this alternative would be less than significant.

Cultural and Paleontological Resources

Under the Maximum Recreation Alternative, impacts on cultural and paleontological resources are similar to those described under the proposed project. However, impacts from restoration would be lessened or removed. This quantitatively lower level of impact would be offset by an increase in impacts from additional recreation facilities, such as the establishment of new trails. These

potentially significant impacts could be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project.

The Maximum Recreation Alternative includes large-scale programmatic projects, most of which would consist of construction of new trails and other recreation facilities. These projects would require subsequent environmental review once specific alignments and location of those facilities are developed. However, similar to the proposed project, construction of those facilities would not result in a substantial adverse impact on historic landscapes or forests and would not result in a substantial adverse impact on the Golden Gate Park Historic District or contributing sites. Implementation of other types of programmatic projects, such as the construction of erosion control structures, could result in a substantially adverse change to the significance of a historic resource. However, impacts on historic resources, as a result of programmatic projects, would be mitigated to less than significant by implementing M-CP-1, which would require the SFRPD to avoid installing any structures that would have an adverse effect on potentially eligible historic resources. Therefore, by implementing mitigation measures identified for the proposed project, impacts on historic resources would be less than significant.

At the Sharp Park Natural Area, restoration of the Laguna Salada wetland complex would be limited to the geographic boundary of the Natural Area and would not modify the layout of the Sharp Park Golf Course. Impacts on buried or submerged cultural or paleontological resources under the Maximum Recreation Alternative are similar to the proposed project and could be reduced to less than significant by implementing Mitigation Measure M-CP-7. Given that restoration would be confined to the Natural Area boundary, the Maximum Recreation Alternative would not modify the Sharp Park Golf Course and would have no effect on the historical character of the golf course.

Wind and Shadow

Compared to the proposed project, the Maximum Recreation Alternative would result in substantially less invasive tree removal. Tree removal would be limited to dead, diseased, and hazardous trees, consistent with SFRPD tree maintenance health and safety goals. Additionally, some trees may be removed for the construction of new trails and other recreation facilities. Under the Maximum Recreation Alternative, tree removal techniques would follow the Urban Forestry Statements of the SNRAMP. As with the proposed project, this alternative would not result in significant ground-level wind speeds or wind throw impacts, so it would have less than significant wind impacts.

The Maximum Recreation Alternative may include construction of aboveground recreation facilities, including picnic areas and playgrounds. These facilities would not create new shadows that would substantially affect outdoor recreation activities, and shadow impacts under the Maximum Recreation Alternative would be less than significant.

Recreation

The Maximum Recreation Alternative would prioritize recreation facility construction over habitat restoration. In addition, this alternative would allow for multiuse of trails for mountain biking and horseback riding where those uses would not conflict with protection of special status species and their habitats (both protected species and locally significant species). Compared to the proposed project, the Maximum Recreation Alternative would not close or reduce DPAs. As such, the Maximum Recreation Alternative would increase use of the Natural Areas. However, under this alternative, Natural Areas Program staff would continue routine maintenance, which would ensure that the physical deterioration of recreation facilities (trails, DPAs, and other facilities) would not be substantially degraded.

As discussed above, the Maximum Recreation Alternative would not close or reduce DPAs in the Natural Areas and would therefore not contribute to more intense use of other DPAs, as a result of displaced dog owners. However, the GGNRA Dog Management Plan would restrict dog use on GGNRA lands, potentially increasing dog use in the Natural Areas, which may result in the deterioration of the Natural Areas DPAs. Because this alternative would not close or reduce DPAs, unlike the proposed project, the Maximum Recreation Alternative would not contribute to potentially significant cumulative impacts from increased dog use, resulting in the deterioration of DPAs in the Natural Areas. Therefore, the Maximum Recreation Alternative's contribution to potentially cumulatively significant impacts on recreational resources would be less than cumulatively considerable.

At the Sharp Park Natural Area, restoration of the Laguna Salada wetland complex would be limited to the geographic boundary of the Natural Area and would not encroach on the Sharp Park Golf Course or modify the golf course in any way. Therefore, the Maximum Recreation Alternative would have no impact on recreational resources at Sharp Park as a result of restoration. Restoration at Laguna Salada would include removing tules, cattails, and excess sediment and organic matter and would require dredging of Laguna Salada. Sediment traps or a sediment basin, or both, would also be installed in Laguna Salada. These improvements would increase the capacity of Laguna Salada to accommodate runoff during the rainy season, reducing the potential for, and extent of, seasonal flooding of the golf course.

Biological Resources

The Maximum Recreation Alternative would be least effective at improving habitats in the Natural Areas. Special status species, riparian areas, sensitive habitats, wetlands, migratory species and corridors, and nursery sites would be protected as required by federal, state, and local laws. Compared to the proposed project, this alternative emphasizes creating multiuse trails over protecting and restoring native habitat (excluding special status species and their habitats). However, under the Maximum Recreation Alternative, funding would be prioritized for recreation (trail creation, for example) over habitat restoration. Over time, fewer of the habitat restoration projects identified by the Natural Areas Program would be implemented; as such, the Maximum Recreation Alternative includes substantially less invasive tree and vegetation removal, thereby resulting in a long-term increase in nonnatives and a reduction in native habitat. Tree and vegetation removal would be limited to that necessary to meet the Natural Areas Program tree maintenance health and safety goals and those trees required to be removed for trail creation or other projects providing additional recreation facilities (picnic areas and playgrounds). Over time, the Maximum Recreation Alternative would result in Natural Areas with a greater number of trails, less native plant and animal habitat, and a greater amount of nonnative urban forest and invasive species.

Below is a discussion of the potential biological resources impacts of the Maximum Recreation Alternative on special status plant and wildlife species, nesting birds, sensitive natural communities and wetlands, and fish and wildlife movement.

Special Status Plant Species occur throughout the natural areas, as discussed in Section V.G, Biological Resources. The Maximum Recreation Alternative includes large-scale programmatic projects, most of which would construct new trails and other recreation facilities, although some large-scale projects to improve native habitat would still occur. Large-scale programmatic projects would require subsequent environmental review once specific alignments and locations of those facilities and restoration projects are developed. However, similar to the proposed project, large-scale programmatic projects could result in significant impacts on special status plant species (both protected species and locally significant species). In addition, the Maximum Recreation Alternative includes routine maintenance, as described under the SNRAMP. It is possible that Natural Areas Program staff, volunteers, or contractors for large-scale programmatic projects may inadvertently remove or destroy special status plant species during maintenance and restoration and other programmatic projects. These impacts would be mitigated to less than significant by incorporating mitigation measures M-BI-1a and M-BI-1b, as identified for the proposed project. M-BI-1a, required

for all programmatic projects would require that, before implementing programmatic projects, the SFRPD conduct special status plant surveys identifying the location of all sensitive plants in the project footprint. M-BI-1a also requires the SFRPD to avoid impacts on those plant species to the extent feasible, through such actions as realigning trails and minimizing trail development in high quality special status plant habitat. If avoidance mechanisms are not possible, M-BI-1 requires the installation of flagging and temporary fencing that restricts SFRPD contractor access to sensitive areas during programmatic projects. Where avoidance and minimization measures are not adequate to reduce impacts on special status plant species, M-BI-1a further requires habitat restoration or compensation for impacts on special status plant species. Furthermore, M-BI-5 would reduce impacts on special status plant species that may occur as a result of routine maintenance by requiring the SFRPD to conduct annual biological training, identifying the types and location of special status plant species that occur throughout the Natural Areas and avoiding direct impacts on those species.

The Maximum Recreation Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Observation indicates that dogs in the DPAs are affecting special status plant species, including those at Lake Merced and Bernal Hill. Continued use of these DPAs by off-leash dogs would continue to impact special status plant species, resulting in significant impacts on special status plants. Impacts on special status plant species could be reduced or avoided by actions identified in the SNRAMP to close DPAs or to modify areas to on-leash dog use only. However, without those specific actions identified in the SNRAMP to close or reduce off-leash dog use, impacts on special status plant species from dog use would otherwise be considered significant and unavoidable.

The Maximum Recreation Alternative would result in a more trails created and diversity in trail users. Over the long term, increased use of the Natural Areas could result in a greater impact on special status plant species than the proposed project by increasing human disturbance, presence, trampling, and the spread of weeds in Natural Areas. These potentially significant impacts could be reduced to less than significant by implementing management actions identified in the SNRAMP, such as GR-2c (protect sensitive species and vegetation from human disturbance) and mitigation measures identified for the proposed project, including M-BI-1a, which requires the SFRPD staff to limit public access in areas where special status plant species are being affected by posting signs or installing exclusionary fencing. By implementing these measures, impacts of the Maximum Recreation Alternative on special status plant species would be less than significant.

As discussed above, the Maximum Recreation Alternative would be less effective at improving special status species and native habitats in the Natural Areas than under the proposed project. Over time, the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater level of nonnative urban forest and invasive species coverage. This alternative, however, would not prohibit large-scale habitat restoration and invasive tree removal and therefore would be more beneficial by preserving and enhancing special status plant species habitat than either the No Project or Maintenance Alternatives. Additionally, as with all alternatives considered in this EIR, the Maximum Recreation Alternative would protect special status plant species as required by federal, state, and local laws during implementation of programmatic projects and routine maintenance. However, the lack of focus on restoring native habitats and removing invasive species under the Maximum Restoration Alternative could threaten the continued existence of sensitive plant species in the Natural Areas, especially those of limited distribution in the Natural Areas. The potentially significant impact of the Maximum Recreation Alternative could only be mitigated by implementing the restoration activities identified in the SNRAMP; therefore, the long-term impacts on special status plant species could be significant.

No special status plant species occur in the Laguna Salada wetland complex in the Sharp Park Natural Area. Therefore, restoration at Laguna Salada under the Maximum Recreation Alternative would have no effect on special status plant species.

Special Status Wildlife Species in the Natural Areas are listed above under the biological resources analysis for the No Project Alternative and in Section V.G, Biological Resources.

The impacts of programmatic projects under the Maximum Recreation Alternative are similar to those described for the proposed project. The Maximum Recreation Alternative would prioritize recreation projects over habitat restoration or invasive tree removal projects and, over the long term, would be the less beneficial than the proposed project. This alternative, however, would not prohibit large-scale habitat restoration and invasive tree removal and therefore could be more beneficial by preserving and enhancing special status wildlife species habitat than either the No Project or Maintenance Alternatives. Large-scale programmatic projects would require subsequent environmental review once specific alignments and location of those facilities and restoration projects are developed. However, similar to the proposed project, large-scale programmatic projects could result in significant impacts on special status wildlife species. In addition, the Maximum Recreation Alternative includes routine maintenance, as described under the proposed SNRAMP. It is possible that Natural Areas Program staff, volunteers, or contractors for large-scale programmatic projects may inadvertently affect special status wildlife species during maintenance and restoration

and other programmatic projects. Potential impacts on special status wildlife would be mitigated to less than significant by incorporating Mitigation Measures M-BI-1a and M-BI-1b, as identified for the proposed project. M-BI-1a would be required for all programmatic projects and would require that, before implementing programmatic projects, the SFRPD survey the project site, according to applicable special status species survey protocols, to identify whether any such species occur in the project footprint or could otherwise be affected by the project. M-BI-1a also requires the SFRPD to avoid impacts on those species to the extent feasible, through such actions as realigning trails (to avoid, for example, woodrat nests) and minimizing trail development in high quality special status wildlife habitat. If avoidance mechanisms are not possible, M-BI-1a requires the installation of flagging and temporary fencing that restricts SFRPD contractor access to sensitive areas during implementation of programmatic projects. Where avoidance and minimization measures are not adequate to reduce impacts on special status wildlife species and their habitats, M-BI-1a further requires habitat restoration or compensation of impacts on these species. Furthermore, M-BI-5 would reduce impacts on special status wildlife that may occur as a result of routine maintenance by requiring the SFRPD to conduct annual biological training to identify the types and location of those species that occur throughout the Natural Areas and avoiding impacts on special status wildlife species.

In addition, implementing management action GR-4b identified for the proposed project would be required to reduce impacts on special status bird species and to comply with the federal MBTA. Implementing management action GR-4b requires vegetation management to be conducted outside of the breeding season to the extent possible. If this is not possible, GR-4b would require a bird survey to be conducted before vegetation is removed and to avoid active nests. Implementing M-BI-1a and GR-4b would reduce impacts on special status bird species to less than significant.

The Maximum Recreation Alternative would not close or reduce DPAs in the Natural Areas. Dog use in the DPAs may affect special status wildlife species and nesting birds, including those at Lake Merced and McLaren Park. Continued use of these DPAs by off-leash dogs would continue to impact special status wildlife species and nesting birds, resulting in significant impacts on special status wildlife. Impacts on special status wildlife species and nesting birds could be reduced or avoided by actions identified in the SNRAMP to close DPAs or modify areas to on-leash dog use only. However, without those specific actions identified in the SNRAMP to close or reduce off-leash dog use, impacts on special status wildlife species and nesting birds from dog use would otherwise be considered significant and unavoidable.

The Maximum Recreation Alternative would result in a greater amount of trail creation and diversity in trail users. Over the long term, increased use of the Natural Areas could result in a greater impact on special status wildlife than under the proposed project by increasing human disturbance and presence. Increased human use could also result in more litter and intentional disturbance to wildlife. These potentially significant impacts could be reduced to less than significant by implementing management actions identified in the SNRAMP: GR-11c (routinely monitor Natural Areas for new social trails and close or reroute any trails that impact sensitive species or sensitive habitat or that contribute to erosion) and mitigation measures identified for the proposed project, including M-BI-1a (require Natural Areas Program staff to limit public access in areas where special status plant species are being affected by posting signs or installing exclusionary fencing). By implementing these measures, impacts of the Maximum Recreation Alternative on special status wildlife species would be less than significant.

Overall, the Maximum Recreation Alternative would be less effective at improving special status species and native habitats in the Natural Areas than the proposed project and would likely result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest and invasive species coverage. This alternative, however, would not prohibit large-scale habitat restoration and invasive tree removal. As with all alternatives considered in this EIR, the Maximum Recreation Alternative would protect special status wildlife species, as required by federal, state, and local laws, during programmatic projects and routine maintenance. However, the lack of focus on restoring native habitats and removing invasive species under the Maximum Restoration Alternative could threaten the continued existence of special status wildlife species in the Natural Areas, especially those with limited distribution. This potentially significant impact of the Maximum Recreation Alternative could only be mitigated by implementing the restoration activities identified in the SNRAMP; therefore, in the long term, impacts on special status wildlife species could be significant.

The Laguna Salada wetland complex would be restored under the Maximum Recreation Alternative. However, restoration would differ from the proposed project in that activities would be limited to the geographic boundaries of the Sharp Park Natural Area and therefore would not be as extensive. Restoration at Laguna Salada would include removing tules, cattails, and excess sediment and organic matter and would require dredging of Laguna Salada. Sediment traps and a sediment basin, or both, would also be installed in Laguna Salada. Additional upland habitat for the San Francisco garter snake would be created where this additional habitat is contained in the Natural Area boundary. Restoration could result in short-term construction impacts on special status wildlife species. However, these impacts could be reduced to less than significant by implementing

mitigation measures identified for the proposed project, specifically implementation of M-BI-1a. In the long term, restoration of Laguna Salada under this alternative would result in less edge and upland habitat being restored and would be less beneficial for the California red-legged frog and San Francisco garter snake. However, the Maximum Recreation Alternative would improve the current conditions for these species, but to sufficiently achieve recovery of the San Francisco garter snake and California red-legged frog under the Maximum Recreation Alternative, restoration at a scale similar to that under the proposed project would be required. Overall, restoration would increase the capacity of the Laguna Salada wetland complex to accommodate runoff during the rainy season, reducing the potential for, and extent of, seasonal flooding of the golf course. If reauthorized by the USFWS and the CDFG, the SFRPD would continue to monitor and move egg masses deposited outside the Laguna Salada wetland complex to suitable habitat within the wetland complex during the rainy season if flooding results in a risk of stranding.

Migratory Birds. Tree and vegetation removal under the Maximum Recreation Alternative would be smaller in scale than the proposed project because it would be limited to those necessary to maintain forest health and safety and limited to those required to be removed for creating new trails or other recreation facilities. However, tree and vegetation removal under the Maximum Recreation Alternative could still disturb migratory birds and destroy active nests. As with the proposed project, the Maximum Recreation Alternative would be required to comply with the federal MBTA, which prevents the take or destruction of birds and their nests. Compliance with the MBTA would reduce impacts on migratory birds to less than significant. Implementing management action GR-4b, which requires vegetation to be removed outside the breeding season to the extent possible, and if not possible, requires a pre-construction nesting bird survey and avoidance measures, would ensure compliance with the MBTA. By implementing these measures and complying with the MBTA, impacts on migratory birds, including special status bird species, would be less than significant. Impacts on nesting birds as a result of DPAs are addressed above under special status wildlife species.

Sensitive Natural Communities and Wetlands. Under the Maximum Recreation Alternative, the SFRPD would favor recreation facilities over habitat restoration and invasive species removal. In the long term, the Maximum Recreation Alternative would restore native habitat, including sensitive natural communities (such as native grasslands) and would be less effective at controlling invasive vegetation.

Construction-related impacts on sensitive natural communities and wetlands from programmatic projects under the Maximum Recreation Alternative are similar to those under the proposed project.

They would require implementing the erosion control BMPs identified for the proposed project to reduce erosion and impacts of erosion on water quality. Trail creation and other programmatic projects would include the use of heavy equipment and could affect sensitive natural communities and wetlands through direct removal of vegetation that comprises the sensitive natural community. Impacts on sensitive natural communities and wetlands would be temporary and could be reduced to less than significant by implementing mitigation measure M-BI-1a.

The Maximum Recreation Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Observation indicates that dogs are affecting sensitive natural communities in the DPAs, including riparian habitat at McLaren Park. Continued use of these DPAs by off-leash dogs would continue to impact sensitive natural communities, resulting in significant impacts. Impacts on sensitive natural communities could be reduced or avoided by actions identified in the SNRAMP to close DPAs or to modify areas to on-leash dog use only. However, without those specific actions identified in the SNRAMP to close or reduce off-leash dog use, impacts on sensitive natural communities from dogs would otherwise be considered significant and unavoidable.

Fish and Wildlife Movement. The Maximum Recreation Alternative favors implementing recreation facilities over habitat restoration. Over time, the Maximum Recreation Alternative would result in Natural Areas with a greater amount of trail coverage, less native plant and animal habitat, and a greater amount of nonnative urban forest coverage. In effect, the Maximum Recreation Alternative would result in greater fragmentation of habitat and a higher incidence of human disturbance to wildlife species. However, the Natural Areas would remain relatively undeveloped and would continue to serve as corridors for wildlife movement. There would not be significant impacts on migratory corridors, wildlife movement, or nursery sites.

Cumulative Impacts on biological resources as a result of the GGNRA Dog Management Plan would be similar to those of the proposed project. These impacts are potentially significant, but the Maximum Recreation Alternative would not close or reduce any of the DPAs and would therefore not have the potential to increase the use of other DPAs or result in additional impacts on biological resources as a result of consolidating the use of dogs in Natural Areas DPAs. Dog use in the Natural Areas would continue to have project-level significant impacts on biological resources; however, because the Maximum Recreation Alternative would not close or reduce any DPAs, it would not have a considerable contribution to this cumulatively significant biological resources impact.

Hydrology and Water Quality

Under this alternative, impacts on hydrology and water quality would be similar to but slightly greater than the impacts described for the proposed project. This is because this alternative would favor creating recreation facilities over habitat restoration, including large-scale erosion control projects. In addition, the Maximum Recreation Alternative would add new trails to inaccessible areas, such as slopes along Glen Canyon, and would allow for multiuse activities, including mountain biking and horseback riding. Natural Areas Program staff would continue with routine maintenance, as described in the SNRAMP.

Large-scale programmatic trail creation projects, especially trails on slopes, could increase erosion and may affect water quality or stormwater quality. Impacts on water and stormwater quality, erosion, and siltation are similar to those described for programmatic projects under the proposed SNRAMP. Impacts on hydrology and water quality could be reduced to less than significant by implementing the erosion control BMPs identified for the SNRAMP, as applicable for each programmatic project. Additionally, programmatic projects, including trail creation using heavy or other gasoline-powered equipment could result in the accidental release of gasoline or other fluids. If this were to happen during implementation of programmatic projects or routine maintenance, it could have significant impacts on water or stormwater quality. However, mitigation measures M-HZ-13 and M-HZ-14 require the SFRPD to develop and implement an emergency response plan for the accidental release of fuels and other hazardous fluids for programmatic projects and routine maintenance; therefore, these impacts would be mitigated to less than significant.

In the long term, the Maximum Recreation Alternative would result in more intense use of the Natural Areas as a result of additional trails and from allowing more intensive uses, such as mountain biking and horseback riding, potentially increasing erosion, which may affect nearby water and stormwater quality. Potential long-term impacts could be mitigated by implementing measures identified in the SNRAMP, as follows:

- Management action GR-11c (routinely monitor Natural Areas for new social trails and close or reroute any trails that impact sensitive species or sensitive habitat or that contribute to erosion);
- Management action GR-12a (revegetate steep slopes that have very thin vegetation to promote general soil stability); and
- The erosion control BMPs identified in the SNRAMP, as applicable, when areas are found to be experiencing erosion as a result of more intense use of the Natural Areas.

By implementing the actions identified in the proposed project, potential impacts on water quality fro, increased erosion would be reduced to less than significant.

At the Laguna Salada wetland complex in the Sharp Park Natural Area, restoration would include removing tules, cattails, and excess sediment and organic matter. It would require dredging and installing sediment traps or a sediment basin, or both, in Laguna Salada. Construction-related impacts on hydrology and water quality are similar to the proposed project and could be reduced to less than significant by implementing mitigation measure HY-1. In the long term, restoration at Laguna Salada under the Maximum Recreation Alternative would be beneficial as these activities would reduce sedimentation or eutrophication of the wetland complex. Restoration proposed for Laguna Salada under the Maximum Recreation Alternative would increase the capacity of Laguna Salada to accommodate runoff during the rainy season, reducing the potential for, and extent of, seasonal flooding of the golf course.

Hazards and Hazardous Materials

Hazards and hazardous materials impacts under the Maximum Recreation Alternative are similar to those of the proposed project. Programmatic projects, including trail creation, as well as routine maintenance that requires diesel- or gasoline-powered equipment, including heavy-duty construction vehicles, chainsaws and weed whackers, could result in the accidental release of gasoline. This could have significant impacts on vegetation and water courses. Impacts from the accidental release of hazardous materials could be reduced to less than significant by implementing an emergency response plan, as identified in Mitigation Measures M-HZ-13 and M-HZ-14. Further, impacts from pesticides and herbicides, lead contamination, and wildfires would be similar to those described for the proposed project, as the SFRPD would implement similar management practices while using pesticides that would reduce the potential to impact the nearby human populations, wildlife, and groundwater to less than significant.

Although the Maximum Recreation Alternative would result in a greater use of the Natural Areas, this would not significantly increase the potential for wildfires. Therefore, the Maximum Restoration Alternative would result in less than significant wildfire impacts.

Restoration at Laguna Salada includes dredging the wetland complex and removing cattails and tules and would therefore remove habitat for tule mosquitoes. Similar to the proposed project, the San Francisco Department of the Environment and the San Mateo County Mosquito and Vector Control District would continue to implement current programs for controlling and preventing

mosquitoes and ticks that would reduce the potential for insect-borne diseases to less than significant.

Agriculture and Forest Resources

Similar to the proposed project, this alternative would have no impacts on agricultural resources. The Maximum Recreation Alternative would remove dead, dying, and diseased trees or trees that pose a public safety hazard. In addition, creating new trails and other recreation facilities may remove additional trees throughout the Natural Areas. Overall, this alternative includes substantially less invasive tree removal. As with the proposed project, this alternative would have less than significant agricultural and forest resources impacts.

Air Quality

The air quality impacts under the Maximum Recreation Alternative are similar to those described for the proposed project. Programmatic projects, including creating additional trails and other recreation facilities, would require the use of heavy equipment. The magnitude and scale of activities under this alternative are similar to those described under the proposed project. As with the proposed project, the impacts from fugitive dust emissions and health risk impacts would be less than significant, as described in Section V.K; however, programmatic projects could result in significant unavoidable impacts by exceeding the BAAQMD thresholds for NOx criteria pollutant emissions. Therefore, the Maximum Restoration Alternative would result in significant unavoidable air quality impacts with regard to criteria pollutants and less than significant impacts with regard to fugitive dust and health risks. Similar to the proposed project, the contribution from this project to regional air quality would be cumulatively considerable, resulting in a significant and unavoidable cumulative criteria air pollutant impacts.

Other Resource Areas

Population and Housing

As with the proposed project, the Maximum Recreation Alternative does not involve activities that would induce substantial population growth or create the need for replacement housing. There would be no population and housing effects from this alternative.

Transportation and Circulation

Transportation and circulation impacts from this alternative are similar to those described under the proposed project. However, as this alternative would seek to improve access to recreation in the Natural Areas, this would result in a higher number of visitors. Therefore, the number of vehicle

trips is expected to be higher under this alternative. However, most of the visitors would either walk, bike, or drive short distances from locations close to the Natural Areas. Even with the improvement of the recreational areas, the increase in visitors to the Natural Areas and associated increase in vehicle trips would not result in a significant increase in traffic that could affect the traffic load and capacity of the street system or exceed the level of service for designated roads or highways. Therefore, the transportation and circulation impacts under this alternative are expected to be less than significant.

Noise

Similar to the proposed project, construction of programmatic projects, including new trails and other recreation facilities under this alternative could result in temporary increases in noise levels. Construction-related noise impacts would be discontinuous, would be of very short duration, and would occur during daytime hours, consistent with applicable construction noise ordinances. Therefore, construction noise impacts would be less than significant. Over the long term, the Maximum Recreation Alternative would increase use of the Natural areas, potentially increasing noise levels. However, noise impacts are not expected to exceed current standards or expose persons living near the Natural Areas to substantial noise impacts. Therefore, the Maximum Recreation Alternative would have less than significant noise impacts.

Greenhouse Gas Emissions

Greenhouse gas emissions under the Maximum Recreation Alternative are similar to those of the proposed project, except that this alternative may result in additional emissions from increased visitor use. The Maximum Recreation Alternative would improve access to recreation in the Natural Areas and would result in a higher number of visitors. Therefore, this alternative is anticipated to increase vehicles trips and associated greenhouse gas emissions. However, most of the visitors would either walk, bike, or drive short distances from locations close to the Natural Areas, so the Maximum Recreation Alternative would not result in a significant amount of greenhouse gas emissions from vehicle trips.

On the other hand, this alternative would result in substantially less invasive tree removal. Tree removal would be limited to those that are dying, diseased, and hazardous and only those to be removed to accommodate recreation facilities. Dead, dying, and diseased trees are not able to store accumulated carbon as efficiently as healthy trees, and after a time no longer serve as sufficient carbon sinks. Overall, the SFRPD would be required to comply with the *Greenhouse Gas Analysis: Compliance Checklist* for activities in the City and County of San Francisco and applicable regulations

to reduce impacts from greenhouse gases. Therefore, greenhouse gas emission impacts under this alternative would be similar to the proposed project and are considered less than significant.

Utilities and Service Systems

The Maximum Recreation Alternative favors constructing recreation facilities over restoring habitat, so, compared to the proposed project, this alternative would require less irrigation water. Irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. The Maximum Recreation Alternative does not involve activities that would affect landfill capacity, solid waste regulations, and operation or relocation of local utilities. Impacts of the Maximum Recreation Alternative on utilities and service systems would be less than significant.

Public Services

As with the proposed project, the Maximum Restoration Alternative does not involve activities that would require constructing or modifying public service facilities, nor would activities under this alternative increase police or fire emergency response times; therefore, there would be no public services impacts from this alternative.

Geology and Soils

The Maximum Recreation Alternative includes activities and that are similar in scale to programmatic project activities identified under the proposed project. These activities would not increase seismic or landslide hazards, cause a geologic unit to become unstable, substantially change the topography of a Natural Area, or result in substantial soil erosion.

As with the proposed project, there is a potential for strong ground shaking at all Natural Areas due to a nearby earthquake. The Maximum Recreation Alternative does not include any activities that would increase the exposure of people or structures to adverse effects from seismic ground-shaking or seismic failure. Similar to the proposed project, this alternative would not increase landslide hazards.

In the long term, the Maximum Recreation Alternative would result in more intense use of the Natural Areas from creating additional trails and from allowing more intensive uses, such as mountain biking and horseback riding, potentially increasing erosion. The potential long-term impacts could be reduced by implementing measures identified in the SNRAMP, as follows:

- Management actions GR-11c (routinely monitor Natural Areas for new social trails and close or reroute any trails that impact sensitive species or sensitive habitat or that contribute to erosion);
- GR-12a (revegetate steep slopes that have very thin vegetation to promote general soil stability); and
- The erosion control BMPs identified in the SNRAMP, as applicable, when areas are found to be experiencing erosion.

By implementing the erosion-control management actions identified in the proposed project, potential erosion impacts would be reduced to less than significant.

Programmatic project activities, such as creating new trails, would initially disturb soils; however, implementing erosion control measures identified as part of the proposed project would reduce the potential for construction to substantially erode soil. Also, it would prevent a geologic unit or soil from becoming unstable and so would result in a less than significant impact.

While this alternative includes activities that would result in ground disturbance, the magnitude and location of those activities would not be sufficient to substantially change the topography or to impact any unique geologic or physical features of the Natural Areas. By implementing the erosion control management actions identified for the proposed SNRAMP, erosion impacts from the Maximum Recreation Alternative would be less than significant.

Mineral and Energy Resources

Compared to the proposed project, the Maximum Recreation Alternative would increase visitor use, resulting in a minor increase in vehicle use and associated fuel. However, improved Natural Areas may also encourage more local nonmotorized forms of recreation, potentially resulting in minor reductions in vehicle miles traveled, thus reducing fuel consumption. None of the activities under this alternative would result in the loss of availability of a mineral resource or mineral resource recovery site. Similar to the proposed project, the mineral and energy resources effects of the Maximum Recreation Alternative would be less than significant.

VII.D MAINTENANCE ALTERNATIVE

VII.D.1 Description

Under the Maintenance Alternative the general components of the SNRAMP, the SFRPD would implement BMPs, adaptive management, IPM, and the monitoring plan, which are detailed in

Chapter III. Under this alternative, the SFRPD would maintain the current distribution of native and nonnative habitat and species throughout the Natural Areas. There would be no conversion of nonnative habitat to native habitat, and other features of the Natural Areas also would be retained. There would be less habitat restoration and less invasive tree and vegetation removal compared to the proposed project. Over time, this alternative likely would result in Natural Areas with habitat and recreation characteristics similar to those currently present; habitat in MA-2 and MA-3 areas would naturally convert to eucalyptus, ivy, blackberry, and invasive shrub species.

As the Maintenance Alternative would preserve the current trail system, it would not close trails or create new trails. The Maintenance Alternative would not close or reduce DPAs; however, no new DPAs would be created in the Natural Areas, consistent with the SFRPD moratorium[4] on new DPAs. Large-scale programmatic projects would occur under this alternative, but most of those projects would be directed at erosion control, with some invasive vegetation removal and no trail modifications.

Activities at Laguna Salada in the Sharp Park Natural Area would be limited to removing accumulated sediment and tules by hand or other low-impact means during the dry season (April 15 to October 15). Laguna Salada would not be dredged, and during the rainy season Natural Areas Program staff would continue monitoring for the California red-legged frog, in compliance with the state and federal ESAs.

In summary, the Maintenance Alternative would:

- Primarily employ passive management in MA-1, MA-2 and MA-3 areas to preserve the distribution and abundance of native and nonnative vegetation assemblages
- Not close or create trails
- Not close or reduce existing DPAs
- Not restore the Laguna Salada marsh complex

The Maintenance Alternative meets some, but not all of the project objectives presented in Section III.C. Specifically, the Maintenance Alternative does not meet the objectives related to enhancement

[4] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.

of the native ecosystem and biodiversity and restoration of the Laguna Salada wetland complex. The Maintenance Alternative would not result in restoration projects that address the issues that may adversely affect the ecosystem functions and biological diversity in the Natural Areas. Furthermore, the Maintenance Alternative would not provide additional recreation opportunities compatible with San Francisco's natural resources. This alternative would be generally feasible.

VII.D.2 Impacts

Land Use and Land Use Planning

The Maintenance Alternative would implement fewer management actions, compared to the proposed project. Current recreation and habitat areas would remain unchanged. This alternative would not physically divide an established community because no action would be undertaken that would represent a significant physical change to the Natural Areas.

This alternative may conflict with San Francisco and City of Pacifica policies, which call for trail improvements, habitat enhancement, and native or appropriate vegetation and forestation. Policy 2.13 states that "native plant habitats should be preserved and efforts undertaken to remove exotic plant species from these areas." By limiting trail development, conservation, and restoration in the Natural Areas, certain policy goals may not be fulfilled. While the Maintenance Alternative does not fully meet the objectives of the governing land use policies, it would not result in a significant land use impact and would not alter the permitted land use.

As stated before, the Maintenance Alternative would not result in new trails or undertake significant restoration. With minimal change to the use of the Natural Areas anticipated as part of the Maintenance Alternative, there would be no substantial impact on the character of the vicinity.

In summary, the Maintenance Alternative would not physically divide an established community, conflict with land use policies, or have a substantial impact on the character of the Natural Areas and their vicinity and would have less than significant land use and planning impacts.

Aesthetics

The Maintenance Alternative would not improve the presence of native vegetation and would not increase natural landscape elements in local Natural Areas because the SFRPD would only prevent the spread of invasive nonnative vegetation and would not increase native vegetation. The Maintenance Alternative may remove exotic species and trees and would maintain the distribution and abundance of native vegetation; the types of impacts associated with those activities are similar to those of the proposed project. The impacts on scenic resources in the Natural Areas and on the

visual character or quality of the Natural Areas would be less than those of the proposed project because there would be only limited vegetation alteration. There would be less active vegetation management under the Maintenance Alternative, compared to both the No Project Alternative and the proposed project, resulting in the least alteration of the visual landscape. Because of this, the Maintenance Alternative would not result in a substantial adverse effect on a scenic vista, would not substantially degrade the visual character or quality of the site and its surroundings, and would not substantially damage scenic resources of the natural or built environment. As with the proposed project, this alternative would have less than significant impacts on aesthetics.

Cultural and Paleontological Resources

Compared to the proposed project and other alternatives, impacts on cultural and paleontological resources would be at their lowest under the Maintenance Alternative. The current condition of the Natural Areas would be maintained with considerably limited ground-disturbing activities. While reduced, this alternative would result in some ground disturbance, and the archaeological and paleontological resources impacts of those management activities could be significant. By implementing the mitigation measures identified for the proposed project, including Mitigation Measure M-CP-10, which was developed for routine maintenance at archeologically sensitive Natural Areas (Tank Hill and Lake Merced), ground-disturbing activities proposed under this alternative would also result in less than significant impacts on archaeological and paleontological resources.

This alternative includes vegetation management that is similar in scale to the routine maintenance identified for the proposed project, which would result in less than significant impacts on historic landscapes and the Golden Gate Park Historic District.

The Maintenance Alternative does not include restoring the Laguna Salada wetland complex, and actions at Laguna Salada would be limited to hand removal of accumulated sediments, tules, and the invasive plant species at Horse Stable Pond. This alternative would not encroach on the Sharp Park Golf Course or modify the golf course in any way; therefore; it would have no effect on the historical character and historical character-defining features of the Sharp Park Golf Course.

Wind and Shadow

Compared to the proposed project, fewer trees would be removed under this alternative. Further, implementation of this alternative would also adhere to the tree removal guidelines in Section III.E.5, including one-for-one replacement of trees in San Francisco Natural Areas. It would follow the Urban Forestry Statements of the SNRAMP for tree removal techniques and system-wide

practices. Similar to the proposed project, under the Maintenance Alternative, the potential for tree removal to alter wind patterns is less than significant. As with the proposed project, the Maintenance Alternative does not include any aboveground structures that would create new shadows, so it would not result in shadow impacts.

Recreation

Compared to the proposed project, the Maintenance Alternative may increase recreation opportunities in the Natural Areas because there would be no closure or conversion of recreation facilities. However, no new trails would be established either.

The Maintenance Alternative calls for minor maintenance at Laguna Salada in the Sharp Park Natural Area and at Horse Stable Pond. This would not encroach into, or otherwise modify, the golf course, and its playability would be retained. Therefore, the Maintenance Alternative would have no impact on recreation resources at Sharp Park. While the proposed project would have a significant impact on the golf course, it would be mitigated by M-RE-6 and therefore is not a significant unavoidable impact of the project. However, without the proposed restoration, the Sharp Park Golf Course would continue to be flooded during the rainy season and would continue to require seasonal closures.

This alternative would not close or reduce any of the DPAs and would therefore not increase the use of other DPAs that may result in the physical deterioration of recreation facilities. The GGNRA Dog Management Plan would restrict dog use on GGNRA lands that could result in significant and unavoidable cumulative impacts from the deterioration of the Natural Areas DPAs. However, the Maintenance Alternative would not reduce the size or number of DPAs in the Natural Areas and would therefore not contribute to any potentially significant cumulative recreation impacts from the deterioration of the Natural Areas as a result of dog use restrictions.

Different from the proposed project, the Maintenance Alternative would not require mitigation measures to achieve less than significant recreation impacts.

Biological Resources

The Maintenance Alternative likely would be the most restrictive to habitat improvements in the Natural Areas. The current distribution of native and nonnative habitat and species would be maintained, resulting in limited beneficial effects on biological resources. Maintenance to control encroaching nonnative species could impact species in the short term through increased human presence, noise, trampling, and machinery. Implementing the BMPs, the IPM program, and the

general recommendations of the SNRAMP would lessen the impacts caused by ground-disturbing activities. This alternative would not close or create new trails or reduce the acreage of DPAs, so, relative to the proposed project, it may increase recreation facilities. Activities at Laguna Salada would include hand removal of tules and accumulated sediment during the dry season and monitoring and relocating California red-legged frog egg masses during the rainy season. Invasive plant removal and revegetation at Horse Stable Pond would continue.

The following discusses the potential biological resources impacts of the Maintenance Alternative on special status plant and wildlife species, nesting birds, sensitive natural communities and wetlands, and fish and wildlife movement.

Special Status Plant Species occur throughout the Natural Areas, as discussed in Section V.G, Biological Resources. The number of large-scale programmatic projects under this alternative would be greatly reduced, compared to the proposed project, because they would be directed primarily toward erosion control, with moderately less invasive vegetation removal and no trail modifications. While the programmatic projects under this alternative could affect both protected plant species and locally significant plant species through inadvertent removal, the reduced scope of these projects would substantially reduce impacts, compared to the proposed project. Habitat maintenance would be smaller in scale and similar to that described for routine maintenance under the proposed project. However, it is possible that Natural Areas Program staff or their volunteers may inadvertently remove or destroy special status plant species during maintenance and restoration. These potentially significant impacts would be mitigated to less than significant by implementing the mitigation measures identified for the proposed project (M-BI-1a, M-BI-1b, and M-BI-5), which require the SFRPD to conduct annual biological training, identifying the types and location of special status plant species that occur throughout the Natural Areas and to avoid impacts on special status plant species. M-BI-1a and M-BI-1b would require that programmatic projects be designed to first avoid, then minimize, restore, or compensate for (if necessary) impacts on those species.

The Maintenance Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Observation indicates that off-leash dog play and exercise, such as running at high speed, is eroding soil and damaging plants, which affects special status plant species in the existing DPAs, including those at Bernal Hill and Lake Merced. Continued use of these DPAs by off-leash dogs would continue to impact special status plant species, resulting in significant impacts on special status plants. These impacts could be mitigated by actions identified in the SNRAMP that call for monitoring and closing DPAs or modifying areas to on-leash dog use only where those impacts are

occurring. Without implementation of these measures in the SNRAMP, this impact would continue and may result in potentially significant impacts on special status plant species.

No special status plant species occur in the Laguna Salada wetland complex in the Sharp Park Natural Area; therefore, restoration at Laguna Salada under the Maintenance Alternative would have no effect on special status plant species.

Special Status Wildlife Species in the Natural Areas include the Mission Blue butterfly at Sharp Park and McLaren Park; the California red-legged frog and San Francisco garter snake at Laguna Salada wetland complex in Sharp Park; California red-legged frog, San Francisco garter snake, and San Francisco dusky-footed woodrat in the upper canyon of Sharp Park; western pond turtle at Sharp Park and Lake Merced; and the western red bat in Golden Gate Park, Mount Davidson, Twin Peaks, Pine Lake, and McLaren Park. The Natural Areas also support special status bird species, addressed in the migratory birds section below.

Under the Maintenance Alternative, the number and degree of programmatic projects would be much less than under the proposed project and would therefore have less of a potential to affect special status wildlife species. Maintenance under this alternative would be relatively similar to that under the proposed project. Should programmatic projects or routine maintenance be conducted in Natural Areas with special status wildlife species, there is potential for those species to be affected, potentially resulting in significant adverse impacts. However, similar to the proposed project, these impacts could be reduced to less than significant by implementing Mitigation Measures M-BI-1a and M-BI-5, which require the SFRPD to conduct annual biological training, identifying the types and location of special status wildlife species that occur throughout the Natural Areas and avoiding direct impacts on those species. Where programmatic projects are being implemented and avoidance measures are determined to be infeasible, Mitigation Measure M-BI-1a requires the SFRPD to minimize impacts on special status species, followed by restoration and compensatory mitigation, as necessary.

The Maintenance Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Dog use in the DPAs may affect special status wildlife species, and continued use of these DPAs by off-leash dogs would continue to impact special status wildlife species, resulting in significant impacts. These impacts could be mitigated by actions identified in the SNRAMP that call for monitoring and closing DPAs or modifying areas to on-leash dog use only where those impacts are occurring. Without implementing these measures in the SNRAMP, this impact would continue and could result in significant impacts on special status wildlife species.

Activities at Sharp Park would continue as they do currently and restoration would be limited to hand removal of tules and accumulated sediment. Impacts on protected species at Laguna Salada could be mitigated by implementing the applicable measures described in M-BI-6a and M-BI-6b, which would require the SFRPD to educate workers, to undertake pre-activity surveys, and to initiate additional measures to avoid or minimize impacts on these species. Avoidance would include removing tule and sediment during the dry season, when these special status species are less likely to be present. By implementing mitigation measures M-BI-6a and M-BI-6b, impacts on special status wildlife species could be reduced to less than significant.

As a result of ongoing natural processes, conditions at the Laguna Salada wetland complex would continue to degrade and be less hospitable to the western pond turtle, California red-legged frog, and San Francisco garter snake, due to increased sedimentation and eutrophication (a condition of dissolved nutrients in a water body promoting plant life, such as algae, which deplete the water's oxygen levels). Substantial deterioration of California red-legged frog, San Francisco garter snake, and western pond turtle habitat could affect the habitat elements required by the species to maintain a viable breeding populaiton. Restoration of the Laguna Salada wetland complex on the scale of the proposed project, with implementation of mitigation measures developed for the proposed project, is intended to enhance the special status species habitat that may continue to degrade if no action is taken.

Without implementing the Sharp Park restoration project, direct impacts on California red-legged frog could occur from continued flooding of the golf course during the rainy season, which may result in frog egg masses being produced in the high water and being stranded after rainstorms. If reauthorized by the USFWS and the CDFG, the SFRPD would continue to monitor and move egg masses deposited outside the Laguna Salada wetland complex to suitable habitat within the wetland complex during the rainy season if flooding results in a risk of stranding.

Migratory Birds. Under the Maintenance Alternative, there would be moderately fewer invasive trees and other vegetation would be removed. With no trail creation, there would also be no vegetation removal associated with that activity. Any vegetation removal under this alternative would be to maintain the distribution and abundance of vegetation. Compared to the proposed project, the Maintenance Alternative would result in fewer temporary impacts on migratory birds and their habitat. As with the proposed project, this alternative would be required to comply with the federal MBTA, which prevents the take or destruction of migratory birds and their nests. Compliance with the MBTA would reduce impacts on migratory birds to less than significant. GR-4b requires vegetation to be removed outside of the breeding season to the extent possible, and if not possible,

requires a pre-construction nesting bird survey and avoidance measures. This would ensure compliance with the MBTA. Implementing Mitigation Measure M-BI-1a would ensure that measures are taken to avoid direct and indirect impacts on migratory bird species when implementing programmatic projects; where those impacts cannot be avoided, the SFRPD would then minimize, restore, or compensate for (if necessary) those impacts. By implementing these measures and complying with the MBTA, programmatic project impacts on migratory birds would be less than significant.

As with the proposed project, vegetation removal as part of routine maintenance also may significantly impact migratory bird species; this impact would be reduced to less than significant by implementing measure GR-4b in the SNRAMP, as described above.

Sensitive Natural Communities and Wetlands. The primary programmatic projects under the Maintenance Alternative are those for erosion control; however, some invasive vegetation may be removed. Therefore, this alternative would have the least potential to result in temporary impacts on sensitive natural communities, and those impacts would be less than significant. On the other hand, as this alternative seeks to maintain the current distribution and abundance of vegetation assemblages, it would not result in long-term beneficial impacts on sensitive natural communities.

As with the proposed project, programmatic projects could affect protected riparian and wetland habitats. By implementing Mitigation Measure M-BI-1a, the impacts would be reduced to less than significant. Mitigation Measure M-BI-1a would require the SFRPD to avoid and minimize impacts on riparian and wetland habitat. This mitigation measure also requires the SFRPD to restore or compensate for impacts on riparian and wetland habitat where impacts cannot be avoided. Therefore, by implementing Mitigation Measure M-BI-1a, impacts on sensitive natural communities (including riparian habitat) and wetlands would be less than significant.

The Maintenance Alternative would not close or reduce the acreage of DPAs in the Natural Areas. Observation indicates that dogs in the DPAs are affecting sensitive natural communities and wetlands. Continued use of these DPAs by off-leash dogs would continue to impact these areas, resulting in potentially significant impacts. Potential impacts on sensitive natural communities and wetlands could be mitigated by actions identified in the SNRAMP that call for monitoring and closing DPAs or modifying areas to on-leash dog use only, where those impacts are occurring. Without these measures in the SNRAMP, this impact would continue and could result in potentially significant impacts on these habitats.

Routine maintenance under this alternative would be similar to the current level of maintenance, and this alternative would not increase the degree of routine maintenance impacts. Therefore, as with the proposed project, impacts from routine maintenance would be less than significant.

Fish and Wildlife Movement. The Maintenance Alternative would involve limited programmatic projects. As such, the impacts associated with this alternative would be reduced, compared to the proposed project. Routine maintenance under this alternative would be similar to those under the proposed project. Due to the limited nature of these programmatic projects and routine maintenance, potential impacts on migratory corridors, wildlife movement, and nursery sites would be less than significant.

Cumulative Impacts on biological resources as a result of the GGNRA Dog Management Plan would be similar to those of the proposed project. Under the No Project Alternative, impacts on biological resources in DPAs identified for closure or reduction under the SNRAMP would continue. However, because this alternative would not close or reduce any DPAs, the Maintenance Alternative would not contribute to any cumulative biological resources impacts resulting from the GGNRA dog management plan.

Hydrology and Water Quality

The primary programmatic projects under the Maintenance Alternative are those for erosion control, with moderately less invasive vegetation removal than under the proposed project. Due to the reduction in programmatic activity relative to the proposed project, this alternative also would have reduced potential to impact hydrology and water quality. However, programmatic project activities would result in soil disturbance, and runoff could carry eroded soils to surface water, resulting in potentially significant impacts on water quality. Potential spills of gasoline or other petroleum products from motorized equipment used for the programmatic projects also may affect water quality. By implementing Mitigation Measures M-HY-1 and M-HZ-13, as discussed under the proposed project, the water quality impacts under this alternative would be reduced to less than significant.

Routine maintenance also may result in accidental releases of gasoline or other petroleum products from motorized equipment. By implementing Mitigation Measure M-HZ-14, as discussed under the proposed project, the water quality impacts under this alternative would be reduced to less than significant.

As a result of ongoing natural processes, water quality conditions at the Laguna Salada wetland complex would continue to degrade due to increased sedimentation and eutrophication (a condition of dissolved nutrients in a water body promoting plant life, such as algae, which deplete the water's oxygen levels), resulting in potentially significant long-term impacts on the water quality of Laguna Salada. These long-term impacts could be reduced to less than significant by implementing restoration sufficient to maintain or improve the current water quality levels. Without implementation of the proposed Sharp Park restoration project, this alternative could result in potentially significant impacts on the water quality of the Laguna Salada wetland complex. Additionally, this alternative would not alleviate current flooding impacts at Sharp Park, resulting in continued seasonal flooding and closure of the golf course, as discussed in the analysis of the impacts of the No Project Alternative on recreation resources.

Hazards and Hazardous Materials

The primary programmatic projects under the Maintenance Alternative are those for erosion control, with moderately less invasive vegetation removal. As such, impacts from the use of hazardous materials would be reduced, as compared to the proposed project. However, the potential for fire hazards under this alternative would be higher, as fewer trees would be removed; therefore, BMPs described in the Urban Forestry Statements of the SNRAMP (such as tree thinning) would be implemented at a lower rate in the forested areas, including in fire hazards areas classified as high or moderate. However, the SFRPD would continue to implement routine management that includes pruning dead branches and removing dead trees. Therefore, the risks of fire hazards would be less than significant. Under this alternative, as with all alternatives, equipment use could result in accidental spills of gasoline and other petroleum products used by motorized equipment. As with the proposed project, these impacts could be mitigated to less than significant by implementing Mitigation Measures M-HZ-13 and M-HZ-14, which require the SFRPD to prepare emergency response plans for accidental releases of hazardous materials. Impacts from the use of pesticides and herbicides and lead contamination are similar to those described under routine maintenance for the proposed project, as the SFRPD would be implementing similar management practices, while using pesticides that would reduce the potential to impact the nearby human populations, wildlife, and groundwater. Therefore, this alternative would have less than significant hazards and hazardous materials impacts.

At Laguna Salada, the Maintenance Alternative calls for manually removing tule stands. The actions at Laguna Salada would be limited in scale and are anticipated to be less effective at controlling tules, potentially providing habitat for tule mosquitoes. The San Francisco Department of the

Environment and the San Mateo County Mosquito and Vector Control District would continue to implement current programs for controlling and preventing mosquitoes and ticks reducing the potential for insect-borne diseases to less than significant.

Agriculture and Forest Resources

Similar to the proposed project, the Maintenance Alternative would have no impacts on agricultural resources. Unlike the proposed project, this alternative involves tree removal and replacement only to the extent necessary to maintain the current distribution and abundance of vegetation. With fewer trees removed to allow healthier trees to grow, this alternative may result in adverse effects on forest health. However, because it involves no loss or conversion of forest land or timberland, this alternative would have less than significant agriculture and forest resources impacts, as under the proposed project.

Air Quality

With the primary programmatic projects under the Maintenance Alternative limited to those for erosion control and vegetation removal, emissions of air pollutants and associated effects on air quality would be reduced, relative to the proposed project. Impacts from fugitive dust emissions and health risk impacts would be less than significant, as described for the proposed project in Section V.K; however, programmatic projects could result in significant unavoidable impacts by exceeding the BAAQMD thresholds for NOx criteria pollutant emissions. Therefore, programmatic activities under the Maintenance Alternative would result in significant unavoidable air quality impacts from criteria pollutants and less than significant impacts from fugitive dust and fewer health risks. As described under the proposed project, routine maintenance would be similar to current activities conducted in the Natural Areas and therefore would not result in a net increase of fugitive dust, criteria air pollutant emissions, or health risks. Similar to the proposed project, the contribution from this project to regional air quality would be cumulatively considerable, resulting in a significant and unavoidable cumulative air quality impact.

Other Resource Areas

Population and Housing

As with the proposed project, the Maintenance Alternative does not involve activities that would induce substantial population growth or create the need for replacement housing. There would be no population and housing effects from this alternative.

Transportation and Circulation

As the Maintenance Alternative would maintain the current distribution of the natural habitats, implementing this alternative would not change the current conditions of the transportation and circulation system. As this alternative would not reduce or close any DPAs, no additional vehicle trips are expected as a result of people traveling by car to other DPAs.

Noise

Noise impacts under this alternative are less than those described under the proposed project. Although the types of equipment could be the same, the level of use would be less than the proposed project because programmatic activities would be limited to those for controlling erosion and removing vegetation. The continued use of powered equipment, including chainsaws and weed whackers, would be similar in duration and intensity to current activities and those described under routine maintenance for the proposed project. Therefore, noise impacts under this alternative would be less than significant.

Greenhouse Gas Emissions

Activities under the Maintenance Alternative would be smaller in scale and magnitude than those described under the proposed project. This alternative would not modify habitats or land uses. Therefore, GHG emissions would be less than those described under the proposed project because there would be reduced use of motorized heavy equipment. Further, with less habitat modification and tree removal, existing carbon sequestration would not be substantially affected. Similar to the proposed project, the SFRPD would comply with the *Greenhouse Gas Analysis: Compliance Checklist* for activities in the City and County of San Francisco and applicable regulations to reduce GHG emissions. Therefore, impacts from GHG emissions under the Maintenance Alternative would be less than significant.

Utilities and Service Systems

Compared to the proposed project, this alternative would require less irrigation water, particularly for establishing new vegetation, due to the reduced level of invasive vegetation removal and replacement. Irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. The Maintenance Alternative does not involve activities that would affect landfill capacity, solid waste regulations, and operation or relocation of local utilities. Therefore, impacts on utilities and service systems would be less than significant.

Public Services

As with the proposed project, the Maintenance Alternative does not involve activities that would require construction or modification of public service facilities, nor would the Maintenance Alternative increase police or fire emergency response times. Therefore, there would be no public services impacts from the Maintenance Alternative.

Geology and Soils

Compared to the proposed project, this alternative would result in less ground disturbance due to reduced programmatic project activities. These activities would not increase seismic or landslide hazards, would not cause a geologic unit to become unstable, would not substantially change the topography of a Natural Area, and would not result in substantial soil erosion. Potential soil erosion would be addressed by the erosion control BMPs included in the SNRAMP. As under the proposed project, there is a potential for strong ground shaking at all Natural Areas from a nearby earthquake. Under this alternative, the increased likelihood that people or structures would experience adverse effects from strong ground shaking would be less than significant because the user population would not be exposed to an increased potential for ground failure in the Natural Areas. Landslides and erosion-related impacts are expected to be less than significant because this alternative involves less ground disturbance relative to the proposed project and includes erosion control measures. While activities under this alternative would disturb soils, those activities would not cause a geologic unit or soil to become unstable, resulting in less than significant geology impacts. While this alternative includes activities that would result in ground disturbance, the magnitude and location of those activities would not be sufficient to substantially change the topography or any unique geologic or physical features of the Natural Areas. In light of the above, the geology and soils impacts of this alternative would be less than significant.

Mineral and Energy Resources

Compared to the proposed project, motorized equipment and vehicles for management activities under this alternative would consume less fuel due to the decreased number of programmatic project activities. None of the activities under this alternative would result in the loss of availability of a mineral resource or mineral resource recovery site. Therefore, the mineral and energy resources effects of the Maintenance Alternative would be less than significant.

VII.E ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 21 summarizes the effects of the proposed project and alternatives. In determining the environmentally superior alternative for the proposed project, this EIR considers the environmental

Table 21
Summary of Environmental Effects

	Proposed Project	Maximum Restoration Alternative	Maximum Recreation Alternative	Maintenance Alternative	No Project Alternative
Land Use and Land Use Planning	LTS	LTS	LTS	LTS	NI
Aesthetics	LTS	LTS	LTS	LTS	LTS
Cultural and Paleontological Resources	SU/M	SU/M	LTS/M	LTS/M	LTS/M
Cultural and Paleontological Resources (Cumulative)	SU	SU	LTS	LTS	LTS
Wind and Shadow	LTS	LTS	LTS	LTS	LTS
Recreation	LTS/M	LTS/M	LTS	LTS	LTS
Recreation (Cumulative)	SU	SU	LTS	LTS	LTS
Biological Resources	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Biological Resources (Cumulative)	SU	SU	LTS	LTS	LTS
Hydrology and Water Quality	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Hazards and Hazardous Materials	LTS/M	LTS/M	LTS/M	LTS/M	LTS/M
Agriculture and Forest Resources	LTS	LTS	LTS	LTS	LTS
Air Quality	SU/M	SU/M	SU/M	SU/M	LTS
Air Quality (Cumulative)	SU/M	SU/M	SU/M	SU/M	LTS

LEGEND:
SU = Significant and unavoidable impact
SU/M = Significant and unavoidable impact with mitigation
LTS/M = Less than significant impact with mitigation
LTS = Less than significant impact
NI = No impact

effects of the project and project alternatives. The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative. Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance Alternative would be the environmentally superior alternative for two reasons. While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the

Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative. First, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. For these reasons, the Maintenance Alternative is the environmentally superior alternative.

It should be noted that one of the reasons that both the Maintenance Alternative and Maximum Recreation Alternative would result in less environmental impacts than the proposed project is because these alternatives would not provide a habitat corridor between Laguna Salada and Horse Stable Pond or provide the same degree of upland habitat as the proposed project and Maximum Restoration Alternative. The construction of the habitat corridor and upland refuge would require augmenting the Sharp Park Golf Course, resulting in significant and unavoidable impacts to the golf course as a historic resource. While the habitat corridor and upland refuge result in additional cultural and historic impacts, they are features of the proposed project that were developed based on early coordination efforts with the USFWS, CDFG and consulting biological experts and determined appropriate to achieve recovery of the San Francisco garter snake population.

VII.F ALTERNATIVES CONSIDERED BUT REJECTED

During the scoping process, a public comment was received proposing a Sharp Park restoration alternative that included a model of natural flood control, outdoor recreation, environmental education, and endangered species recovery. This alternative would involve full restoration of the entire Sharp Park property, including the elimination of the golf course. This proposal was rejected as an individual alternative because it is not compatible with the 18-hole layout of the historic golf course. This alternative would, through the elimination of the Sharp Park Golf Course, result in greater significant and unavoidable impacts to cultural and recreational resources and therefore is not required to be analyzed under CEQA. In accordance with CEQA Guidelines Section 15126.6, "…alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." In addition, an alternative that would convert the entire Sharp Park Natural Area would only address one of the many Natural Areas addressed by the SNRAMP and could not practicably be extrapolated to the other Natural Areas. While rejected as an individual alternative, components and approaches embodied by this proposal have been incorporated into the Maximum Restoration Alternative.

As part of the Sharp Park Conceptual Restoration Alternatives Report, the SFRPD proposed restoration alternatives that would be compatible with either a nine-hole layout at the Sharp Park Golf Course or with removal of the golf course entirely. These alternatives have been rejected because they are not compatible with the existing and planned 18-hole layout of the historic golf course.

Suggested alternatives or modifications to the project received during the scoping process have been considered and incorporated into the proposed project and the three project alternatives.

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IX.A EIR PREPARERS

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GENERAL RECOMMENDATIONS

GR-1a	Reduce invasive plant populations
GR-1b	Where native plant seed banks do not exist or have diminished, appropriate native species may be used for revegetation. Plant native species to appropriate the diversity, cover, and density of adjacent habitats or of reference sites in similar habitats.
GR-1c	Conduct restoration during the appropriate time of the year and at an appropriate scale to avoid impacts on wildlife and to minimize erosion
GR-1d	In areas where it may not be feasible to reduce large infestations of invasive vegetation immediately, conduct containment actions along the interface between native and nonnative habitats
GR-1e	Annually monitor MAs, restoration areas, and other sensitive habitats for undesired plant species
GR-2a	Prioritize invasive weed reduction and management in areas supporting sensitive species or other vegetation series
GR-2b	Give sensitive species priority in revegetation and reintroduction activities throughout Natural Areas
GR-2c	Protect areas of sensitive species and vegetation series of limited distribution from human disturbance
GR-2d	Closely monitor plant populations and vegetation series of limited distribution
GR-2e	Continue to work with the scientific community to better understand key biological factors affecting the survival and reproduction of sensitive species and to better inform adaptive management decision making
GR-3a	Monitor annually if feasible, native grasslands and control invasive species
GR-3b	Explore alternative methods of grassland management for large grassland expanses, such as prescribed burning, livestock grazing, and use of motorized equipment
GR-4a	Conduct annual breeding bird surveys, if resources are available, using the standard point count or transect method, to develop a list of species nesting in Natural Areas

GR-4b	Conduct vegetation management activities outside the breeding season (February 1 to August 31) if breeding birds could be affected, unless the following specific conditions are met: projects begun prior to the breeding season have already disturbed the area, or a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest.
GR-4c	If surveys indicate that parasitism by brown-headed cowbirds is a significant problem, consult with the CDFG and the USFWS determine proper protocols to minimize the negative effects of this species on breeding birds
GR-4d	Use material from brush and tree trimming to increase nesting or escape habitat for ground-dwelling birds and to mitigate any loss of habitat from other vegetation clearing
GR-4e	Create corridors of shrubs between landscaped areas and Natural Areas to provide cover and transitional habitat for birds and other wildlife
GR-5a	Prevent invasive shrubs and trees from colonizing grasslands
GR-6a	Leave snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations
GR-6b	Provide nest boxes for native species where natural cavities are absent or in limited supply
GR-6c	Provide nest boxes for wood ducks at Impound Lake (a sub-lake of Lake Merced), Sharp Park, and Pine Lake
GR-7a	Implement the feral cat control policy from the Quail Recovery Plan approved by the San Francisco Commission on the Environment
GR-7b	Develop outreach materials to educate neighbors and users of Natural Areas about feral cats
GR-7c	Undertake control of non-cat predators only where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations
GR-8a	Retain the boundaries and locations of seven DPAs in Natural Areas (Corona Heights, Pine Lake Park, Golden Gate Park Southeast, McLaren Park Crocker Amazon, McLaren Park Geneva, Golden Gate Park Northeast, and Buena Vista Park) and modify two DPAs (Shelley Drive Loop at McLaren Park and Bernal Hill) to protect sensitive habitat areas
GR-8b	Match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas

GR-8c	Restrict dogs from three sensitive habitat areas (a portion of Gray Fox Creek at McLaren Park, habitat used by the San Francisco garter snake or California red-legged frog at Sharp Park, and the water at Pine Lake)
GR-9a	Preserve during vegetation management activities any brush, logs, rocks, and other natural elements that function as habitat for small mammals and place them at appropriate locations within the Natural Areas
GR-10a	As invasive plants are removed, install native plants or seeds that are beneficial to local insects
GR-10b	In MA-3 grasslands, maintain some invasive plant species that are host plants for local butterflies and other native insects
GR-11a	Maintain and improve primary designated trails
GR-11b	Encourage users to stay on the trails in all Natural Areas
GR-11c	Routinely monitor Natural Areas for new social trails and close or re-route any trails that impact sensitive species or sensitive habitat or that contribute to erosion
GR-11d	Maintain viewsheds to maintain and enhance public recreation
GR-11e	Consider adding amenities, such as overlooks and seating areas, when evaluating overall trail use
GR-12a	Revegetate steep slopes that have very thin vegetation to promote general soil stability
GR-12b	Reduce erosion risk during the transition between removing invasive species and growth of native species that replace them, including gradual implementation of restoration efforts
GR-13a	Discourage establishment of vegetation with high fire hazard ratings, such as French broom and eucalyptus stands, next to homes and other structures
GR-13b	Maintain clear passageways by removing encroaching vegetation and maintaining sight lines to increase safety on trails
GR-14a	Continue to network with local schools and research institutions to provide environmental education resources and opportunities for school children in San Francisco and Pacifica
GR-14b	Develop appropriate signage that explains the importance of natural resources, ecosystem functions, management activities and goals, and public involvement contacts
GR-14c	Develop education materials that discuss the impacts of feeding wildlife and wild animals and the problems with releasing unwanted pets into Natural Areas

GR-14d	Conduct special outreach to adjacent property owners about the impacts mentioned in GR-14c
GR-15a	Maintain urban forests within the MA-3 areas with a basal area per acre of between 200 and 600 square feet (this would provide a shaded forest environment)
GR-15b	Maintain a stocking rate that will perpetuate the urban forest and promote forest health
GR-15c	To promote forest health, focus tree removal on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding; retain snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations
GR-15d	Do not plant sensitive species in MA-3 urban forests
GR-15e	Remove invasive Cape *(Delairia odorata)*, English *(Hedera helix)* and Algerian ivy *(Hedera algeriensis)* and Himalayan blackberry *(Rubus discolor)* as required in MA-3 stands to promote and maintain urban forest health
GR-15f	Consult the SFRPD arborist when tree removals or planting are proposed in MA-3 urban forests
GR-15g	Plant trees and shrubs in the urban forests that promote species diversity and improve wildlife habitat
GR-15h	Use San Francisco-approved insecticides to treat cut stumps

PLACE

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Jessica Range
San Francisco Planning Department
Major Environmental Analysis Division
1650 Mission Street, Suite 400
San Francisco, CA 94103

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REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

Planning Department Case No. 2005.1912E, Natural Areas Management Plan

Check one box: ☐ Please send me a copy of the Final EIR on CD-ROM.
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DRAFT
ENVIRONMENTAL IMPACT REPORT

Significant Natural Resource Areas Management Plan

PLANNING DEPARTMENT
CASE NO. 2005.1912E

STATE CLEARINGHOUSE NO. 2009042102

Volume II – Draft EIR Appendices

AUGUST 2011

	Draft EIR Publication Date:	AUGUST 31, 2011
	Draft EIR Public Hearing Date:	OCTOBER 6, 2011
	Draft EIR Public Comment Period:	AUGUST 31, 2011 to OCTOBER 17, 2011

SAN FRANCISCO
PLANNING
DEPARTMENT

Written comments should be sent to:
Environmental Review Officer | 1650 Mission Street, Suite 400 | San Francisco, CA 94103



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APPENDIX A

Notice of Preparation, Initial Study, and Scoping Report

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
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San Francisco,
CA 94103-2479

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415.558.6377

Notice of Preparation of an Environmental Impact Report

Date:	April 22, 2009
Case No.:	**2005.1912E**
Project Title:	**Natural Areas Management Plan**
Project Size:	1,105 acres
Project Sponsor	Daniel LaForte, San Francisco Recreation and Park Department (415) 831-2742
Lead Agency:	San Francisco Planning Department
Staff Contact:	Jessica Range – (415) 575-9018 jessica.range@sfgov.org

PROJECT DESCRIPTION

Fragments of unique plant and animal habitats within San Francisco and Pacifica, known as Significant Natural Resource Areas (Natural Areas), have been preserved within parks that are managed by the San Francisco Recreation and Park Department (SFRPD). In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan (SNRAMP).

Over the course of several years, the SFRPD developed a new SNRAMP, with the final draft plan published in February 2006 and based on the 1995 plan. This SNRAMP contains detailed information on the biology, geology, and trails within 31 Natural Areas, 30 of which are in San Francisco and one (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

A detailed project description can be found in the Initial Study attached to this Notice of Preparation.

FINDING

This project may have a significant effect on the environment and an Environmental Impact Report is required. This determination is based upon the criteria of the State CEQA Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and for the reasons documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

PUBLIC SCOPING PROCESS

Pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, two public scoping meeting will be held to receive oral comments concerning the scope of the EIR. These meetings will be held on **Tuesday, May 12, from 6:30 pm to 9:30 pm** at **County Fair Building Auditorium in Golden Gate Park (9th Avenue and Lincoln Way)** and

Thursday, May 14, from 6:30 pm to 9:30 pm at **Pedro Point Firehouse in Pacifica (1227 Danmann Avenue).** Written comments will also be accepted at this meeting and until the close of business on **May 26, 2009**. Written comments should be sent to Bill Wycko, San Francisco Planning Department, Natural Areas Management Plan, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

If you work for a responsible State agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

April 29, 2009
Date

Bill Wycko
Environmental Review Officer

INITIAL STUDY

Case No. 2005.0912E

SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN

April 2009

By:
San Francisco Planning Department
San Francisco, California

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ACRONYMS AND ABBREVIATIONS

BA	Balboa
BAAQMD	Bay Area Air Quality Management District
BG	Billy Goat Hill
BH	Bernal Hill
BMP	best management practice
BP	Brooks Park and Lakeview/Ashton Mini Park
BV	Buena Vista Park
C-APE	CEQA area of potential effects
CARB	California Air Resources Board
CCSF	City and County of San Francisco
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CH	Corona Heights
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
DC	Duncan-Castro
DP	Dorothy Erskine
DPA	Dog Play Area
EIR	Environmental Impact Report
EM	Edgehill Mountain
EPA	US Environmental Protection Agency
ERO	Environmental Review Officer
FARR	Final Archaeological Resources Report
FEMA	Federal Emergency Management Agency
FI	15th Avenue Steps
FIRM	Flood Insurance Rate Map
FP	Fairmount Park

ACRONYMS AND ABBREVIATIONS

GC/OH	Glen Canyon Park and O'Shaughnessy Hollow
GGNRA	Golden Gate National Recreation Area
GGRH	Golden Gate Heights Park, Grandview Park, Hawk Hill, and Rock Outcrop
GHG	greenhouse gas
GIS	Geographic Information System
GR	General Recommendations
IB	India Basin Shoreline Park
IG	Interior Greenbelt
IPM	Integrated Pest Management
KH	Kite Hill
LM	Lake Merced
LS	locally sensitive
MA	management area
MD	Mount Davidson
MEA	Major Environmental Analysis
MLD	Most Likely Descendant
MP	McLaren Park
MRZ	Mineral Resource Zone
NAHC	Native American Heritage Commission
Natural Areas	Significant Natural Resource Areas
NFIP	National Flood Insurance Program
NPS	National Park Service
NWIC	Northwest Information Center
OSHA	Occupational Safety and Health Administration
OW	Golden Gate Park Oak Woodlands
PL	Pine Lake
PM_{10}	inhalable particulate matter
$PM_{2.5}$	fine particulate matter
PP	Palou-Phelps
SFGS	San Francisco garter snake
SFHA	special flood hazard area
SFPUC	San Francisco Public Utilities Commission
SFRPD	San Francisco Recreation and Park Department
SNRAMP	Significant Natural Resource Areas Management Plan
SP	Sharp Park
TK	Tank Hill
TP	Twin Peaks
TSS	total suspended solids
UCMP	University of California Museum of Paleontology
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service
VP	Bayview Park

INITIAL STUDY
(Case No. 2005.0912E—Natural Areas Management Plan)

A. PROJECT DESCRIPTION

A.1 INTRODUCTION

While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats within San Francisco and Pacifica, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks that are managed by the San Francisco Recreation and Park Department (SFRPD). In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan.

Over the course of several years, the SFRPD developed a new Significant Natural Resource Areas Management Plan (SNRAMP, SFRPD 2006), with the final draft plan published in February 2006 and based on the 1995 plan. This SNRAMP contains detailed information on the biology, geology, and trails within 31 Natural Areas, 30 of which are in San Francisco and one (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP.

The Major Environmental Analysis Division of the San Francisco Planning Department has prepared this Initial Study in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Sections 21000-21177) and the Guidelines for Implementation of the California Environmental Quality Act (California Code of Regulations, Title 14, Sections 15000-15387). It evaluates environmental impacts associated with the project, identifies feasible mitigation measures to reduce these impacts to a less than significant level, and includes improvement measures to further reduce impacts identified as less than significant.

This Initial Study provides a preliminary evaluation of the proposed project. Potentially significant environmental impacts of the proposed project will be addressed in detail in an Environmental Impact Report to be prepared for this project.

A.2 PROJECT OBJECTIVES AND GOALS

The objectives of the SNRAMP are as follows:

- To present the inventory of biological resources in Natural Areas, which will inform planning, restoration, and management activities;

- To develop a geographic information system database containing baseline information for each of the Natural Areas;
- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify and prioritize restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity;
- To identify and prioritize monitoring activities of natural resources to support an adaptive management[1] approach;
- To provide guidelines for passive recreational[2] uses compatible with the San Francisco's natural resources; and
- To provide guidelines for educational, research, and stewardship programs.

Summarized below are the goals of the SNRAMP.

Conservation and Restoration Goals

- To identify existing natural resources;
- To maintain viable populations of all special status species;[3]
- To maintain and enhance native plant and animal communities;
- To maintain and enhance local biodiversity;
- To reestablish native community diversity, structure, and ecosystem function where degraded;
- To improve natural area connectivity; and
- To decrease the extent of invasive exotic species cover.

Education Goals

- To provide services that will enable all age groups to better understand the values of the Natural Areas, including ecosystem functions and socioeconomic values;
- To provide opportunities for service learning to students in the San Francisco Unified School District; and

[1]Adaptive management—a flexible, learning-based approach to managing complex ecosystems.

[2]Passive recreation—recreational activities that occur in a natural setting and that require minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

[3]Special status species—species that are accorded special status because of their recognized rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection in federal or state endangered species legislation. Others have been designated sensitive species or species of special concern on the basis of adopted policies of federal, state, or local resource agencies. These species are referred to collectively as special status species.

- To provide diverse outdoor classroom opportunities.

Research Goals

- To provide a research framework and research opportunities to schools and universities that will lead to an enhanced understanding of the natural systems and an informed adaptive management approach;
- To contribute to the scientific understanding of local natural systems; and
- To contribute to the field of restoration ecology and other applied sciences.

Stewardship Goals

- To develop and support opportunities for public stewardship of Natural Areas;
- To foster neighborhood stewardship and volunteer groups; and
- To provide diverse opportunities for participation by stewardship groups.

Recreation Goals

- To provide opportunities for passive recreational uses (e.g., hiking, nature observation) that are compatible with conservation and restoration goals and
- To improve and develop a recreational trail system that provides the greatest amount of accessibility while protecting natural resources.

Monitoring Goals

To establish a long-term monitoring program to:

- Identify the species on which monitoring should focus;
- Detect increases and declines in abundance, distribution, or health of special status species;
- Detect significant changes in acreage of native communities, wildlife habitats, and invasive species;
- Detect significant increases and declines in native species richness;
- Assess success of restoration activities in achieving conservation and restoration goals; and
- Provide an adaptive management framework for evaluating changes (e.g., conceptual model).

Design and Aesthetic Goals

- Where possible, to develop aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions, especially where adjacent parklands and traditionally landscaped areas abut Natural Areas;
- To maintain and develop viewpoints and viewsheds[4] to enhance park experiences; and

[4]Viewshed—the landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

- Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments.

Safety Goal

- To design and maintain landscapes that promote public safety.

A.3 PROJECT LOCATION

The 31 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately four percent of the total city area; one Natural Area is in Pacifica. The areas range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Others include striking geologic formations. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some remnant Natural Areas are managed by other public and private entities. Some of these properties may eventually be transferred to the SFRPD. Figure 1 is an overview map of the Natural Areas. Detailed maps of each Natural Area depicting the designated management areas described below can be found in Appendix A.

A.4 PROJECT OVERVIEW

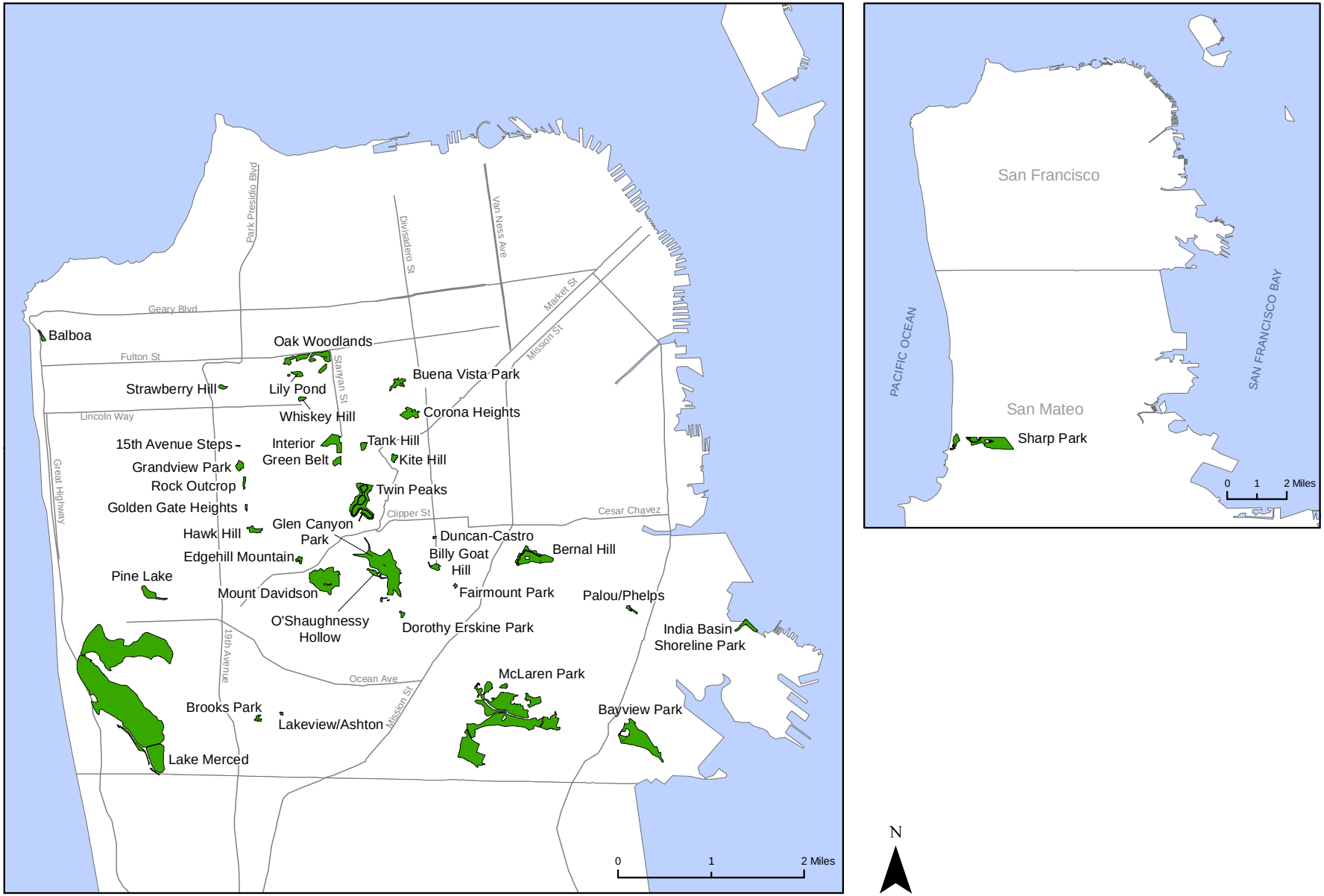
The Significant Natural Resource Areas Management Plan, Final Draft (SFRPD 2006) is incorporated by reference into this description of the project.

As envisioned, the SNRAMP will provide the framework for long-term management of the Natural Areas. One goal is to provide the resource managers with a framework that can be used for the next 20 years. During this period, restoration actions will be taken within the framework of an evolving urban fabric, and monitoring will determine the success of those actions and influence future actions.

The management areas (MAs) addressed in the SNRAMP represent differing levels of sensitivity, species presence, and habitat complexity within the 31 Natural Areas. Three levels of MAs have been defined as MA-1, MA-2 and MA-3, and the acreage of each Natural Area is divided among these three categories. MA-1, MA-2, and MA-3 areas make up approximately 18, 39, and 43 percent of the total Natural Areas, respectively. In general, MA-1 represents the priority areas for conservation and management activities, where management actions provide the greatest conservation benefit. As additional resources become available, management activities may shift to MA-2 or MA-3 areas. Individual maps of the Natural Areas showing the designated management areas are included in Appendix A.

Portions of Natural Areas designated MA-1 are those that:

- Support listed species or special status species;
- Support habitat for a significant number of sensitive species of plants or animals;
- Contain a relatively high portion of native plants or plant richness;



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The 31 Natural Areas total approximately 1,105 acres and range in size from 0.3 acres (15th Avenue Steps) to 395 acres (Lake Merced).

Natural Area

Roadway

Natural Areas

Tetra Tech, Inc

Figure 1

- Contain unique remnant native vegetation (such as native grasslands or wetlands[5]);
- Contain habitats or species most likely to be impacted by human use;
- May support vegetation assemblages of limited distribution (locally or regionally); or
- Contain erosion-prone areas.

Management actions within areas designated MA-1 may include:

- The most focused restoration work, possibly to the degree of manipulating individual plants and vegetation series;
- Reintroduction of sensitive species;
- Tree removal in conformance with forestry statements;
- Implementation of erosion-control measures as problems arise, including the closure of informal and social trails;[6] and
- Prohibition of planting nonnative species.

Areas designated MA-2 areas are comparatively more resilient to human disturbance than MA-1 areas, and their criteria for designation include:

- Important habitats, such as coastal scrub, wetlands, native grasslands;
- Remnant native vegetation of otherwise widespread plant communities, such as coyote brush, scrub, blackberry scrub;
- Habitats or species moderately susceptible to human impact;
- Habitat for local native wildlife species, such as resident and migratory bird species;
- Native vegetation with some nonnative elements; or
- Buffer areas for MA-1s.

Management actions within areas designated as MA-2 may include the following:

- Management focused on maintaining native plant communities;
- Reintroduction of sensitive plants;

[5]Wetland—a zone periodically or continuously submerged or having high soil moisture, which has aquatic or riparian vegetation components and is maintained by water supplies significantly in excess of those otherwise available through local precipitation.

[6]Social trail—an undesignated user-developed pathway through a Natural Area.

- Tree removal that is limited to a prescribed number of acres or trees in compliance with forestry statements;
- Implementation of erosion control measures as problems arise, including closing informal and social trails; and
- Prohibition on planting nonnative species.

The remaining lands within the Natural Areas are those designated as MA-3, which are the least sensitive. Specific criteria for areas to be designated MA-3 include:

- Absence (current or historic) of sensitive plants or animals but where there are some native plants and habitat for wildlife species;
- Predominance of nonnative vegetation that serves as a buffer for MA-1 and MA-2 from surrounding developed recreational and other land uses; or
- Unusual geological features.

Management actions within areas designated as MA-3 include:

- Activities to promote the health and diversity of urban forests[7] and the wildlife habitat they provide;
- Prohibition on (re)introduction of sensitive species;
- Few restrictions on recreational use (subject to the standard park rules and codes); and
- Implementation of erosion control measures as problems arise, including the closure of informal and social trails.

The Natural Areas Program staff of up to ten gardeners would continue to conduct the management actions at the Natural Areas. The Natural Areas Program also uses groups of volunteers that range in size from 10 to 50 people. The Natural Areas Program staff is composed of biologists and natural resource managers.

For larger projects, the Natural Areas Program staff would hire a contractor and would oversee the contractor's work. The Natural Areas Program staff would require a work plan addressing erosion control, species awareness and management, and other environmental considerations.

Implementation of the SNRAMP would prioritize activities at MA-1 areas, then MA-2 areas, then MA-3 areas.

Generally, invasive trees removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location. For

[7]Urban forest—a significant stand of nonindigenous trees.

Sharp Park in Pacifica, many of the trees would be replaced not with trees but with more appropriate native vegetation; the SFRPD would coordinate with the California Department of Fish and Game to determine the appropriate types of replacement vegetation. Tree removal is discussed in detail in Appendix F of the SNRAMP. For accounting purposes, the SNRAMP defines a tree as any plant having a dominant vertical trunk that is over 15 feet tall; tree species less than 15 feet tall are considered seedlings or saplings in the SNRAMP. Natural Areas Program staff would remove any tree that has a diameter at breast height[8] (dbh) of six inches or less; Natural Areas Program staff would coordinate with the SFRPD arborist, who would evaluate the removal of larger trees. Tree work would generally be limited to the nonbreeding season for bird species. Where tree work is required during the breeding season, trees would be disturbed initially before breeding to discourage nesting; alternately, surveys would be conducted before tree removal to determine the presence of breeding birds. Typically, trees would be removed limb-by-limb, rather than felling an entire tree. Tree removal would leave the tree stump and root ball intact; stumps would be ground to below grade where necessary to avoid tripping hazards. The SFRPD's tree posting policy requires that all trees over six inches dbh and designated for removal be posted at least 30 days before removal. The public is invited to comment about the proposed removal, and the SFRPD may or may not modify its plans based on public input.

Implementing the SNRAMP would involve removing both individual trees and small clusters of trees that could at a maximum range from 0.25 and 0.5 acre to create openings, leaving the surrounding forest intact. Vegetation removal in MA-1 areas would be focused on individual plants within roughly half-acre plots.

Trails typically would be created in previously inaccessible areas, as opposed to improving social trails. For tree removal and other activities conducted at the edges of Natural Areas, sidewalks and roads may have to be closed temporarily.

Wherever possible, Natural Areas Program staff would avoid undeveloped areas that are not planned for restoration or other management actions.

A.4.1 Management Approach

The primary management concerns relate to restoring and enhancing the remaining natural communities that have been adversely impacted by human activities. Human-generated impacts on natural areas include loss of native habitat, fragmentation of the natural landscape, introduction of nonnative plants and animals, and increased pressures from human use.

Specific management issues include:

- Loss of special status or unusual native species or habitats;

[8]Diameter at breast height—a standard means of tree measurement, with the diameter of the trunk measured at breast height, defined as 4.5 feet above the forest floor on the uphill side of the tree.

- Loss of diversity and components of a healthy ecosystem;
- Effect of nonnative invasive species on the local native flora and fauna;
- Erosion of natural areas from inappropriately located or constructed trails and access roads;
- Effect of human uses (recreation, poor trail location or too many trails, and a general increase in use) that conflict with conservation values; and
- Effects of feral animals and domestic pets on native flora and fauna.

Toward achieving the plan's goals, the restoration methods and practices below would be used.

Adaptive Management

The strategy for managing Natural Areas is based on adaptive management, which is a flexible learning-based approach to managing complex ecosystems. Adaptive management recognizes that some uncertainty exists about the nature of ecosystems and the organisms and processes that define them. Adaptive management, as applied to natural systems, involves a continuous cycle of systematically monitoring biodiversity and other ecosystem goals, and reassessing the plans, strategies and goals, methods, and questions that underlie the management approach. Land managers then use this information to evaluate successes and failures of management actions and to refine techniques and approaches. In this approach, adaptive management is executed in three phases. First, site-specific issues and recommendations are developed. Second, a plan based on these recommendations and on priorities assigned by the Natural Areas Program is implemented. Third, a monitoring program is implemented to evaluate the plan's site-specific success and, based on the information gathered, the implementation strategies, priorities, and methods are modified, as necessary.

A.4.2 Integrated Pest Management

Integrated Pest Management (IPM) is the use of multiple treatment methods to control undesirable weeds and other pests. While IPM has a range of meanings and is subject to various interpretations, the Natural Areas Program defines it as the optimal integration of management methods to control pests with the least possible hazard to people, property, and the environment. The Natural Areas Program uses a least toxic decision making model in its vegetation management. Although the IPM process has been formally adopted by many public and private organizations, it continues to evolve as management strategies are fine-tuned and innovative new pest control methods are found to be effective.

IPM is a multistep ecologically based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests. Conventional pest control methods attempt to control the symptoms of a pest problem, but IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem. IPM implements effective, long-term management solutions through

the use of a broad range of expertise, a combination of treatment methods, and comprehensive monitoring and evaluation.

In accordance with Chapter 39 of the San Francisco Administrative Code, the Natural Areas Program employs IPM as its strategy for preventing new and managing existing pest infestations. The Natural Areas IPM program has:

- Identified management goals, such as preserving biodiversity;
- Identified pests and the environmental conditions that favor their spread;
- Identified gaps in the knowledge of species biology and habitats and made efforts to increase understanding and fill these gaps;
- Established a monitoring program to determine pest population, size, occurrence, and rate of change in each ecosystem;
- Set injury levels and treatment thresholds;
- Employed effective, least-toxic pest control methods if feasible, using combinations of methods as necessary; and
- Implemented pilot programs to experiment with alternative pest control methods.

A.4.3 General Recommendations (GR)

This section presents management recommendations common throughout the various Natural Areas. For use while reading this Initial Study, a fold-out list of the general recommendations is included at the end of this document. Site-specific recommendations are presented in Section A.5.

Invasive Plant Control and Revegetation

- GR-1a—reduce invasive plant populations;
- GR-1b—where native plant seed banks do not exist or have diminished, appropriate native species may be used for revegetation. Plant native species to approximate the diversity, cover, and density of adjacent habitats or of reference sites in similar habitats;
- GR-1c—conduct restoration during the appropriate time of the year and at an appropriate scale to avoid impacts on wildlife and to minimize erosion;
- GR-1d—in areas where it may not be feasible to reduce large infestations of invasive vegetation immediately, conduct containment actions along the interface between native and nonnative habitats;
- GR-1e—annually monitor MAs, restoration areas, and other sensitive habitats for undesired plant species.

Sensitive Plant Species

- GR-2a—prioritize invasive weed reduction and management in areas supporting sensitive species or other vegetation series;

- GR-2b—give sensitive species priority in revegetation and reintroduction activities throughout Natural Areas;
- GR-2c—protect areas of sensitive species and vegetation series of limited distribution from human disturbance;
- GR-2d—closely monitor plant populations and vegetation series of limited distribution;
- GR-2e—continue to work with the scientific community to better understand key biological factors affecting the survival and reproduction of sensitive species and to better inform adaptive management decision making.

Native Grasslands

- GR-3a—monitor annually, if feasible, native grasslands and control invasive species;
- GR-3b—explore alternative methods of grassland management for large grassland expanses, such as prescribed burning, livestock grazing, and use of motorized equipment.

  (Note: The SNRAMP no longer is proposing prescribed burning would not occur. The SNRAMP will be updated to reflect this change. Should the SFRPD determine prescribed burning to be a desirable, feasible method for managing native grasslands, a separate environmental review would be required to comply with CEQA, and applicable permits and other regulatory agency approvals would be obtained.)

Breeding Bird Habitat

- GR-4a—conduct annual breeding bird surveys, if resources are available, using the standard point count or transect method, to develop a list of species nesting in Natural Areas;
- GR-4b—conduct vegetation management activities outside the breeding season (April 1 to September 1) if breeding birds could be affected, unless the following specific conditions are met: projects begun before the breeding season have already disturbed the area, or a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot-radius avoidance buffer would be centered on the nest site(s) to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest;
- GR-4c—if surveys indicate that parasitism by brown-headed cowbirds is a significant problem, consult with the California Department of Fish and Game and the US Fish and Wildlife Service to determine proper protocols to minimize the negative effects of this species on breeding birds;

- GR-4d—use material from brush and tree trimming to increase nesting or escape habitat[9] for ground-dwelling birds and to mitigate any loss of habitat from other vegetation clearing;
- GR-4e—create corridors of shrubs between landscaped areas and Natural Areas to provide cover and transitional habitat for birds and other wildlife.

Avian Foraging Habitat

- GR-5a—prevent invasive shrubs and trees from colonizing grasslands.

Avian Cavity Nesting Habitat

- GR-6a—leave snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations;
- GR-6b—provide nest boxes where natural cavities are absent or in limited supply;
- GR-6c—provide nest boxes for wood ducks at Impound Lake (a sub-lake of Lake Merced), Sharp Park, and Pine Lake.

Predators

- GR-7a—implement the feral cat control policy from the Quail Recovery Plan approved by the San Francisco Commission on the Environment;
- GR-7b—develop outreach materials to educate neighbors and users of Natural Areas about feral cats;
- GR-7c—undertake control of non-cat predators only where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations.

Dog Use

- GR-8a—retain the boundaries and locations of eight Dog Play Areas (DPAs) in Natural Areas (Corona Heights, Pine Lake Park, Golden Gate Park Southeast, McLaren Park Crocker Amazon, McLaren Park Geneva, Golden Gate Park Northeast, Buena Vista Park, and Lake Merced) and modify two DPAs (Shelley Drive Loop at McLaren Park and Bernal Hill) to protect sensitive habitat areas;
- GR-8b—match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas;

  (Note: An underlying assumption of this Initial Study is that there would be no new DPAs because there is a moratorium on them until system-wide DPA planning is completed. This moratorium was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee. Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)

[9]Escape habitat—natural or man-made features that allow animals to avoid predators or other threats.

- GR-8c—restrict dogs from three sensitive habitat areas (a portion of Gray Fox Creek at McLaren Park, habitat used by the San Francisco garter snake or California red-legged frog at Sharp Park, and the water at Pine Lake).

Small Mammal Habitat

- GR-9a—preserve during vegetation management activities any brush, logs, rocks, and other natural elements that function as habitat for small mammals and place them at appropriate locations within the Natural Areas.

Invertebrate Habitat

- GR-10a—as invasive plants are removed, install native plants or seeds that are beneficial to local insects;
- GR-10b—in MA-3 grasslands, maintain some invasive plant species that are host plants for local butterflies and other native insects.

Trails and Views

- GR-11a—maintain and improve primary designated trails;
- GR-11b—encourage users to stay on the trails in all Natural Areas;
- GR-11c—routinely monitor Natural Areas for new social trails and close or reroute any trails that impact sensitive species or sensitive habitat or that contribute to erosion;
- GR-11d—maintain viewsheds to maintain and enhance public recreation;
- GR-11e—consider adding amenities, such as overlooks and seating areas, when evaluating overall trail use.

Erosion Control

- GR-12a—revegetate steep slopes that have very thin vegetation to promote general soil stability;
- GR-12b—reduce erosion risk during the transition between removing invasive species and growth of native species that replace them, including gradual implementation of restoration efforts.

Safety

- GR-13a—discourage establishment of vegetation with high fire hazard ratings, such as French broom and eucalyptus stands, next to homes and other structures;
- GR-13b—maintain clear passageways by removing encroaching vegetation and maintaining sight lines to increase safety on trails.

Education

- GR-14a—continue to network with local schools and research institutions to provide environmental education resources and opportunities for school children in San Francisco and Pacifica;
- GR-14b—develop appropriate signage that explains the importance of natural resources, ecosystem functions, management activities and goals, and public involvement contacts;

- GR-14c—develop education materials that discuss the impacts of feeding wildlife and wild animals and the problems with releasing unwanted pets into Natural Areas;
- GR-14d—conduct special outreach to adjacent property owners about the impacts mentioned in GR-14c.

Urban Forests

- GR-15a—maintain urban forests within the MA-3 areas with a basal area[10] per acre of between 200 and 600 square feet;
- GR-15b—maintain a stocking rate that will perpetuate the urban forest and promote forest health;
- GR-15c—to promote forest health, focus tree removal on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding;
- GR-15d—do not plant sensitive species in MA-3 urban forests;
- GR-15e—remove invasive Cape, English, and Algerian ivy and Himalayan blackberry to promote and maintain urban forest health in MA-3 areas;
- GR-15f—consult the SFRPD arborist when tree removals or plantings are proposed in MA-3 urban forests;
- GR-15g—plant trees and shrubs in the urban forests that promote species diversity and improve wildlife habitat; and
- GR-15h—use San Francisco-approved insecticides to treat cut stumps.

A.4.4 Best Management Practices

The SNRAMP identifies best management practices (BMPs) for erosion control, pathogen[11] control, and West Nile virus.

Erosion Control

The erosion control BMPs applicable and appropriate to managing the Natural Areas include the following:

- Straw mulch—this method can be applied quickly in areas where long-term erosion protection is not required;
- Rolled erosion control products—these materials are supplied in rolls and are used to protect exposed soil areas from water and wind erosion;
- Wood mulch—this material is typically broadcast by hand onto exposed soil to prevent wind and water erosion;

[10]Basal area—a measure, typically in square feet per acre, of the area covered by trees within a given urban forest. Basal area is used as an index of tree production.

[11]Pathogen—a disease-causing agent, especially a living microorganism such as a bacterium or fungus.

- Silt fences—this method involves staking a permeable geotextile fabric along the contours of a slope. The bottom of the silt fence is typically trenched into the soil, allowing the fence to intercept and reduce the velocity of sediment-laden sheet flow;
- Fiber rolls—these roll materials are shaped into tubes that can be placed along the contour of a slope to intercept sediment-laden sheet flow and can also be placed around storm drain inlets; and
- Straw bales—these can be applied in much the same way as the fiber rolls, but they are taller and sturdier.

Pathogen Control

The SNRAMP identified the following BMPs to control the spread of pathogens from one area to another. For work conducted in a known site of sudden oak death infestation, tools should be cleaned and disinfected after use on infected trees and should be sanitized before use on healthy trees. Generally, to prevent the spread of aquatic pathogens, dirt and debris should be removed from equipment, and the equipment should be disinfected.

West Nile Virus

To control the spread of this mosquito-borne disease, the following BMPs are recommended:

- Educate staff about the most effective ways to avoid being bitten by mosquitoes;
- Remove small water features that contain standing water or treat those features with BT (*Bacillus thuringiensis israelensis*), a biological control agent for mosquito larvae, if the features are to remain and Public Health Services identifies a potential health hazard; and
- Encourage staff to drain any standing water that is caused by stored equipment or by temporary depressions.

A.4.5 Monitoring Plan

Monitoring activities will be designed within the conceptual framework to address the following questions:

- What is the population status of selected special status species? Where are these populations located? What are the growth trends for each of these populations and for the species as a whole within the Natural Areas?
- How successful are restoration and enhancement projects in terms of project goals? What are the best ways to measure success criteria? How do selected management activities, including restoration and conservation projects, affect the diversity and abundance of native species in relation to the diversity and abundance of invasive species within the project areas?

The following standardized protocols have been developed to address those questions:

Monitoring Populations of Special Status Species

- Monitoring special status plant species
  - Locate populations,
  - Map populations,
  - Estimate population/cover, and
  - Assess population/cover change.
- Monitoring Special Status Wildlife Species
  - Locate populations and
  - Assess population change.

Measuring the Success of Restoration and Conservation Programs

- Qualitative methods for assessing project success
  - Timing of photo-monitoring and
  - Location of photo-monitoring.
- Quantitative Methods for Assessing Project Success
  - Map project area,
  - Randomize samples,
  - Conduct point intercept sampling, and
  - Record and analyze.
- Tracking changes in avian and butterfly diversity and abundance
  - Qualitative methods for avian species monitoring,
  - Quantitative methods for avian species monitoring,
  - Qualitative methods for monitoring butterfly species, and
  - Quantitative methods for monitoring butterfly species.

A monitoring program can be successful only if it is applied uniformly and consistently. Once a monitoring effort has begun, the methods for collecting data must continue in the manner that they were initially implemented, or the data will not be comparable over time and between sites. The protocols associated with this monitoring plan should not be altered in any significant way.

A.5 NATURAL AREAS

The Significant Natural Resource Areas Management Plan, Final Draft (SFRPD 2006) is incorporated by reference into this description of the proposed project. The information presented below for each of the Natural Areas is grouped into sections on general description, management areas, and recommended management actions. The system-wide recommendations that apply to the entire Natural Area are presented first, followed by site-specific recommendations, including an alphabetical code unique to each Natural

Area. As presented in the SNRAMP, a number of the Natural Areas have been grouped in this section; as a result, the 31 Natural Areas are addressed in 26 subsections below. Table 1 is an overview of the management activities proposed for each of the Natural Areas. Figure 1 is an overview of the Natural Areas, and individual maps of the Natural Areas are included in Appendix A.

A.5.1 Balboa (BA)

General Description

The 1.8-acre Balboa Natural Area, also referred to as Parcel 4, is at the corner of Balboa Street and the Great Highway in western San Francisco. The National Park Service (NPS) maintains the Balboa Natural Area for the City and County of San Francisco (CCSF) under the terms of a Cooperative Management Agreement approved in 2007. It is in the southern corner of the Sutro Heights Park and is across the Great Highway from Ocean Beach and the Pacific Ocean. This all-sand area has one of the few foredune communities in San Francisco. An elevated boardwalk provides public access and keeps people out of the sensitive sand dune vegetation. The SFRPD and the NPS jointly administer the Balboa Natural Area for the CCSF. This Natural Area is public land that the CCSF has dedicated for recreation and sewer system operations. It is next to NPS lands administered by the Golden Gate National Recreation Area (GGNRA).

Management Areas

The 1.1-acre MA-1 area of the Balboa Natural Area includes restored dune scrub habitat and sensitive species. The 0.7-acre MA-2 area is a sandy substrate area with potential for expansion of the dune community. There is no MA-3 area at the Balboa Natural Area.

Recommended Management Actions

At Balboa, GR-1, GR-2, GR-4, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Balboa Natural Area:

- BA-1a—contain and reduce herbaceous[12] invasive plants and prevent invasive tree species from becoming established;
- BA-1b—revegetate using appropriate native plants in those areas where invasive plants have been removed;
- BA-1c—augment existing populations of sensitive plant species; and
- BA-1d—reintroduce rare plants.

[12]Herbaceous—having the texture, color, and other characteristics of an ordinary foliage leaf. Herbaceous vegetation is not woody.having the texture, color, and other characteristics of an ordinary foliage leaf. Herbaceous vegetation is not woody.

Table 1
Summary of Natural Areas Management Plan

Natural Area Site	Park Acreage	Natural Area Acreage*	Management Area (acres)				Invasive Trees			Trails (feet)				Dog Play Areas (acres)			
			MA-1	MA-2	MA-3	Total MA[1]	Existing	To Remove	To Remain	Existing	To Close/ Relocate	To Create	Resulting	Existing	To Remove	To Remain	Monitor**
Balboa Natural Area	1.8	1.8	1.1	0.7	0	1.8	0	0	0	637	90	0	547				
Bayview Park	43.9	43.9	8.2	15.8	19.7	43.7	6,000	511	5,489	8,496	1,439	1,020	8,077				
Bernal Hill	24.3	24.3	7.6	5.8	10.7	24.1	100	0	100	12,239	4,544	464	8,159	21.0	6.0	15.0	No
Billy Goat Hill	3.5	3.5	0.6	1.1	1.6	3.3	20	0	20	2,600	745	0	1,855				
Brooks Park	3.5	2.0	0.8	0.9	0.3	2.0	20	3	17	1,340	456	0	884				
Buena Vista Park	36.1	6.1	0	6.1	0	6.1	140	10	130	3,741	0	0	3,741	1.0	0	1.0	Yes
Corona Heights	12.6	9.6	2.9	2.5	4.2	9.6	200	15	185	6,701	1,845	0	4,856	0.4	0	0.4	No
Dorothy Erskine Park	1.5	1.5	0.2	0.3	1.0	1.5	120	14	106	771	0	0	771				
Duncan-Castro	0.5	0.5	0.3	0.1	0.1	0.5	0	0	0	333	0	0	333				
Edgehill Mountain	2.3	2.3	0	0.9	1.4	2.3	300	0	300	747	0	438	1,185				
Fairmount Park	0.7	0.7	0	0	0.7	0.7	100	0	100	187	0	0	187				
Glen Canyon Park and O'Shaughnessy Hollow***	72.6	63.8	8.1	33.0	22.4	63.5	6,000	120	5,880	23,242	3,653	0	19,589				
Golden Gate Heights	6.0	0.8	0.2	0.5	0.1	0.8	30	0	30	559	390	188	357				
Golden Gate Park Oak Woodlands	1,021.0	26.2	0.7	25.5	0	26.2	900	82	818	24,844	12,381	0	12,463	2.8	0	2.8	Yes
Grandview Park	4.0	4.0	0.9	2.4	0.7	4.0	25	5	20	1,722	409	0	1,313				
Hawk Hill	4.5	4.5	1.4	3.0	0	4.4	10	0	10	1,609	692	0	917				
India Basin Shoreline Park	11.8	6.2	3.2	2.8	0	6.0	0	0	0	1,885	0	0	1,885				
Interior Greenbelt	19.4	16.5	0	1.8	14.7	16.5	5,800	140	5,660	935	0	620	1,555				
Kite Hill	2.7	2.7	0.6	0.5	1.6	2.7	10	0	10	1,957	398	0	1,559				
Lake Merced	614.0	395.0	60.8	101.8	231.5	394.1	12,000	134	11,866	11,106	3,319	365	8,152	5.0	5.0	0	Yes
Lakeview/Ashton Mini Park	0.5	0.5	0.1	0.2	0.2	0.5	0	0	0	651	0	0	651				
McLaren Park	312.6	165.3	34.9	68.3	61.4	164.6	19,500	809	18,691	59,185	15,681	0	43,504	61.7	8.3	53.4	Yes
Mount Davidson	40.2	40.2	8.8	11.0	20.1	39.9	11,000	1,600	9,400	15,456	2,867	0	12,589				
Palou-Phelps	2.5	2.1	0.8	0.4	0.8	2.0	40	2	38	1,049	527	496	1,018				
Pine Lake	30.3	8.4	1.0	3.8	3.6	8.4	1,000	0	1,000	3,157	608	13	2,562	3.3	0	3.3	No
Rock Outcrop	1.6	1.6	0.8	0.7	0	1.5	0	0	0	0	0	0	0				
Tank Hill	2.9	2.9	1.5	0.6	0.7	2.8	50	0	50	2,672	1,411	0	1,261				
Twin Peaks	34.1	31.1	12.6	14.3	3.8	30.7	88	3	85	8,741	2,303	501	6,939				
15th Avenue Steps	0.3	0.3	0	0.2	0	0.2	0	0	0	0	0	0	0				
San Francisco Subtotal	**2,311.7**	**868.3**	**158.1**	**305.0**	**401.3**	**864.4**	**63,453**	**3,448**	**60,005**	**196,562**	**53,758**	**4,105**	**146,909**	**95.2**	**19.3**	**75.9**	
Sharp Park (Pacifica)	411.0	237.2	35.0	125.1	76.5	236.6	54,000	15,000	39,000	14,741	653	1,792	15,880				
Total	**2,722.7**	**1,105.5**	**193.1**	**430.1**	**477.8**	**1,101.0**	**117,453**	**18,448**	**99,005**	**211,303**	**54,411**	**5,897**	**162,789**	**95.2**	**19.3**	**75.9**	

*The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.

**The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park. Until the Dog Play Area at Lake Merced is removed, the SFRPD would monitor that area for impacts.

***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.

A.5.2 Bayview Park (VP)

General Description

Bayview Park is in southeast San Francisco and is east of Candlestick Point State Park and Candlestick Park. Developed areas within the 43.9-acre Natural Area are limited to paved trails, which are also used as access roads. This is one of the more diverse Natural Areas with vegetation that includes grasslands, scrub, tree-dominated areas, and a large number of sensitive plant species. The vegetation provides suitable habitat for resident and migratory bird species, reptiles, mammals, and amphibians. The extensive grasslands provide habitat for butterflies and other insects, including the endangered mission blue butterfly (*Icaricia icarioides missionensis*). It also contains historic Works Progress Administration features.

Management Areas

The 8.2-acre MA-1 area is native grassland and scrub habitats that support the highest numbers of sensitive species. The 15.8-acre MA-2 area also may contain sensitive species and habitats and may act as buffers for the more sensitive areas. The 19.7-acre MA-3 area includes urban forests and invasive scrub.

Recommended Management Actions

At Bayview Park, GR-1 through GR-4, GR-6, GR-7, and GR-9 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended:

- VP-1a—reduce and contain herbaceous and woody invasive plants;
- VP-1b—remove approximately 511 of the estimated 6,000 invasive trees (primarily blue gum eucalyptus) to enhance sensitive species habitats;
- VP-1c—protect and maintain existing native habitats;
- VP-1d—augment existing sensitive plant populations;
- VP-1e—reintroduce populations of sensitive plant species to help prevent extinctions of these species in San Francisco;
- VP-2a—install coast live oak seedlings and other native plants in gaps and openings in the eucalyptus forest;
- VP-3a—construct a small berm to create a seasonal wetland and detention basin, if capital funds are made available;
- VP-4a—maintain and improve habitat for the pinion mouse;
- VP-5a—augment existing silver bush lupine populations;
- VP-6a—install signs and temporary barriers along the roadway to discourage off-road motorcycle riding;
- VP-7a—construct a pedestrian trail connecting to the historic Works Progress Administration trail;

- VP-7b—develop a new entryway on the southern side of the park;
- VP-8a—remove the berm on the downhill side of Key Avenue and regrade the entire roadway so that the uphill side is higher than the downhill side, if funds are made available;

  (Note: portions of this management action have been completed. Those that have not been undertaken will be addressed in the EIR.)
- VP-8b—remove material in major downslope gullies and replace it with brush that is highly compacted;
- VP-8c—build a small berm south of Key Avenue at the base of the main soil slip;
- VP-9a—create a detailed and complete erosion control plan before beginning work on the large gully near the summit; work would include the following:
  - Installing a minimum of two check-dams within the upper portion of the gully,
  - Creating soil berms and troughs between these two structures,
  - Removing soil from the upper edges of the gully to create a 1:1 slope,
  - Installing a staked brush pile or brush box immediately below the upper edge of the gully,
  - Installing one or two staked brush bundles in the vegetated swale leading into the gully from the direction of the radio tower,
  - Installing rice straw bales along all edges of the gully, and
  - Hand broadcasting the entire area with the appropriate native grass seed once construction is complete and before the fall rains; and
- VP-10a—restrict access to sensitive mission blue butterfly habitat if these habitat areas continue to be damaged.

A.5.3 Bernal Hill (BH)

General Description

Bernal Hill is in the Bernal Heights neighborhood in central San Francisco. A microwave radio transmission station, not owned by the SFRPD, is in a fenced enclosure at the hill's summit. Other than a paved access road, the 24.3-acre Natural Area is primarily grassland. A designated DPA is on and above Bernal Heights Boulevard, which circumnavigates the Natural Area.

Management Areas

The 7.6-acre MA-1 area includes the slopes of Bernal Hill where native grasslands and sensitive species are found. The 5.8-acre MA-2 area serves as a buffer between the MA-1 area and urban forest. The 10.7-acre MA-3 area is that portion of the Natural Area that does not support sensitive species or native grasslands.

Recommended Management Actions

At Bernal Hill, GR-1 through GR-4 and GR-7 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Bernal Hill Natural Area:

- BH-1a—reduce and contain herbaceous and woody invasive plants;
- BH-1b—revegetate using appropriate native plants where invasive plants have been removed;
- BH-1c—focus sensitive plant species management and conservation on existing habitat areas;
- BH-1d—maintain the urban forest-grassland mosaic;
- BH-2a—encourage people and dogs to stay on designated trails and discourage them from climbing the steep slopes and causing erosion on the north side of the Natural Area; and
- BH-3a—retain on- and off-leash dog use of the entire Natural Area and limit off-leash activities to the relatively flat areas, reducing the off-leash DPA from 21 to 15 acres.

A.5.4 Billy Goat Hill (BG)

General Description

The 3.5-acre Billy Goat Hill Natural Area is in the Diamond Heights area, east of Glen Canyon Park. The Natural Area is composed mainly of grasslands. Billy Goat Hill provides important habitat for native plants and populations of sensitive plant species, grassland habitat, and suitable habitat for a variety of bird species and special-status butterfly species.

Management Areas

The MAs have been delineated based on the presence of rich native grasslands. The 0.6-acre MA-1 area supports the richest array of species, as well as more intact habitat than the 1.1-acre MA-2 area, which surrounds the MA-1 and buffers it. The MA-2 area is itself surrounded on three sides by the 1.6-acre MA-3 area, which includes tree and grassland communities.

Recommended Management Actions

At Billy Goat Hill, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Billy Goat Hill Natural Area:

- BG-1a—reduce and contain woody and herbaceous invasive plants;
- BG-1b—revegetate using appropriate native plants, enhance and diversify existing grasslands as appropriate, augment the existing rare or uncommon grassland plant species, slowly replace the nonnative grassland with a grassland

dominated by native species, maintain and enhance the native scrub community, and plant native grassland and scrub species into the appropriate areas using diversity, cover, and density targets generated from reference sites around San Francisco;

- BG-1c—maintain a periphery of tall trees and diversify areas at the grassland interface with wildlife-enhancing species, and design, maintain, and enhance a grassland-scrub-tree mosaic; and
- BG-2a—create and protect a complex mosaic of grassland and scrub with a variety of plant species that will provide shelter, food, and nesting areas for local wildlife.

A.5.5 Brooks Park and Lakeview/Ashton Mini Park (BP)

General Description

Brooks Park and Lakeview/Ashton Mini Park (also informally known as Orizaba Rocks) are in southwestern San Francisco in the Merced Heights and Ingleside Heights neighborhoods. Brooks Park, which fronts on Shields Street between Victoria and Vernon Streets, is a 3.5-acre park, two acres of which are part of the Natural Area. The 0.5-acre Lakeview/Ashton Mini Park Natural Area is a rocky outcrop at the dead ends of Ashton and Orizaba Avenues and Lakeview and Shields Streets. Both of these Natural Areas contain grasslands.

Management Areas

The Brooks Park and Lakeview/Ashton Mini Park Natural Areas are dominated by grasslands, and the relative quality of the grasslands define the MA-1, MA-2, and MA-3 areas. The 0.9-acre MA-1 areas encompass two grasslands at Brooks Park and one area at Lakeview/Ashton Mini Park. The 1.1-acre MA-2 areas are the grasslands surrounding the MA-1 areas and serve as buffers between the MA-1 and the MA-3 areas. The 0.5-acre MA-3 areas are on the periphery in both parks and represent the least sensitive grassland areas.

Recommended Management Actions

At Brooks Park and Lakeview/Ashton Mini Park, GR-1 through GR-4, GR-7, and GR-10 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Brooks Park and Lakeview/Ashton Mini Park Natural Areas:

- BP-1a—contain and reduce herbaceous and woody invasive plants;
- BP-1b—remove three cypress trees and prevent establishment of invasive trees in all areas;
- BP-1c—revegetate with appropriate native plants using diversity, cover, and density targets generated from reference sites within and around San Francisco; and

- BP-1d—consider augmenting sensitive species at Lakeview/Ashton Mini Park and introducing sensitive species within suitable locations at Brooks Park.

A.5.6 Buena Vista Park (BV)

General Description

The 36.1-acre Buena Vista Park is in central San Francisco, just north of Corona Heights, and is bounded in part by Haight Street on the north; Buena Vista Avenue East and Buena Vista Avenue West loop around the park and form the eastern, southern, and western boundaries. The 6.1-acre Buena Vista Park Natural Area is on the northern side of the park and supports one of the most extensive coast live oak forests within San Francisco. The remainder of the park is covered almost exclusively by mixed exotic forest. There is a designated DPA in the northwest corner of Buena Vista Park in the oak woodland.

Management Areas

The 6.1-acre MA-2 area includes coast live oak woodlands in the northern portion of the park. There are no MA-1 or MA-3 areas.

Recommended Management Actions

At Buena Vista Park, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, GR-11, GR-13, and GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Buena Vista Park Natural Area:

- BV-1a—reduce woody and herbaceous invasive plants and understory[13] plants and prevent invasive trees from becoming established;
- BV-1b—remove approximately 10 eucalyptus and acacia trees out of 140 invasive trees, revegetate areas with appropriate dune scrub and oak trees to promote creation of a multi-aged stand, and use diversity, cover, and density targets generated from reference sites around San Francisco to develop planting plans;
- BV-1c—consider reintroducing rare or uncommon plant species;
- BV-2a—create complex multistoried habitat by removing invasive species in the understory and planting species that provide food and nesting resources and increase structural diversity by planting native vegetation that is different in height at maturity than vegetation in the existing habitats;
- BV-2b—install a permanent water source within or next to the Natural Area in an area that would not be easily accessible to off-leash dogs or subject to undesirable human use and ensure that artificial water sources can be drained periodically to remove bullfrogs;
- BV-3a—augment winter and late-fall fruiting shrubs; and

[13]Understory—the shrubs and plants growing beneath the main canopy of a forest or stand of trees.

- BV-4a—consider implementing protective measures or relocating the DPA outside of oak woodlands if necessary to protect nesting bird habitat.

A.5.7 Corona Heights (CH)

General Description

Corona Heights is in the central portion of San Francisco and is bounded roughly by Flint Street, Roosevelt Way, and 16th Street. The Corona Heights Playground and the Randall Museum are within the southern portion of the park. Of the park's 12.6 acres, the Natural Area covers approximately 9.6 acres and is composed of grasslands, with scrub and tree-dominated areas around its edges. A fenced DPA is next to the northwest portion of the Natural Area.

Management Areas

The 2.9-acre MA-1 areas include three areas with sensitive species and habitats. The 2.5-acre MA-2 areas are buffers around the MA-1 areas. The 4.2-acre MA-3 areas include urban forest and grasslands around the Natural Area perimeter.

Recommended Management Actions

At Corona Heights, GR-1 through GR-4, GR-7, GR-9 through GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Corona Heights Natural Area:

- CH-1a—contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- CH-1b—augment existing populations of sensitive plant species through seeding or planting;
- CH-1c—reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco;
- CH-1d—maintain diverse native grassland in areas where invasive plants have been removed. Maintain and enhance oak woodlands;
- CH-1e—remove 15 Monterey pines;
- CH-2a—create complex multistoried habitat that provides food sources and nesting, roosting, and escape habitat for a variety of species;
- CH-2b—increase the extent of oak woodland habitat to create habitat for wildlife, particularly birds; and
- CH-3a—install signs and temporary barriers at access points to discourage people and dogs from going off the trails into erosion-prone areas. If signs and temporary fencing prove ineffective, install permanent fences at the base of the hill.

A.5.8 Dorothy Erskine (DP)

General Description

Dorothy Erskine Park is near the southern end of Glen Canyon Park at the intersection of Baden Street and Martha Avenue in central San Francisco. The 1.5-acre Natural Area is mostly forested. Most remnant plant areas and important wildlife habitat are associated with the grassland and mixed exotic forests on the steep north-facing slopes, which are inaccessible due to the presence of a safety fence at the top of the slope. There is one main trail and access route through the Natural Area.

Management Areas

The 0.2-acre MA-1 areas contain remnant grassland and wildflower habitats. The 0.3-acre MA-2 areas include remnant scrub habitat and serve as buffers to the MA-1 areas. The 1.0-acre MA-3 areas are composed of urban forests.

Recommended Management Actions

At Dorothy Erskine, GR-1, GR-2, GR-4, GR-7, GR-9, GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Dorothy Erskine Natural Area:

- DP-1a—reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- DP-1b—remove approximately 14 of the estimated 120 eucalyptus trees;
- DP-1c—revegetate with appropriate native plants those areas where invasive plants have been removed to maintain and enhance the native grassland and scrub communities;
- DP-1d—reintroduce silk tassel bush to prevent the countywide extinction of this sensitive plant species; and
- DP-2a—survey the site for red-tailed hawk nests before tree removal. If an occupied nest is found, conduct tree removal activities no closer than 500 feet from the nest.

A.5.9 Duncan-Castro (DC)

General Description

Duncan-Castro is in the central portion of San Francisco and is northeast of the intersection of Castro and Duncan Streets. The 0.5-acre Natural Area is predominantly grassland, with an ornamental planting area along Duncan Street.

Management Areas

The 0.3-acre MA-1 area includes rock outcrops, red fescue prairie, and portions of the annual grassland with sensitive plant species populations. The 0.1-acre MA-2 area has less diverse grasslands and rock outcrops on the south and west sides of the Natural

Area. The 0.1-acre MA-3 area includes ornamental vegetation and forest along the eastern edge of the Natural Area.

Recommended Management Actions

At Duncan-Castro, GR-1 through GR-4, GR-7, GR-9, GR-10, GR-13, and GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Duncan-Castro Natural Area:

- DC-1a—contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- DC-1b—maintain and diversify grasslands and maintain and enhance tree cover in the northeast part of the Natural Area;
- DC-1c—enhance the native scrub community; and
- DC-2a—determine whether two pipelines crossing the Natural Area are still in service or abandoned, then bury, reroute, or remove them, as appropriate.

A.5.10 Edgehill Mountain (EM)

General Description

Edgehill Mountain is northwest across Portola Drive from Mount Davidson in central San Francisco. The 2.3-acre, forested Natural Area is bordered by Kensington and Edgehill Ways. The area is accessed from Shangrila Way and Knockash Hill. Edgehill Mountain is a blue gum eucalyptus forest that supports small populations of sensitive plants and provides habitat for sensitive bird species.

Management Areas

The 0.9-acre MA-2 areas are at the center of the Natural Area and include coastal scrub and prairie grassland habitats. The 1.4-acre MA-3 areas include the remaining urban forests. There are no MA-1 areas.

Recommended Management Actions

At Edgehill Mountain, GR-1, GR-2, GR-4, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Edgehill Mountain Natural Area:

- EM-1a—reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- EM-1b—replace dead and dying trees with native species typical of coastal bluff scrub and oak woodland habitats;
- EM-1c—revegetate with appropriate native plant species in those areas where invasive plants have been removed to maintain and enhance existing scrub and grassland habitats;

- EM-1d—augment existing sensitive plants to prevent extinction of rare or uncommon plant species; and
- EM-2a—develop two new entrances and trails through the Natural Area, one entering at Kensington Way and one entering at Edgehill Way.

A.5.11 Fairmount Park (FP)

General Description

Fairmount Park is southeast of Billy Goat Hill in central San Francisco. The 0.7-acre Natural Area is mostly forested and is at the intersection of Fairmount and San Miguel Streets.

Management Areas

The 0.7-acre MA-3 area is an urban forest. There are no MA-1 or MA-2 areas.

Recommended Management Actions

At Fairmount Park, GR-1, GR-3, GR-4, GR-7, GR-11, GR-12, GR-13, and GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Fairmount Park Natural Area:

- FP-1a—contain and reduce herbaceous and woody invasive plants and
- FP-1b—focus tree regeneration on the north and south sides, leaving fewer trees on the east side and helping to screen existing homes from view.

A.5.12 Glen Canyon Park and O'Shaughnessy Hollow (GC/OH)

General Description

Glen Canyon Park and O'Shaughnessy Hollow are south of Twin Peaks, between the Diamond Heights and Miraloma neighborhoods, in an area formally referred to as the San Miguel Hills. The approximately 70-acre Glen Canyon Park has 60 acres designated as a Natural Area. O'Shaughnessy Hollow is a 3.8-acre Natural Area. O'Shaughnessy Boulevard separates the two Natural Areas, with Glen Canyon Park to the east and O'Shaughnessy Hollow to the west. Recreation facilities in Glen Canyon Park include the Silver Tree Day Camp, a community recreation center, ball fields, playgrounds, and formal and informal trails. There are no developed areas within O'Shaughnessy Hollow.

Management Areas

The 8.1-acre MA-1 areas contain high concentrations of native plants within the grasslands or sensitive species at Glen Canyon Park. The O'Shaughnessy Hollow MA-1 areas include sensitive plant species habitat. The 33-acre MA-2 areas include the scrub-covered western slopes and the riparian[14] corridor in Glen Canyon Park, and areas are

[14]Riparian—land next to a natural watercourse such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank.

designated to provide buffers around the grassland MA-1 areas. The O'Shaughnessy Hollow MA-2 areas support a mix of native-dominated scrub and grassland habitats. MA-3 areas (22.4 acres) include portions of Glen Canyon Park covered with urban forest, the invasive annual grassland in the extreme northern corner, and a corridor along the gravel access road.

Recommended Management Actions

At Glen Canyon Park and O'Shaughnessy Hollow, GR-1 through GR-7, GR-8c, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Glen Canyon Park and O'Shaughnessy Hollow Natural Areas:

- GC/OH-1a—reduce woody and herbaceous invasive plants and understory plants and prevent invasive trees from becoming established;
- GC/OH-1b—revegetate with appropriate native plants to approximate the diversity, cover, and density of adjacent habitat;
- GC/OH-1c—augment existing rare or uncommon species to maintain these species and enhance their chances of survival;
- GC/OH-1d—consider reintroduction of sensitive species;
- GC/OH-1e—remove approximately 120 of the estimated 6,000 invasive blue gum eucalyptus trees in Glen Canyon Park to maintain and enhance native habitats;
- GC/OH-2a—thin sections of the overstory within the riparian corridor and reduce invasive plants in the understory;
- GC/OH-2b—prevent willows from encroaching on open water and create new and stable pool habitats;
- GC/OH-3a—to protect sensitive habitats and prevent erosion, close social trails to the northwestern rock outcrop in Glen Canyon Park, discontinue rock climbing, and close social trails in O'Shaughnessy Hollow;
- GC/OH-4a—avoid removing trees with red-tailed hawk or great horned owl nests and prohibit tree removal within 500 feet of occupied nests;
- GC/OH-4b—protect and preserve open grassland habitat through vegetation management and control of invasive species;
- GC/OH-5a—remove invasive species bordering native coastal scrub;
- GC/OH-5b—plant native vegetation of differing heights to increase structural diversity of coastal scrub habitats;
- GC/OH-5c—manage open pools as in GC/OH-2a-b and GC/OH-7e and make these pools inaccessible to the public;
- GC/OH-6a—consider the requirements of amphibians when creating open pools under GC/OH-2;

- GC/OH-7a—document the presence or absence of forktail damselfly in Glen Canyon Park;
- GC/OH-7b—reintroduce forktail damselfly in Glen Canyon Park if it is not observed in the next five years;
- GC/OH-7c—remove and trim vegetation along the asphalt channel to create appropriate habitat for the forktail damselfly, if it is observed or reintroduced;
- GC/OH-7d—remove willows along the asphalt channel to reduce shading of water, if the forktail damselfly is observed or reintroduced;
- GC/OH-7e—control vegetation within the asphalt channel to create open water and emergent vegetation, if the forktail damselfly is observed or reintroduced;
- GC/OH-7f—consider requirements of the forktail damselfly when creating new pools in Islais Creek;
- GC/OH-8a—annually evaluate the populations of sensitive butterflies within the park;
- GC/OH-8b—install larval host plants and nectar sources as part of revegetation;
- GC/OH-9a—monitor the dog impact on wetlands and Islais Creek channel and consider appropriate restrictions (including fencing) to keep dogs out of the creek channel and wetlands;
- GC/OH-9b—install boardwalks in wet marshy locations along the Islais Creek loop trail to prevent damage to resources and increased sedimentation[15] in the creek;
- GC/OH9c—trim willows along formal trails to allow ease of access, thereby limiting the perceived need to create new trails;
- GC/OH-10a—fill gullies in the access road with gravel to help minimize the input of sediment from the gravel access road, outslope the road the next time it is graded or resurfaced to allow uniform flow of runoff from the hillside across the road to the creek and to eliminate ponding and reduce gullying in the road, evaluate and replace the culverts as necessary, and consider paving the access road;
- GC/OH-10b—close and revegetate social trails that are next to or crossing the creek, in accordance with GR-11, and install bridges or stabilize stream banks with well-designed steps that lead to stepping-stones to cross the creek for any creek crossings that would remain in use;
- GC/OH-10c—maintain the sediment dam and consider installing new sediment traps on the lower reach of the creek; and

[15]Sedimentation—the deposition of material suspended in a stream system, whether in suspension (suspended load) or on the bottom (bedload).

- GC/OH-10d—consider a long-term solution for the unstable and eroding bank of Islais Creek immediately below Silver Tree Day Camp.

A.5.13 Golden Gate Heights Park, Grandview Park, Hawk Hill, and Rock Outcrop (GGRH)

General Description

The Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill all belong to a remnant ridgetop sand dune system in the western portion of San Francisco, in the mid-Sunset or Sunset Heights area. Because these sites have similar characteristics and management issues, they have been combined into this single section. The 4-acre Grandview Park is at 15th Avenue and Moraga Street. Just south of Grandview Park is the 1.6-acre Rock Outcrop, between 14th and Funston Avenues. Continuing south, Golden Gate Heights Park, which contains a 0.8-acre Natural Area, is between Funston, 12th, and 14th Avenues. Of the four parks, the 4.5-acre Hawk Hill at the intersection of Rivera Street and Funston Avenue is the farthest south. These parks are surrounded by dense urban development.

Management Areas

The 3.3-acre MA-1 areas include sensitive species, rich dune habitats, and grasslands. Three areas on Grandview, two areas on Rock Outcrop, one area at Golden Gate Heights, and one area at Hawk Hill have been designated as MA-1. The 6.6-acre MA-2 areas contain less-sensitive but important habitat, and they usually surround the MA-1 areas, providing buffers to the more sensitive habitats within MA-1 areas. The 0.8-acre MA-3 areas designated at Grandview and Golden Gate Heights contain areas of invasive tree species.

Recommended Management Actions

At the Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill, GR-1 through GR-4, GR-7, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for these sites:

- GGRH-1a—contain and reduce herbaceous and woody invasive plants, removing them in such a way that avoids erosion, and then plant native species;
- GGRH-1b—augment existing sensitive plants to maintain these species and enhance their chances of survival;
- GGRH-1c—reintroduce populations of sensitive plant species to help prevent county-wide extinctions of these species;
- GGRH-1d—prevent invasive trees from becoming established and remove trees only at Grandview Park, where approximately five trees will be removed from the upper slope;
- GGRH-1e—reduce invasive vegetation, plant native species to approximate the diversity, cover, and density of adjacent habitat or reference plots in similar habitats at other parks and target habitat types as follows:

- At Grandview, maintain and enhance dune scrub, a dune scrub mosaic, and cypress tree-scrub mosaic,
- At Rock Outcrop, maintain and enhance the dune scrub-rock outcrop plant communities,
- At Golden Gate Heights, maintain and enhance dune scrub, maintain a diversified understory and plant forest gaps with wildlife friendly species within the urban forest, consider removing the asphalt pad at the entryway and installing a native plant demonstration garden, and
- At Hawk Hill, maintain and enhance the dune scrub communities with scattered open sand for annual plant recruitment;

- GGRH-1f—remove vegetation and replant with native species in small noncontiguous patches where soil erosion could occur;
- GGRH-2a—limit access to the 917 linear feet of designated trails to protect sensitive habitat and consider installing fencing at Hawk Hill if necessary;
- GGRH-2b—consider using the dune-step system as a biotechnical control measure to help control soil movement and allow for revegetation that would better withstand foot traffic on the steep dune slopes;
- GGRH-3a—route users away from eroding areas and sensitive habitats to the 1,313 linear feet of designated trails and install temporary or permanent fencing at Grandview Park if necessary;
- GGRH-3b—install soil retaining boxes on the downhill side of the landings to help minimize erosion at Grandview Park; and
- GGRH-4a—develop a new approximately 188-foot trail at the edge of the forest to replace the trail that is causing erosion and close the 390-linear-foot social trail through the dunes (Golden Gate Heights).

A.5.14 Golden Gate Park Oak Woodlands (OW)

General Description

The 26.2-acre Oak Woodlands Natural Area is in the northeast corner of the 1,021-acre Golden Gate Park, between Fulton Street and Lincoln Way. In addition to the large oak woodland bounded by Stanyan Street, Fulton Street, and 6th Avenue, the Natural Areas in Golden Gate Park include Whiskey Hill, Strawberry Hill, and Lily Pond. The individual areas that compose this Natural Area represent the few places where native trees persist in the Natural Areas Program system. Two DPAs are within or next to the Natural Area, one where North Willard Street intersects with Fulton Street (Golden Gate Park Northeast DPA) and one next to Whiskey Hill (Golden Gate Park Southeast DPA).

Management Areas

The 0.7-acre MA-1 areas contain sensitive plant species. The 25.5-acre MA-2 areas are oak woodlands. There are no MA-3 areas.

Recommended Management Actions

At Oak Woodlands, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Oak Woodlands Natural Area:

- OW-1a—contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- OW-1b—reduce invasive vegetation within the oak woodlands to increase and diversify the native understory;
- OW-1c—augment and reintroduce native plant species;
- OW-1d—remove approximately 82 of the approximately 900 invasive blue gum eucalyptus trees;
- OW-2a—redesign the organic material dump site and install traffic barricades at the edge of the slope to reduce damage to downslope oak trees;
- OW-3a—remove invasive understory vegetation and replace it with native species typical of an oak woodland understory; and
- OW-4a—monitor use of Golden Gate Park Northeast DPA and install signs to delineate the boundaries of both DPAs.

A.5.15 India Basin Shoreline Park (IB)

General Description

India Basin Shoreline Park is in southeast San Francisco next to Hunters Point Boulevard at the shore of San Francisco Bay. Comprising 6.2 of the park's 11.8 acres, the Natural Area is the only one that borders San Francisco Bay. It contains a segment of the Bay Trail, shoreline access for fishing and water-dependent recreation, tidal salt marsh wetlands, and suitable habitat for shore birds and foraging raptors.

Management Areas

The 3.2-acre MA-1 area consists of salt marsh wetland. The 2.8-acre MA-2 areas include a buffer between restored wetlands and upland habitat, annual grasslands, scrub, and oak habitat areas under development. There are no MA-3 areas.

Recommended Management Actions

At India Basin Shoreline Park, GR-1 through GR-4, GR-7, and GR-13 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the India Basin Shoreline Park Natural Area:

- IB-1a—monitor the salt marsh for smooth cordgrass and other invasive species and reduce and contain infestations of upland invasive species;
- IB-1b—remove invasive species from wetland and upland areas and maintain and enhance upland areas as a grassland-coastal scrub mosaic;

- IB-1c—augment populations of alkali heath and marsh gumplant by direct seeding or planting;
- IB-2a—maintain and enhance existing grassland-scrub mosaic;
- IB-2b—install low-growing plants to create a partially vegetated screen between the trail and the buffer area;
- IB-3a—increase vegetation density in the area of the trail to reduce erosion on the face of the levee; and
- IB-4a—restrict access to sensitive salt marsh habitat if damage to these areas occurs, including installing low trailside fencing.

A.5.16 Interior Greenbelt (IG)

General Description

Interior Greenbelt is on Mount Sutro, south of Golden Gate Park and north of Twin Peaks in central San Francisco. Of the two parcels that make up the 16.5-acre Natural Area, the northern parcel (owned by the University of California San Francisco) is accessed at the end of Edgewood Street and at the corner of Stanyan Street and Belgrave Avenue. The southern parcel is south across Clarendon Street from the northern parcel and is accessed at the ends of Mt. Spring and Saint Germain Streets. Both parcels are urban forests.

Management Areas

The 1.8-acre MA-2 areas are in the northern parcel and support sensitive plants. The 14.7-acre MA-3 areas include the urban forests outside the MA-2 areas. There are no MA-1 areas.

Recommended Management Actions

At Interior Greenbelt, GR-1, GR-2, GR-4, GR-7, GR-9, GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Interior Greenbelt Natural Area:

- IG-1a—reduce and contain herbaceous invasive plants and prevent invasive trees from becoming established;
- IG-1b—remove approximately 140 of the estimated 5,800 blue gum eucalyptus trees;
- IG-1c—revegetate using appropriate native plants in those areas where invasive plants have been removed to maintain and enhance the existing scrub mosaic communities;
- IG-1d—augment existing populations of sensitive plants;
- IG-1e—reintroduce rare plants to reduce the potential for local extinction of sensitive species in San Francisco;
- IG-2a—develop a new trail linking existing secondary trails with trails on the University of California property; and

- IG-2b—formalize existing social trails.

A.5.17 Kite Hill (KH)

General Description

Kite Hill is a grassy knoll in the central portion of San Francisco, near the intersection of 19th and Yukon Streets. Most of the 2.7-acre Natural Area is grassland, with an ornamental garden north of the corner of 19th and Yukon Streets.

Management Areas

The 0.6-acre MA-1 area has native scrub series, rock outcrops, and annual grasslands with high native species diversity. The 0.5-acre MA-2 area buffers the MA-1 area and includes native landscaping along the Yukon Street frontage. The 1.6-acre MA-3 area has grasslands in the eastern portion of the Natural Area.

Recommended Management Actions

At Kite Hill, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Kite Hill Natural Area:

- KH-1a—contain and reduce herbaceous and woody invasive plants and prevent invasive tree species from becoming established;
- KH-1b—maintain and diversify grasslands, with the initial focus on areas where native species are dominant;
- KH-1c—install showy native vegetation near the road and access points;
- KH-1d—reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco;
- KH-1e—maintain and enhance the grassland-scrub oak woodland ecotone[16] to increase habitat diversity and value to wildlife; and
- KH-2a—revegetate a large area of exposed soil surrounding a small group of apple trees by hand-broadcasting the appropriate seed mixture and by applying mulch to the area. Install signs explaining the benefits of this revegetation.

A.5.18 Lake Merced (LM)

General Description

Lake Merced is in the southwest portion of San Francisco and is roughly bordered by John Muir Drive, Skyline Boulevard, and Lake Merced Boulevard. The San Francisco Public Utilities Commission (SFPUC) owns Lake Merced, and the SFRPD maintains the recreational uses under the terms of a memorandum of understanding between the two

[16]Ecotone—a transitional zone between two vegetation communities that contains the characteristic species of each community.

departments. Recreation at the lake includes boating, fishing, golfing, jogging, bicycling, skeet shooting, and picnicking. Lake Merced is made up of four connected sub-lakes: North, East, South, and Impound. A designated DPA on the north side of East Lake is in an area informally known as the Mesa. The Natural Area covers approximately 395 of the lake's 614 acres and generally encompasses the lake, the bordering freshwater marsh wetland, and upland vegetation.

Management Areas

The 60.8-acre MA-1 areas include double-crested cormorant rookeries,[17] a portion of the Mesa that supports sensitive plant species, Impound Lake and its associated wetlands, and tule marsh around East, North, and South Lakes. The 101.8-acre MA-2 areas include the water of East Lake, which supports western pond turtles, and the habitat between the marshes and the Natural Area boundary. The 231.5-acre MA-3 areas include urban forests and North and South Lakes.

Recommended Management Actions

At Lake Merced, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Lake Merced Natural Area:

- LM-1a—contain and reduce herbaceous and woody invasive plants and plant native species;
- LM-1b—remove approximately 134 of the estimated 12,000 invasive blue gum eucalyptus trees, a little more than one percent of the total inventory, to maintain and enhance native habitats;
- LM-1c—prevent the establishment of invasive tree species to maintain and enhance coastal wetland scrub;[18]
- LM-1d—maintain and enhance sensitive habitats;
- LM-2a—augment existing sensitive plants to maintain these species and enhance their chances of survival;
- LM-2b—reintroduce populations of rare plant species to help prevent county-wide extinctions of these species;
- LM-3a—remove trees in such a way as to avoid removing those used by raptors, cormorants, and herons and remove no trees within 500 feet of occupied nests;
- LM-3b—consider closing social trails near cormorant nesting colonies or hawk nests if trail usage appears to disrupt nesting. Install signs at rental boat launch locations asking boaters to remain at least 30 feet from the edge of the marsh between February 1 and August 31;
- LM-3c—remove invasive understory vegetation when bird nests are not active;

[17]Rookery—colony or aggregation of animals of the same species.

[18]Scrub—low trees or shrubs collectively.

- LM-3d—locate and map raptor nests during inactive periods;
- LM-4a—maintain and enhance important bird nesting and foraging habitat to include removal of invasive species and natural recruitment of preferred species;
- LM-5a—create more open grassland habitat through vegetation management and control of invasive species;
- LM-5b—remove iceplant to create openings where native grasslands and grassland/scrub mosaics could be established;
- LM-6a—remove invasive vegetation and enhance native scrub and grassland species in upland sandy soils next to East Lake to allow for western pond turtle nesting. Create piles of logs or rocks to increase and improve basking habitat;
- LM-6b—periodically trap and remove nonnative turtle species;
- LM-6c—restrict public access to the East Lake water and shoreline from April 1 to August 31 to avoid disturbing breeding turtles;
- LM-7a—relocate the DPA to a different area to avoid disturbing breeding birds in the current location;

  (Note: Due to the CCSF moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed. Restoration of the site would continue, following removal of the DPA.)
- LM-8a—implement GR-14;
- LM-8b—consider participating in the development of an environmental education center;

  (Note: Constructing and operating an environmental education center are not proposed as part of the SNRAMP and the project. Should those activities be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)
- LM-8c—maintain existing interpretive signs at key locations;
- LM-9a—treat small-scale erosion gullies with such measures as gully plugs, brush boxes, energy dissipaters, and water bars and plant these areas with native vegetation to prevent soil erosion;
- LM-9b—coordinate with the San Francisco Department of Public Works and other agencies about programs to address large-scale erosion gullies;
- LM-10a—create an educational program for golf course staff; and
- LM-10b—install informational and interpretive signs next to Lake Merced, along the periphery of Harding Park Golf Course, indicating that the area is sensitive wildlife habitat and install temporary barriers along sensitive areas during large golf tournaments.

A.5.19 McLaren Park (MP)

General Description

McLaren Park covers 312.6 acres near the southeast corner of San Francisco and is bisected by Mansell Street. Sunnydale and Visitacion Avenues cross the southern half of the park, while John F. Shelley Drive crosses the northern half. Recreational facilities within the park include over 11 miles of trails, tennis courts, ball fields, a golf course, picnic areas, and an amphitheater. Three designated DPAs are within the park, two within and one next to the Natural Area. The Natural Area covers 165.3 acres and is made up of grassland, scrub, and tree-dominated vegetation series.

Management Areas

The 34.9-acre MA-1 areas include sensitive riparian habitat, grassland habitat, marsh habitat, and an area of diverse grasslands supporting sensitive plant species. The 68.3-acre MA-2 areas may also contain sensitive species[19] and habitats and act as buffers between the MA-1 areas and the adjacent urban forest. These areas are being restored, and trees and shrubs are being removed, and native species are being planted. The 61.4-acre MA-3 areas include urban forests, grasslands, and forest-grassland mosaics.

Recommended Management Actions

At McLaren Park, GR-1 through GR-4, GR-6, GR-7, and GR-9 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the McLaren Park Natural Area:

- MP-1a—reduce and contain herbaceous and woody invasive plants;
- MP-1b—remove approximately 809 of the estimated 19,500 invasive blue gum eucalyptus trees to enhance sensitive species habitats;
- MP-1c—revegetate, using appropriate native plants in those areas where invasive plants have been removed;
- MP-1d—augment existing sensitive plants to prevent the extinction of rare or uncommon grassland plants in McLaren Park;
- MP-1e—reintroduce rare plant species to help prevent local extinction of sensitive species in San Francisco;
- MP-2a—increase the patch size of willow and coastal scrub by removing invasive species that border these areas and allowing natural recruitment into the newly opened areas;
- MP-2b—increase the structural diversity of habitats by planting native vegetation that is different in height from the existing plants;
- MP-2c—restrict foot traffic in the Gray Fox Creek area;

[19]Sensitive species—species that are listed on the California Native Plant Society plant list or *Inventory of Rare and Endangered Vascular Plants*.

- MP-3a—remove fruiting plants only in the very early spring before nesting starts but after wintering birds have left;
- MP-4a—install spring boxes or small artificial pool habitats associated with springs and seeps to enhance amphibian habitat;
- MP-5a—continue to control emergent vegetation in Yosemite Marsh to prevent cattails from completely clogging the open water areas;
- MP-5b—continue to allow the development of an unmowed grass buffer along the channel between Yosemite Marsh and the recreation area;
- MP-5c—routinely monitor the San Francisco forktail damselfly population;
- MP-5d—create an environmental education program for all SFRPD personnel that work at McLaren Park;
- MP-5e—to protect the existing population of the San Francisco forktail damselfly at Yosemite Marsh, do not add any fish to the pond;
- MP-6a—conduct an annual evaluation of the mission blue butterfly population;
- MP-6b—install larval host plants and nectar sources as part of revegetation efforts;
- MP-7a—install signs and temporary barriers along the roadway to protect sensitive areas from off-road vehicles;
- MP-8a—restrict access to sensitive habitat areas if damage continues;
- MP-9a—eliminate dog access to a portion of Gray Fox Creek and convert the area around the creek to an on-leash area, resulting in the loss of 8.3 acres of DPA; and
- MP-9b—monitor native grassland and wildflower areas within the remaining off-leash area of the Shelley Loop DPA.

A.5.20 Mount Davidson (MD)

General Description

Mount Davidson is in south-central San Francisco just south of Portola Drive and partly next to Juanita Avenue, Dalewood Way, and Molimo Drive in the Miraloma neighborhood. Forests dominate the landscape, covering three-quarters of the 40.2-acre Natural Area. Developed facilities are minimal. Mount Davidson is a highly visible focal point within San Francisco and supports a diverse array of habitats, plants, and animals.

Management Areas

The 8.8-acre MA-1 areas include two areas on the east-facing slope where the native Franciscan coastal scrub (huckleberry and reed grass) and grasslands are found and another area in the understory of the eucalyptus forest where populations of Pacific reed grass persist. The 11-acre MA-2 areas may also contain sensitive species, and its habitats serve as buffers between the extensive urban forests and the MA-1 areas. At Mount Davidson, the 20.1-acre MA-3 area is composed entirely of urban forest.

Recommended Management Actions

At Mount Davidson, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Mount Davidson Natural Area:

- MD-1a—reduce woody and herbaceous invasive plants, prevent invasive tree species from establishing, and reduce understory plants;
- MD-1b—remove approximately 1,600 invasive blue gum eucalyptus trees of the estimated 11,000 invasive trees to maintain and enhance native habitats;
- MD-1c—revegetate using appropriate native plants, enhance and diversify existing grasslands and coastal scrub habitats, and plant the understory and forest gaps, in accordance with GR-15;
- MD-1d—augment existing rare or uncommon species to maintain these species and enhance their chances of survival;
- MD-1e—reintroduce populations of rare plant species to help prevent county-wide extinctions of these species;
- MD-2a—remove invasive species bordering native scrub, and connect isolated patches of shrubs with plantings and brush piles;
- MD-2b—plant native species of differing heights to increase structural diversity;
- MD-3a—remove fruiting invasive plants after breeding season and after native replacements mature to fruiting stage; and
- MD-4a—consider establishing a permanent water source for birds and other native animals and provide breeding habitat for amphibians.

A.5.21 Palou-Phelps (PP)

General Description

Palou-Phelps Park covers 2.5 acres near the intersection of Palou and Phelps Streets in southeastern San Francisco. The park has a playground area at the northern entry. The 2.1-acre Natural Area has a vegetated slope made up primarily of grasslands.

Management Areas

The 0.8-acre MA-1 area is rich grassland above the playground that includes purple needlegrass prairie. The 0.4-acre MA-2 area supports natural resources and serves as a buffer for the MA-1 area. The MA-3 0.8-acre area contains invasive scrub series and trees in the eastern portion of the Natural Area.

Recommended Management Actions

At Palou-Phelps, GR-1 through GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Palou-Phelps Natural Area:

- PP-1a—reduce and contain herbaceous and woody invasive plants and prevent invasive trees from becoming established;
- PP-1b—revegetate with appropriate native plants those areas where invasive vegetation has been removed;
- PP-1c—reintroduce sensitive plants;
- PP-1d—maintain the existing mosaic of urban forest and grassland; and
- PP-2a—close an unsafe social trail segment leading southeast from the playground and investigate the best possible route to reach the southern portion of the Natural Area.

A.5.22 Pine Lake (PL)

General Description

The 8.4-acre Pine Lake Natural Area is within the 30.3-acre Pine Lake Park. The Natural Area is bounded in part by Wawona Way on the north and Crestlake Drive on the west and south sides. The eastern edge of Pine Lake abuts the Stern Grove Park Recreation Area. Surrounded on three sides by an urban forest, Pine Lake (or Laguna Puerca), with a water surface area of approximately 1.7 acres, is one of the few natural lakes in San Francisco. Most of Pine Lake's undeveloped areas are covered with nonnative blue gum eucalyptus forest. A designated DPA exists in the meadow to the east of the Natural Area.

Management Areas

The one-acre MA-1 area at Pine Lake is associated with the wetland habitat in the lake. The 3.8-acre MA-2 area includes the bulk of the open water, willow habitat, and buffer area around the MA-1 area. The 3.6-acre MA-3 areas are those that are less sensitive and not a priority for direct management; they include the urban forest on the slopes that surround Pine Lake.

Recommended Management Actions

At Pine Lake, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Pine Lake Natural Area:

- PL-1a—reduce populations of invasive plants, including understory plants, periodically remove water primrose to preserve the open water of Pine Lake, prevent invasive trees from becoming established, and prune invasive trees to create light windows to encourage plant growth in the understory;
- PL-1b—revegetate with appropriate native plants that are consistent with the planting plans for the Pine Lake Park Improvement Project (now underway) and with the diversity, cover, and density of reference plots in similar habitats around San Francisco, enhance and diversify existing wetlands and willow riparian areas, and develop and maintain a continuous riparian corridor to Pine

Lake at the base of the slope on the south side of the Natural Area to increase available habitat for birds;

- PL-2a—locate and map raptor nests during inactive periods, avoid removing trees used by raptors, and prohibit tree removal activities within 500 feet of occupied nests;
- PL-3a—remove invasive species to increase the patch size of willows and coastal scrub and create larger habitat units by encouraging willows to form a continuous riparian corridor to the lake;
- PL-3b—install native plants of different height from existing habitats to increase structural diversity;
- PL-3c—install native hydrophytic vegetation that provides cover and foraging habitat for resident and migratory waterfowl along the degraded shoreline of Pine Lake;
- PL-4a—determine the presence, population, and reproduction status of western pond turtles at Pine Lake;
- PL-4b—relocate any western pond turtles to the higher-quality habitat at Lake Merced;
- PL-5a—consider reintroducing Pacific chorus frogs into Pine Lake;
- PL-5b—consult with the California Department of Fish and Game before introducing any species;
- PL-6a—reopen the concrete trail on the western end of the Natural Area if it allows safe public access, otherwise close the concrete trail and develop a nearby alternate route; remove old concrete and revegetate the site;
- PL-6b—maintain and improve 2,144 linear feet of primary trails throughout the Natural Area and reroute or close degraded areas and social trails;
- PL-7a—in accordance with the Sigmund Stern Grove and Pine Lake Park Improvement Plan, provide two dedicated access points to Pine Lake (one at the beach at the east end and one overlooking the lake at the west end) and reduce uncontrolled shoreline access;
- PL-7b—restrict dog access to the lake; and
- PL-7c—post signs at the lake regarding prohibitions against dog access in the lake.

A.5.23 Sharp Park (SP)

General Description

The 411-acre Sharp Park is in the town of Pacifica in San Mateo County. The park borders the Pacific Ocean and is bisected by Highway 1. The Sharp Park Golf Course and Laguna Salada are on the western side of Highway 1. An archery range and extensive canyon are on the eastern side. Sharp Park Road cuts through the northern edge of Sharp Park, east

of Highway 1. Sanchez Creek originates in the upper canyon of Sharp Park and approximately bisects the park in an east-west direction. Sharp Park is one of the largest SFRPD parks and is surrounded by significant open spaces. Mori Point, recently acquired by the GGNRA, borders the southwestern edge, and the Sweeney Ridge GGNRA borders the park on the southeastern and eastern edges. The northern side of Sharp Park is bordered by undeveloped areas within the cities of Pacifica and San Bruno.

The Natural Areas account for 237.2 acres within Sharp Park and encompass the upper canyon areas, portions of Sanchez Creek, and the Laguna Salada wetlands and associated vegetation. The vegetation of Sharp Park is dominated by invasive forest and a golf course, but the park also contains significant areas of wetlands and scrub vegetation.

Management Areas

The Sharp Park management areas include the wetlands associated with Laguna Salada and Horse Stable Pond, grassland and scrub areas, and the urban forests of the canyon. The 35-acre MA-1 areas include three areas in the upper canyon and three in the Laguna Salada area. The 125.1-acre MA-2 areas surround each MA-1 in the upper canyon, may also contain sensitive species and habitats, and provide buffers between the extensive urban forests and the MA-1 areas. Many of the MA-2 areas in the upper canyon also support diverse assemblages of scrub vegetation that provide important structural diversity. The 76.5-acre MA-3 areas at Sharp Park include most of the areas that are dominated by invasive trees but that are lacking the understory complexity found in the MA-2 areas.

Recommended Management Actions

At Sharp Park, GR-1, GR-2, GR-4, and GR-6 through GR-15 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Sharp Park Natural Area:

- SP-1a—reduce woody and herbaceous invasive plants, prevent invasive tree species from being established, and reduce invasive understory plants;
- SP-1b—remove approximately 15,000 invasive blue gum eucalyptus of the estimated 54,000 invasive trees to maintain and enhance native habitats;
- SP-1c—revegetate using appropriate native plants, enhance and diversify existing wetlands, creek grasslands, and coastal scrub habitats to approximate the diversity, cover, and density of reference sites around San Francisco, and plant the understory and forest gaps in accordance with GR-15;
- SP-1d—augment existing rare or uncommon grassland species to maintain these species and enhance their chances of survival;
- SP-1e—consider reintroducing sensitive species;
- SP-2a—implement a control program for feral pigs;
- SP-3a—preserve natural or biodegradable elements (branches, trees, and logs) during vegetation management and remove other materials;

- SP-4a—implement improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following
    - Create shallow pools within existing wetlands,
    - Continue monitoring California red-legged frogs and San Francisco garter snakes,
    - Remove tires from Horse Stable Pond,
    - Install signs and barriers to keep dogs out of Horse Stable Pond,
    - Separate the small peninsulas within Laguna Salada from the mainland by small canals, and
    - Restore Sanchez Creek by deepening the channel, expanding the creek corridor upstream, and buffer zones to limit human disturbance;
- SP-4b—create low mounds, planted with willows, on the western edge of Laguna Salada to serve as a visual barrier, to provide snake and frog basking sites, and to provide nesting habitat for riparian birds;
- SP-4c—reduce draw-down of Horse Stable Pond when California red-legged frog egg masses are present or maintain a stable water level during red-legged frog breeding season;
- SP-4d—remove any bullfrogs that are found in Laguna Salada;
- SP-4e—stop all golf course vehicles from using the service road from Moose Lodge to Horse Stable Pond;
- SP-5a—work with golf course staff to minimize use of chemicals;
- SP-6a—coordinate with the golf course to remove aquatic vegetation within the channel every spring and fall;
- SP-6b—remove and trim vegetation along the edges of the channel between Laguna Salada and Horse Stable Pond to allow forktail damselfly perching within sight of the water;
- SP-7a—develop a plan for safe public access for San Francisco archers to the upper canyon and nearby GGNRA lands;
- SP-8a—make 33.3 acres of Arrowhead Pond, Laguna Salada, and Horse Stable Pond off limits to dogs to prevent access to sensitive habitats; if this is not effective, use fencing to close social trails in these areas;
- SP-9a—educate golf course staff about the importance of identifying California red-legged frogs, San Francisco garter snakes, and forktail damselflies and their habitats;
- SP-9b—establish a vegetation management plan for the canal connecting Laguna Salada and Horse Stable Pond that would allow channel maintenance without affecting the forktail damselfly, California red-legged frog, or San Francisco garter snake;

- SP-9c—create a buffer zone between the Laguna Salada wetlands and the golf course fairways;
- SP-9d—work with golf course maintenance staff to incorporate native plants within bank stabilization efforts along Sanchez Creek where it flows through the golf course;
- SP-10a—backfill trenches with nearby loose soil, replant with appropriate native vegetation;
- SP-11a—develop and implement a comprehensive plan to control the erosion in the extensive area of eroded badlands in the isolated northern portion of the park bounded by the loop in Sharp Park Road; and
- SP-12a—work with other divisions of the SFRPD as necessary to facilitate cleanup and remediation of the former rifle range.

  (Note: Because these cleanup and remediation activities are part of a separate process lead by the SFRPD Capital Division, they are not addressed as part of the SNRAMP in this Initial Study.)

A.5.24 Tank Hill (TK)

General Description

Tank Hill is in central San Francisco on Twin Peaks Boulevard near Golden Gate Park. The Natural Area is a 2.9-acre grassy knoll rich in local plant species. The property is publicly accessible via a wooden stairway from Twin Peaks Boulevard and a retained-earth stairway at the end of Belgrave Street.

Management Areas

The 1.5-acre MA-1 areas are grassland and rock outcrops that support sensitive species. The 0.6-acre MA-2 areas buffer the MA-1 areas. The 0.7-acre MA-3 areas include tree-dominated habitats and steep slopes in the southern portion of the Natural Area.

Recommended Management Actions

At Tank Hill, GR-1, GR-2, GR-4, GR-7, and GR-9 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Tank Hill Natural Area:

- TK-1a—contain and reduce herbaceous and woody invasive plants;
- TK-1b—augment populations of sensitive plant species;
- TK-1c—reintroduce sensitive plant species;
- TK-1d—revegetate areas where invasive plants have been removed with appropriate native species;
- TK-1e—prevent establishment of invasive tree species; and
- TK-2a—following control of invasive species, install native scrub.

A.5.25 Twin Peaks (TP)

General Description

The 31.1-acre Twin Peaks Natural Areas are north of Mount Davidson and south of Buena Vista Park and Corona Heights. To the north of Twin Peaks are Sutro Tower, a San Francisco Fire Department reservoir, and a parking lot for one of the most popular vista points in San Francisco (popularly known as Christmas Tree Point). The Fire Department property, Christmas Tree Point, and other open space to the north contain Natural Areas, which, when combined with SFRPD property, make a much larger and more viable habitat area. The Natural Areas at Twin Peaks essentially encompass the entire area, except for the roads, viewpoints, and the reservoir.

Twin Peaks has a north-south orientation and is divided into several discontinuous sections by Twin Peaks Boulevard, which winds along its slopes. Twin Peaks' west-facing slopes receive substantial fog and strong winds, while the east-facing slopes receive more sun and warmth. The vegetation is primarily a mix of intergrading patches of grassland and scrub. Twin Peaks offers spectacular views of the surrounding Bay Area and is a world-famous tourist attraction. Twin Peaks receives a high level of recreational use and contains a segment of the Bay Ridge Trail.

Management Areas

Four management areas have been designated at Twin Peaks. The 12.6-acre MA-1a areas include rich native grasslands and sensitive species habitat, including mission blue butterfly habitat. Much of the 14.3-acre MA-2 areas are coastal scrub areas. There are two 3.8-acre MA-3 areas, most of which are along the boundary of the Twin Peaks Natural Area, next to the surrounding residential neighborhoods.

Recommended Management Actions

At Twin Peaks, GR-1, GR-2, GR-4, GR-6, GR-7, GR-9, and GR-11 through GR-14 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the Twin Peaks Natural Area:

- TP-1a—contain and reduce woody and herbaceous invasive plants;
- TP-1b—augment existing rare or uncommon plant species to help ensure the continued presence of these species, and consider reintroducing sensitive species;
- TP-1c—maintain and enhance existing grassland habitats using diversity, cover, and density targets generated from reference sites around San Francisco, plant native grassland and scrub species, and maintain toyon, oak, and coastal scrub in the tree-dominated areas on the park's edges;
- TP-1d—prevent invasive tree species from becoming established and remove three pine trees out of 88 existing invasive trees;
- TP-2a—continue to monitor the mission blue butterfly population;
- TP-2b—augment host plant populations whenever possible;

- TP-3a—maintain existing fences to route park users to safe and designated trails and develop safe pedestrian access along Twin Peaks Boulevard, including developing approximately 500 feet of new trails, if they are required;
- TP-3b—install signs at all formal access points to show that trails are for foot use only, monitor the use of trails within the area, and install appropriate fencing to prevent wheeled-vehicle access to sensitive habitats if necessary;
- TP-3c—install signs at known habitat areas of the mission blue butterfly indicating on-trail and on-leash access only and consider lining the trail with fences; and
- TP-4a—consider restricting access to or fencing 5.9 acres of mission blue butterfly habitat next to or surrounding the trails.

A.5.26 15th Avenue Steps (FI)

General Description

The 0.3-acre 15th Avenue Steps Natural Area is in the Golden Gate Heights area of San Francisco and is the extension of 15th Avenue, between Kirkham and Lawton Streets. Access is via a set of concrete stairs bisecting the Natural Area, which supports native oak trees and habitat for a variety of resident and migratory bird species.

Management Areas

The 0.2-acre MA-2 area includes coast live oak trees and California blackberry scrub on both sides of the concrete stairs. There are no MA-1 and MA-3 areas.

Recommended Management Actions

At 15th Avenue Steps, GR-1, GR-2, GR-4, GR-7, GR-9, GR-11, and GR-12 would be implemented to address management issues. In addition, the following site-specific management actions are recommended for the 15th Avenue Steps Natural Area:

- FI-1a—allow for recruitment of native plants, enhance existing habitats, contain and reduce herbaceous and woody species, remove invasive plants and replace with appropriate dune species; and
- FI-1b—maintain and enhance oak woodland and coastal scrub communities.

A.5.27 Everson/Digby Lots

A portion of the Everson/Digby Lots park was recently determined to be a Natural Area. This Natural Area was not addressed in the SNRAMP. The Environmental Impact Report will present information on the recommended management actions for this Natural Area and will analyze the potential environmental impacts associated with those actions.

B. PROJECT SETTING

CCSF covers the northern portion of the San Francisco Peninsula and encompasses an area of 49 square miles. Small fragments of a unique ecosystem called the Franciscan landscape, part of the larger Bay/Delta region, still exist in San Francisco. The Franciscan landscape developed in the wildlands that once extended from San Bruno Mountain to the Golden Gate Headlands. Its unusual combination of climatic, floristic, and geologic features supported the development of a biologically diverse assemblage of plants and animals, some of which were unique to the area. Most of the remnant fragments of the Franciscan landscape are within the Natural Areas.

The proposed project occurs across 31 Natural Areas totaling approximately 1,105 acres. Of the total Natural Areas acreage, 868 acres are in San Francisco, and 237 are in Pacifica (Sharp Park). The Natural Areas range in size from 0.3 acres (15th Avenue Steps) to 395 acres (Lake Merced). The MA-1 areas cover roughly 193 acres (17 percent), with 430 acres (39 percent) for MA-2 areas and 478 acres (43 percent) for MA-3 areas. Within the Natural Areas are approximately 117,453 trees and 211,303 linear feet of trails.

Descriptions of the project setting for each Natural Area can be found in Section A.5.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	☐	☒
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☐	☒
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	☒	☐

This section identifies and discusses applicable regional and local land use plans and policies relevant to the proposed project. The focus of this section is the CCSF land use plans and policies. CCSF land use plans and policies are primarily applicable to projects within the jurisdictional boundaries of San Francisco, although in some cases they may apply to projects outside San Francisco. This information is relevant to the evaluation of impacts of the proposed project with respect to specific significance criteria under CEQA that require analysis of the compatibility of a proposed project with certain aspects of local land use plans and policies.

The Natural Areas are scattered throughout the central and southern portions of the CCSF and constitute four percent of the total city area. Sharp Park is in the city of Pacifica. Most Natural Areas are owned and managed by the SFRPD; Balboa is owned by CCSF and is managed by the National Park Service, while the San Francisco Public Utilities Commission owns, and SFRPD manages, Lake Merced.

The SFRPD is guided by the San Francisco City Charter along with other city plans and policies. These plans include the *San Francisco General Plan*, which sets forth the comprehensive, long-term land use policy for the CCSF, and the *San Francisco Sustainability Plan*, which addresses the long-term sustainability of the City. In addition the SFRPD has created the Natural Areas Program to support and develop a community-based habitat restoration program. These plans and policies, as applicable to the proposed project, as well as other relevant plans and policies, are discussed herein.

C.1 APPLICABLE PLANS AND POLICIES

CCSF Plans and Policies

San Francisco General Plan

One of the basic goals of the *San Francisco General Plan* is "coordination of the growth and development of the City with the growth and development of adjoining cities and counties and of the San Francisco Bay Region." The general plan consists of ten issue-oriented plan elements—Air Quality, Arts, Commerce

and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design. The plan elements relevant to the proposed project are briefly described below.

Air Quality Element. This element promotes the goal of clean air planning through objectives and policies aimed at adherence to air quality regulations, focusing development near transit services, and advocating alternatives to the private automobile.

Environmental Protection Element. This element addresses the impact of urbanization on the natural environment. The element promotes the protection of plant and animal life and freshwater sources and speaks to the responsibility of San Francisco to provide a permanent, clean water supply to meet present and future needs and to maintain an adequate water distribution system.

Recreation and Open Space Element. This element promotes the goal of preserving and protecting open spaces. Policy 2.13 of the General Plan requires the City to preserve and protect the Significant Natural Resource Areas. Policy 13 includes natural resource areas and naturalistic areas as potential protection and preservation areas. The policy identifies the following criteria used to determine a Significant Natural Resource Area: (1) sites that are undeveloped, relatively undisturbed remnants of San Francisco's original landscape that either support diverse and significant indigenous plant and wildlife habitats or contain rare geologic formations or riparian zones; (2) sites that contain rare, threatened, or endangered species or areas likely to support these species; and (3) areas that are adjacent to other protected natural resource areas. The policy further stipulates that management plans be developed for each of the Natural Areas. Specifically, the policy describes the need to:

- Identify Natural Areas and inventory them;
- Identify the presence of natural resources;
- Describe practices such as exotic plant species removal; and
- Identify policies governing access and recreational uses to ensure that natural resource values are not diminished by public use.

Urban Design Element. This element concerns the physical character and order of the City and the relationship between people and their environment. It provides a general plan, responding to issues relating to City pattern, conservation, major new development, and neighborhood environment.

Western Area Shoreline Plan. The policies of the CCSF Local Coastal Program were incorporated into the general plan as part of this area plan. Applicable area plan policies include the following:

- Objective 3: Enhance the recreational connection between Golden Gate Park and the beach frontage.
    - Policy 3.1: Strengthen the visual and physical connection between the park and beach. Emphasize the naturalistic landscape qualities of the western end of the park for visitor use. When possible eliminate the Richmond-Sunset sewer treatment facilities.
    - Policy 3.2: Continue to implement a long-term reforestation program at the western portion of the park.
    - Policy 3.3: Develop and periodically revise a master plan for Golden Gate Park to include specific policies for the maintenance and improvement of recreational access in the western portion of the park.
    - Policy 3.4: Rehabilitate the Beach Chalet for increased visitor use.
- Objective 5: Preserve the recreational and natural habitat of Lake Merced.
    - Policy 5.1: Preserve in a safe, attractive and usable condition the recreational facilities, passive activities, playgrounds and vistas of Lake Merced area for the enjoyment of citizens and visitors to the city.
    - Policy 5.2: Maintain a recreational pathway around the lake designed for multiple use.
    - Policy 5.3: Allow only those activities in Lake Merced area which will not threaten the quality of the water as a standby reservoir for emergency use.
    - Policy 5.4: As it becomes obsolete, replace the police pistol range on the southerly side of South Lake with recreational facilities.
- Objective 6: Maintain and enhance the recreational use of San Francisco's Ocean Beach shoreline.
    - Policy 6.1: Continue Ocean Beach as a natural beach area for public recreation.
    - Policy 6.2: Improve and stabilize the sand dunes where necessary with natural materials to control erosion.
    - Policy 6.3: Keep the natural appearance of the beach and maximize its usefulness by maintaining the beach in a state free of litter and debris.

- Policy 6.4: Maintain and improve the physical condition and appearance of the esplanade between Lincoln Way and the Cliff House.

- Policy 6.5: Enhance the enjoyment of visitors to Ocean Beach by providing convenient visitor-oriented services, including take-out food facilities.

- Policy 6.6: Extend the seawall promenade south to Sloat Boulevard as funds become available.

Consistency Evaluation. As described above, the *San Francisco General Plan* addresses such elements as air quality, community safety (including protection from geologic and seismic hazards), and environmental protection (including protection of water resources and biological resources and addressing recreation and open space).

The project proposes to restore and manage the Natural Areas. Although the project could impact natural systems, mitigation measures would minimize potential impacts. Implementation of the project would identify natural resources and maintain and preserve native plant and animal communities and local biodiversity. The project would, on the whole, be consistent with the *San Francisco General Plan*.

San Francisco Priority Policies

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the City Planning Code to establish eight Priority Policies. These policies, and the sections of this Environmental Evaluation addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Question 1c, Land Use); (3) preservation and enhancement of affordable housing (Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Questions 5a,b,f and g, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Question 1C, Land Use); (6) maximization of earthquake preparedness (Questions 13a-d, Geology, Soils, and Seismicity); (7) landmark and historic building preservation (Question 4a, Cultural Resources); and (8) protection of open space (Questions 8a and b, Wind and Shadow, and Questions 9a and c, Recreation). Prior to issuing a permit for any project which requires an Initial Study under CEQA, prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *San Francisco General Plan*, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. As noted above, the consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in the

Evaluation of Environmental Effects, providing information for use in the case report for the proposed project. The case report and approval motions for the proposed project would contain the Planning Department's comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies. In addition to the *San Francisco General Plan*, some areas of the city are also addressed in specific area plans.

Sustainability Plan for San Francisco

The *Sustainability Plan for San Francisco* (CCSF 1996b) was endorsed by the San Francisco Board of Supervisors in 1997, although the Board of Supervisors has not committed the City to perform the actions addressed in the plan. The plan serves as a blueprint for sustainability, with many of its individual proposals requiring further development and public comment. The underlying goals of the plan are to maintain the physical resources and systems that support life in San Francisco and to create a social structure that will allow such maintenance. It is divided into 15 topic areas, 10 that address specific environmental issues (Air Quality; Biodiversity; Energy, Climate Change and Ozone Depletion; Food and Agriculture; Hazardous Materials; Human Health; Parks, Open Spaces and Streetscapes; Solid Waste; Transportation; and Water and Wastewater), and five that are broader in scope and cover many issues (Economy and Economic Development; Environmental Justice; Municipal Expenditures; Public Information and Education; and Risk Management). Each topic area in the plan has a set of indicators that are to be used over time to determine whether San Francisco is moving in a sustainable direction in that particular area. The Biodiversity section, which includes 39 specific actions, addresses the goals of increased ecological understanding, protection, and restoration of remnant natural ecosystems; increased habitat value in developed and naturalistic areas; and collection, organization, and development of historic information on habitat and biodiversity.

The *Sustainability Plan for San Francisco* was developed to address San Francisco's long-term environmental sustainability, and it adopted many of the goals and objectives of the 1995 Significant Natural Resource Areas Management Plan. As such, the project would be consistent with the *Sustainability Plan for San Francisco.*

Natural Areas Program

The mission of the Natural Areas Program is two-fold: to restore and enhance remnant Natural Areas and to develop and support community-based stewardship of these areas (CCSF 2008c). Recognizing the functions and value of these Natural Areas and the need to protect and restore them, SFRPD agreed to support and develop a community-based habitat restoration program, today known as the Natural Areas Program.

San Francisco Dog Policy

The SFRPD is the steward of wide-ranging unique landscapes and makes decisions on land management practices. The dog policy reflects the SFRPD Strategic Plan, input from community stakeholder groups, San Francisco Municipal Codes, the 1998 Dog Task Force recommendations, and the best and most relevant efforts of established dog park designs and policies (SFRPD 2002). The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off-leash in 19 designated areas. Existing and proposed sites will need to be evaluated in the context of this policy. Dogs are not allowed in some areas, as noted in Section 3.1 (Location) of the policy. The policy supports continued and increased education about how to be a responsible park user with a pet.

Laguna Salada Resource Enhancement Plan

The *Draft Laguna Salada Resource Enhancement Plan* was developed to enhance the Laguna Salada wetlands (Philip Williams & Associates, et al. 1992). While providing valuable wetland habitat for a variety of vegetation and wildlife species, the site represents critical habitat for the San Francisco garter snake, San Francisco forktail damselfly, California red-legged frog, and salt marsh yellowthroat (a bird species). The main element of the enhancement plan involves dredging to remove accumulated sediments and to provide open water in areas choked by emergent vegetation.

San Francisco Bay Basin (Region 2) Water Quality Control Plan

Water for recreation and habitat is associated with the Natural Areas. The San Francisco Bay Basin (Region 2) Water Quality Control Plan contains water quality regulations adopted by the San Francisco Bay Regional Water Quality Control Board. It has been approved by the State Water Resources Control Board, the Office of Administrative Law, and US Environmental Protection Agency (EPA) (San Francisco Bay Regional Water Quality Control Board 2007). It also contains statewide regulations adopted by the State Water Resources Control Board and other state agencies that refer to activities regulated by the board.

San Francisco Bay Plan

The San Francisco Bay Plan guides the protection and development of the bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline (San Francisco Bay Conservation and Development Commission 2008). A major plan proposal is to develop waterfront parks and recreation facilities. New shoreline parks, beaches, marinas, fishing piers, scenic drives, and hiking or bicycling pathways should be provided in many areas. The bay and its shoreline offer particularly important opportunities for recreational development in urban areas where large concentrations of people live close to the water but are shut off from it. Highest priority should be given to recreational development in these areas as an important means of helping to immediately relieve urban tensions.

General Land Use Plans and Policies of Other Jurisdictions

Although the SFRPD is not legally bound to the land use plans and policies of other jurisdictions, non-CCSF land use plans are discussed in this section to the extent that they provide land use planning information for the jurisdictions in which the proposed project is located. This information is relevant to evaluate the impacts of the proposed project with respect to the specific significance criteria under CEQA that require an analysis of the compatibility of a proposed project with certain aspects of local land use plans and polices. These particular significance criteria are listed below along with the location in this document where the reader can find the impact evaluation:

- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan (analyzed in Section E.16, Mineral and Energy Resources, page 131);
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (analyzed in Section E.12, Biological Resources, page 98);
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (analyzed in Section E.12, Biological Resources, page 98);
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.), or cause a substantial increase in transit demand that cannot be accommodated by existing or proposed transit capacity or alternative travel modes (analyzed in Section E.5, Transportation and Circulation, page 74);
- Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (analyzed in Section E.6, Noise, page 76);
- For a project located within an area covered by an airport land use plan (or, where such a plan has not been adopted, within two miles of a public airport or public use airport), expose people residing or working in the project area to excessive noise levels (analyzed in Section E.6, Noise, page 76); and
- Conflict with existing zoning for agricultural use or a Williamson Act[20] contract (analyzed in Section E.17, Agriculture Resources, page 132).

[20]Williamson Act—also known as the Land Conservation Act of 1965, provides for lowered property taxes for lands maintained in agricultural and certain open space uses. Under a Williamson Act contract, generally the landowner agrees to limit the use of the land to agriculture and compatible uses for a period of at least 10 years. In return, the land is taxed at a rate based on the agricultural production of the land, rather than its real estate market value.

C.2 OTHER COMPLIANCE AND PERMITTING REQUIREMENTS

In addition to compliance with CEQA, the proposed project may be subject to additional compliance and permitting requirements administered by various federal, state, and local resource agencies. These agencies include:

- The US Fish and Wildlife Service (USFWS), which enforces regulations regarding the health of wildlife and wildlife habitat, particularly in accordance with Section 7 of the Endangered Species Act (ESA) and the Migratory Bird Treaty Act (MBTA);
- The US Army Corps of Engineers (USACE), which regulates wetlands and Waters of the United States under Section 404 of the Clean Water Act;
- The California Department of Fish and Game (CDFG), which protects special status species listed under the California Endangered Species Act and regulates streambed alteration under Section 1602 of the California Fish and Game Code;
- The Bay Area Regional Water Quality Control Board (RWQCB) for a National Pollutant Discharge Elimination System general construction activity permit (and associated stormwater pollution prevention plan) and Water Quality Certification under Section 401 of the Clean Water Act. The RWQCB regulates regional water bodies and wetlands, particularly in terms of water quality, in accordance with Section 401 of the Clean Water Act;
- National Marine Fisheries Service, under Section 7 of the Endangered Species Act;
- California Air Resources Board and Bay Area Air Quality Management District;
- California Office of Historic Preservation;
- California Native American Heritage Commission;
- California Coastal Commission; and
- Bay Conservation and Development Commission.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☐ Land Use	☐ Air Quality	☐ Geology and Soils
☒ Aesthetics	☐ Wind and Shadow	☒ Hydrology and Water Quality
☐ Population and Housing	☒ Recreation	☐ Hazards/Hazardous Materials
☒ Cultural and Paleo. Resources	☐ Utilities and Service Systems	☐ Mineral/Energy Resources
☐ Transportation and Circulation	☐ Public Services	☐ Agricultural Resources
☐ Noise	☒ Biological Resources	☒ Mandatory Findings of Signif.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

Under the proposed project, the SFRPD would implement the SNRAMP for 31 diverse Natural Areas, as summarized in Section A. Impacts on the Natural Areas from the proposed project vary, depending upon the type of activity proposed and the Natural Area management needs. For a given significance criterion, the project may have "Less Than Significant Impacts" in several Natural Areas and "Less Than Significant Impacts with Mitigation Incorporated" in other Natural Areas at the same time. For a given significance criterion, the highest impact level applicable to any of the Natural Areas is applied to the project as a whole for that criterion. The impact discussions for each criterion describe the general effects that would occur across the combined Natural Areas or to groups of Natural Areas, followed by discussion of impacts unique in nature or magnitude to specific Natural Areas. A general assumption that is made for the impact analysis is that increased use of the Natural Areas would result from implementing the SNRAMP, due to improved recreation resources and anticipated increases in the general population of San Francisco.

E.1 LAND USE AND LAND USE PLANNING

Topics:		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
1.	**LAND USE AND LAND USE PLANNING— Would the project:**					
a)	Physically divide an established community?	☐	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐
c)	Have a substantial impact upon the existing character of the vicinity?	☐	☐	☒	☐	☐

For informational purposes, this topic area will be discussed in the Environmental Impact Report.

a) Because all project activities would occur within the Natural Areas, this criterion is not applicable to the proposed project.

b) In California, land use is regulated through local plans and policies.

In San Francisco, the overall planning framework is set by the San Francisco General Plan, which consists of ten plan elements. General plans are intended to identify features that are unique to each region and identify policies that preserve and reinforce unique values of the community. Each element identifies

objectives and is supported by policy statements and explanations. In addition, eleven neighborhoods have area plans, which recognize unique characteristics and strengths of neighborhoods and introduce objectives and policy statements at the neighborhood level. The concepts of the General Plan are implemented through the zoning code and administrative review processes.

An important value of San Franciscans is represented by Objective 7 of the Environmental Protection Element (CCSF 2004): "Assure that the land resources in San Francisco are used in ways that both respect and preserve the natural values of the land and serve the best interests of all of the city's citizens."

Another policy statement is Objective 1 of the Environmental Protection Element: "Achieve a proper balance among the conservation, utilization, and development of San Francisco's natural resources."

These principles recognize the need to balance natural resources, conservation, and programming concerns. As such, there is recognition of the logic of removing nonnative species to allow for growth of indigenous plant material and preservation of the natural character of a habitat.

The Recreation and Open Space Element (CCSF 2007a) guides policies over hiking and bicycle trails and advocates developing additional trails along San Francisco Bay (The Bay Trail), on ridgelines, and along the coast, and linking these trails with those in adjacent counties. It defines various classes of open space, including city-serving (Golden Gate Park, McLaren Park), district-serving (larger than 10 acres), neighborhood-serving (less than 10 acres and more than 4 acres), and subneighborhood-serving.

Objective 2 of that element states "Develop and maintain a diversified and balanced citywide system of high quality public open space." It is supported by Policy 2.8: "Develop a recreational trail system that links city parks and public open space, ridge lines and hilltops, the Bay and ocean, and neighborhoods, and ties into the regional hiking trail system." The plan identifies several city parks where future segments of these trails should be developed.

The Bay Trail is a resource for pedestrians and bicyclists and passes through the India Basin Natural Area. Of the San Francisco Natural Areas, trails would increase at Edgehill Mountain and Interior Greenbelt. New trails would be created at an additional seven San Francisco Natural Areas.

Policy 2.9, "Maintain and expand the urban forest," acknowledges the role of urban forests in enhancing the quality of life in San Francisco. The text clarifies the need for replacement of mature trees, and promotes the need for a "major reforestation effort" in the larger city parks. It calls for a systematic inventory of the urban forest, tree replanting, and plant material diversification.

Policy 2.13 is to: "Preserve and protect significant natural resource areas." It specifically addresses the natural resource area management plan and calls for preservation of native plant habitats, inventorying natural areas, and protecting natural areas "to ensure that the natural resource values are not diminished or impacted by public use."

Under Policy 3.5, this element calls for extending the reforestation program within Golden Gate Park "throughout the park to ensure vigorous forest tree growth . . ." Regarding Bayview Park, this section calls for better pedestrian access, which is echoed in the proposed project.

Policy 4.3, "Renovate and renew the City's parks and recreational facilities," acknowledges the need for ongoing assessment and renewal of the City's open space resources.

The Recreation and Park Commission has adopted additional policies pertaining to certain parks, such as the master plans for Buena Vista Park, Glen Canyon Park, Golden Gate Park, McLaren Park, and Pine Lake Park.

The Golden Gate Park Master Plan (SFRPD 1998) identifies three policies that are relevant to the proposed removal of invasive trees. Policy A addresses naturalistic parkland as follows: "Naturalistic parkland comprises the largest land category in Golden Gate Park, and must be preserved to protect the pastoral character of the park and to ensure the retention of park open space. Naturalistic parkland is the predominant landscape of the park and gives the park its visual character."

Policy E focuses on forested indigenous oak preserves and calls for them to be carefully managed to promote their preservation.

The second objective of the plan mandates protection and renewal of the park landscape. Policy B places priority on preservation and renewal of the park's forestry. It calls for "Removal of hazardous, diseased and dying trees; replacement with appropriate tree species." Another goal is "Maintain the designated indigenous oak preserves for their natural and historical values as the only remaining indigenous woodlands in the park, and preserve existing oak trees in other areas."

The proposed project would not conflict with any land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. There would be no change in land uses and no impact under the project, which would serve the objectives of the applicable plans and policies.

c) The proposed project considers changes to vegetation and trails at 31 different Natural Areas. At some parks, the change in tree coverage would be minimal

(two percent of trees), while in others it would be more noticeable (20 percent of trees). In Natural Areas, where large numbers of trees would be removed, the removal would occur gradually and would return the vegetation to a state more consistent with the area's original character. Overall, areas identified for tree removal would result in the removal of 18,448 invasive trees, representing 16 percent of the invasive trees in the parks. At all of the Natural Areas except Sharp Park, invasive trees would be replaced with native trees (3,448 trees replaced). At Sharp Park, 15,000 invasive trees would be removed and replaced with native vegetation; approximately 39,000 invasive trees would remain. Because tree removal in portions of the Natural Areas would not be great enough to substantially alter the overall natural, unique character of the project areas, the impacts would be less than significant.

Although land use impacts would be less than significant, the Environmental Impact Report will include a discussion of land use and land use planning for background purposes.

E.2 AESTHETICS

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
	AESTHETICS—Would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?	☒	☐	☐	☐	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?	☐	☐	☐	☒	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report for this project and does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

A visual quality analysis is somewhat subjective and considers the project in relation to the surrounding visual character, heights and building types of surrounding uses, its potential to obstruct public scenic views or vistas, and its potential for light and glare. A proposed project would have an effect on the visual landscape if it were to cause a noticeable change. The amount of change may be characterized as temporary or permanent or as adverse or beneficial, and it may range from minor to major. With respect to scenic resources involving changes to vegetation, long-term impacts would involve the permanent loss of vegetation or the relatively long time needed for newly planted trees to reach the size of the trees they replaced; short-term impacts would involve the relatively short time needed for replacement shrubs, bushes, and grasses to mature.

a) A scenic vista is a visually appealing view of the distant broad landscape. The San Francisco General Plan does not identify protected scenic vistas in the Recreation and Open Space Element or the Transportation Element (CCSF 2007a and CCSF 2005b). The City of Pacifica General Plan does not identify protected scenic vistas in the Scenic Highways Element, the Conservation Element, the Open Space Element, or the Community Design Element (City of Pacifica 1980).

Also, there is no designated state or county scenic highway[21] near the proposed project (California Department of Transportation 2008).

The following principles for city pattern relating to parks are found in the Urban Design Element of the San Francisco General Plan:

- "Where large parks occur at tops of hills, lowrise buildings surrounding them will preserve views from the park and maintain visibility of the park from other areas of the city. Comment: Areas around Mount Davidson and Twin Peaks have a pattern of low development. The hilltops are therefore citywide focal points of natural landscape, functioning much as Telegraph Hill's summit does in the North Beach area."
- "Landscaped pathways can visually and functionally link larger open spaces to neighborhoods. Comment: The roadside planting of Park Presidio and Sunset Boulevard, and the landscape connections between Mount Sutro, Twin Peaks, Laguna Honda and Glen Canyon are examples of a system that links parks and other open spaces to one another. Such linkages, creating strong defining features, can be extended to other parts of the city."

The plans note the importance to residents and visitors of general scenic vistas, such as those involving ridgelines and beaches. Also, almost all of the Natural Areas include trails, most of which provide general scenic views of San Francisco.

Map 1 in the Urban Design Element in the San Francisco General Plan identifies important vista points to be protected (CCSF 2005a). These points are throughout the City and include, for example, Mount Davidson and Buena Vista Park.

The proposed project does not include permanent human-made structures that would obstruct general scenic vistas, such as those involving ridgelines or vistas of San Francisco from Natural Area trails. The proposed project would not permanently restrict access to important viewpoints (identified in Map 1 in the Urban Design Element in the San Francisco General Plan) from which general vistas are available. Invasive tree removal in San Francisco would be followed by replacement of those trees with native species at a roughly 1:1 replacement ratio, to ensure that views from important points are preserved. In some locations, trees would be replaced by native scrub or grassland species.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

[21]Scenic highway—a highway from which a high quality scenic natural landscape can be seen by travelers and with little intrusion by development.

b) Scenic resources are the visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features). The scenic resources in the Natural Areas are described in the SNRAMP (SFRPD 2006).

The proposed project would alter scenic resources within the Natural Areas. This would involve, for example, contouring the topography of an area differently and removing certain invasive vegetation to enhance habitat and establish native vegetation. The large-scale removal of vegetation in Natural Areas, such as Sharp Park, Mount Davidson, McLaren Park, and Bayview Park, would occur over time. Initially, impacts on scenic resources[22], such as diminished vegetation and altered composition and structure of vegetation, would be noticeable. The intensity of the impact would depend on the viewer and their sensitivity to changes to scenic resources at a Natural Area.

Although scenic resources would be altered, they would be altered to restore the natural integrity of the areas by removing and altering resources that are not historically consistent with the local area. Revegetation and the progression of natural processes would gradually reduce the magnitude of impacts. Generally, trees removed would be replaced with native tree species at a roughly 1:1 replacement ratio, although not necessarily at the same location. In some locations, trees would be replaced by native scrub or grassland species. All removed vegetation would be replaced with native vegetation. Promoting the natural integrity of the areas would ultimately reestablish the natural scenic resources typical of the local Natural Area. Note that no Landmark Trees would be removed or altered.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

c) The general setting of the Natural Areas is characterized as being undeveloped, being used for various designated purposes, and being surrounded by an urban environment. The setting of the areas is described in greater detail in the SNRAMP (SFRPD 2006).

As described in Section A.2, the design and aesthetic goals for the Natural Areas are as follows:

- Where possible, to develop aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions, especially where adjacent parklands and traditionally landscaped areas abut Natural Areas;
- To maintain and develop viewpoints and viewsheds to enhance park experiences; and

[22]Scenic resource—the visible physical features on a landscape.

- Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments.

Policy 1.5 in the Urban Design Element in the San Francisco General Plan emphasizes the special nature of each district through distinctive landscaping and other features. This involves preserving landscaping and installing or encouraging new landscaping. The proposed project would be required to comply with the policies in the Urban Design Element.

During implementation of the proposed project, equipment, such as trucks and bulldozers, would be visible in and around the Natural Areas. The presence of the equipment and project activities would detract from the setting of the areas, resulting in impacts. However, equipment and project activities would be limited in duration and would not occur every day.

Following implementation of the proposed project's activities, the setting of the areas would generally resemble the current setting. One important aspect of the general setting that would be altered by the project's activities involves the vegetation. Initially, impacts on the general setting's vegetation, such as diminished vegetation and altered composition and structure of vegetation, would be noticeable, resulting in impacts. However, vegetation is only one aspect of the general setting. Following implementation of the proposed project's activities, the setting of the areas would ultimately resemble the existing undeveloped setting. While it would be altered, the general setting of the Natural Areas would still resemble an undeveloped area used for various purposes and surrounded by an urban environment.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

d) The proposed project does not include outdoor or indoor lighting or other components that would create new sources of light or glare and would have no impact.

This topic will not be discussed in the Environmental Impact Report.

E.3 POPULATION AND HOUSING

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3.	**POPULATION AND HOUSING— Would the project:**					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐
b)	Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☐	☒	☐
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

a - c) The project does not propose the construction of new homes or businesses and therefore would not result in any direct impacts related to growth inducement. Furthermore, the project would not result in increased use of roadways or extend new infrastructure, such as water and sewer systems, to any undeveloped areas. No new businesses or houses would be constructed or demolished under the proposed project. Workers for the proposed project include up to ten Natural Areas Program gardeners and groups of volunteers of up to 50 people. Any persons that relocate to fill vacant gardener positions would have a negligible effect on the City's population. Because it is assumed that volunteers reside in the San Francisco Bay Area, the project would not induce substantial population growth, displace substantial numbers of housing units or residents, or create demand for additional housing. The project would have no impacts on population and housing.

These topics will not be discussed in the Environmental Impact Report.

E.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
4.	**CULTURAL AND PALEONTOLOGICAL RESOURCES—Would the project:**					
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*?	☐	☒	☐	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report for this project and does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

Under CEQA, cultural resources[23] listed on, or determined to be eligible for listing on, the California Register of Historical Resources (CRHR) or a local register are those that must be given consideration in the CEQA process. The CRHR is in the California Code of Regulations Title 14, Chapter 11.5. According to this code, properties listed on or formally determined eligible for listing on the National Register of Historic Properties (NRHP) are automatically eligible for listing on the CRHR. A resource is generally considered to be historically significant under CEQA if it meets the criteria for listing on the CRHR.

A resource is considered eligible for inclusion on the CRHR, and therefore a historical resource under CEQA, if it is at least 45 years of age. To be eligible for listing to the CRHR under Criteria 1, 2, or 3, a resource must contain artifact assemblages, features, or stratigraphic relationships associated with important events, or important persons, or be exemplary of a type, period, or method of construction. To be eligible under Criterion 4, a resource need only show the *potential* to yield important information.

[23]Cultural resource—a generic term that may be used to refer to architectural resources, archaeological resources, and/or traditional cultural properties.

CEQA requires that the effects of a project on an archeological resource shall be taken into consideration. CEQA recognizes archeological resources as being potential instances of a "unique archaeological resource" or of a "historical resource". However, it must first be determined if the archeological resource is a historical resource, that is, if the archeological resource meets the criteria for listing in the CRHR. An archeological resource that qualifies as a historical resource under CEQA generally, qualifies for listing under Criterion 4 of the CRHR. An archeological resource may qualify for listing under Criterion 4 when it can be demonstrated that the resource has the potential to significantly contribute to questions of scientific/historical importance. The research value of an archeological resource can only be evaluated within the context of the prehistoric/historical background of the site of the resource and within the context of prior archeological research related to the property type.

Archaeological artifacts, objects, or sites that do not meet the above criteria are not considered unique archaeological resources. Impacts on archaeological resources that are not unique and those that do not qualify for listing on the CRHR or a local register receive no further consideration under CEQA.

Paleontological resources[24] include fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period. Collecting localities and the geologic formations containing those localities are also considered paleontological resources. They represent a limited, nonrenewable, and impact-sensitive scientific and educational resource.

Impacts on Native American burials are considered under PRC 15064.5(d)(1). When an initial study identifies the existence of, or the probable likelihood of, Native American human remains within the project, the lead agency is required to work with the appropriate Native Americans, as identified by the California Native American Heritage Commission (NAHC). The CEQA lead agency may develop an agreement with the appropriate Native Americans for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials. By implementing such an agreement, the project becomes exempt from the general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5) and the requirements of CEQA pertaining to Native American human remains.

The SFRPD's treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity would comply with applicable state laws. This would include immediate notification of the CCSF Coroner for discoveries in San Francisco County Natural Areas or the San

[24]Paleontological resource—fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period.

Mateo County Coroner for discoveries at Sharp Park. If the Coroner were to determine that the remains are Native American, the NAHC would be notified and would appoint a Most Likely Descendant (PRC 5097.98). The archaeologist, SFRPD, and the Most Likely Descendant would make all reasonable efforts to develop an agreement for the dignified treatment of human remains and funerary objects (CEQA Guidelines Sec. 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and funerary objects. State law allows 24 hours to reach agreement on these matters. If the Most Likely Descendants do not agree on the reburial method, the SFRPD would follow Section 5097.98(b) of the California PRC, which states "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

Different CEQA areas of potential effects (C-APEs) were used to determine the potential impacts on historical architectural and archaeological resources that could result from the proposed project. The C-APE used here for archaeological resources is considered preliminary. The C-APE for both categories of resources was defined for the proposed project as the surface and subsurface areas that would be directly affected by ground disturbance and project activities and is generally considered to be the boundary of each Natural Area. The architectural C-APE was established to also address nearby historical resources that could be indirectly affected. In general, the architectural C-APE includes historical resources from which the Natural Areas and their associated activities would be audible and/or visible.

To determine project impacts on the various types of cultural resources, a records search was requested in June 2008 from the California Historical Resources Information System's Northwest Information Center (NWIC) at Sonoma State University (File No. 07-1792). The records search indicated there are various types of cultural resources within or next to six of the 31 Natural Areas. One historic building, the Golden Gate Park Conservatory (CA-SFR-37H [P-38-0037]), is adjacent to the Golden Gate Park Oak Woodland Natural Area (oak woodland, Lily Pond, and Whiskey Hill). Historic canal features associated with the Spring Valley Water Company's water system (CA-SFR-102H [P-38-0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is part of the historic district of Stern Grove and Pine Lake Park (P-38-4472). An archaeological site (CA-SMA-114 [P-41-116]) containing "shell midden with some bone, chert chippage[25], and fire fractured rock" (Humphreys 1969) as well as some noted historic-era glass bottles is adjacent to the Sharp Park Natural Area. At the time

[25]Chippage—flakes resulting from the process of human modification to lithic materials.

of its recording, it was remarked that the site was almost entirely destroyed by erosion and construction.

Through coordination with SFRPD and the CCSF Historic Preservation Division, additional cultural resources, primarily architectural in nature, were identified that were not found through the NWIC records search. This includes the Golden Gate Park Historic District, which incorporates oak woodland, Lily Pond, Whiskey Hill, and Strawberry Hill. The historic district was listed on the NRHP in October 2004 (NRIS 2008; Nelson 2004) and is therefore included on the CRHR as well. Geographic information system (GIS) data provided by the SFRPD indicate that numerous historic-aged buildings and structures are known to be immediately adjacent to almost all of the Natural Areas. The Mount Davidson Cross is one of these resources, and it is mapped as within Mount Davidson. The absence of this resource and other resources in the GIS database in the NWIC records search indicates that the resource has not yet been formally documented and submitted to the California Office of Historic Preservation. Because of its historic age (45 years or older), the Mount Davidson Cross is considered a potential historical resource. To be formally determined a historical resource, the cross would need to be recorded and evaluated for eligibility for listing on the CRHR, in consultation with the CCSF Historic Preservation Division. Mount Davidson is also the location of Works Progress Administration stairs and retaining walls (SFRPD 2006). Seven Natural Areas contain documented cultural resources (archaeological and/or architectural); no cultural resources were documented within or adjacent to any of the remaining 24 Natural Areas (NWIC File No. 07-1792).

No surveys for architectural, archaeological, or paleontological resources have been conducted for this project. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (Mayfield 1978). Several cultural resources overviews and pedestrian surveys have been conducted within 8 of the 31 Natural Areas (NWIC File No. 07-1792). The Balboa Natural Area has been partially addressed in two overviews (Mayer 1995; Olmsted and Olmsted 1979) and one linear field survey (Chavez and Ramsey 1979). Bayview Park has been completely covered by a regional overview (Hupman and Chavez 2001) and partially covered by a linear field survey (Hupman and Chavez 2004). Hawk Hill has been fully covered by an archaeological field survey (CCSF 1987). India Basin Shoreline Park has been addressed by one cultural resource overview (Gualtieri and Wall 1987), one archaeological field survey (Praetzellis et al. 1994), and one linear archaeological field survey (Hupman and Chavez 1995). Lake Merced has been partially addressed in one regional cultural resource overview (Shoup and Baker 1981), three field surveys (David Chavez and Associates 1993; Heid 1964; Willer and Albee 1957), and one subsurface testing project (Chavez 1988). Palou-Phelps has been partially covered by three linear archaeological field surveys (BioSystems Analysis 1989; Nelson et al. 2002; Sawyer et al. 2000). Pine Lake has been entirely covered by a cultural landscape report with register evaluations

that included both archaeological and architectural field surveys (Bradley and Corbett 2004) and partially covered by a separate archaeological field survey (EDAW and Ward and Associates 2006). Sharp Park has had nine overviews and surveys within and adjacent to it. The Natural Area itself has been partially covered by three archaeological field surveys (Cartier 1984; Melandry 1977; Orlins and Schwaderer 1994), two linear archaeological field surveys (Clark 2006; Moratto 1974), and one archaeological field survey with a historic study and register evaluation (Clark 2007). The rest of the Natural Areas have not been covered by any field survey or a cultural resource overview specific to those areas.

The NAHC was contacted to determine the presence of sacred sites[26] within or near the project areas that could qualify as historical resources or unique archaeological resources or contain human burials. The NAHC responded on June 19, 2008 that no such resources were identified by their files. However, the NAHC did provide a list of five Ohlone/Costanoan groups and individuals traditionally affiliated with the region that may be able to identify undocumented resources. SFRPD mailed consultation letters to the suggested contacts on July 16, 2008 (Appendix B). At the time of this publication, no responses had been received.

A paleontological records search was requested through the University of California Museum of Paleontology (UCMP). The records search results indicated the presence of five vertebrate localities within two miles of Sharp Park (Holroyd 2008). There are also a number of invertebrate fossil localities recorded for in San Francisco, but none within or adjacent to the Natural Areas. No known paleontological resources are within or adjacent to any of the Natural Areas (Holroyd 2008).

Architectural resources are addressed under topic a) in this Initial Study, and archaeological resources are addressed under topic b).

a) Architectural Resources. Several historical architectural resources not yet evaluated for CRHR- or NRHP-eligibility were identified through the abovementioned NWIC records search and correspondence with CCSF Historic Preservation Division staff. No historical architectural resources listed in Article 10 or Article 11 of the San Francisco Planning Code are within the architectural C-APE (CCSF 2003a; CCSF 2003b). One San Francisco Landmark Tree, a blue elderberry tree, is in the Bernal Hill Natural Area at the corner of Folsom Street and Bernal Heights Boulevard. The overwhelming majority of the proposed project's architectural C-APE has not been previously surveyed for historical architectural resources. As such, the presence of historical architectural resources within the architectural C-APE of the proposed project is unknown at this time.

[26]Sacred site—locality of traditional significance or importance to a Native American community.

Several of the proposed general and site-specific management activities proposed in the SNRAMP could adversely affect historical architectural resources, where present. In general, these primarily include vegetation changes that may alter possible historic landscapes.

Therefore, significant impacts on historical architectural resources are possible. With implementation of Mitigation Measure M-CP-1, impacts on historical architectural resources would be reduced to less than significant. Historical architectural resources will not be discussed in the Environmental Impact Report.

b) Archaeological Resources. No archaeological resources were identified by the NWIC records search as within or immediately adjacent to any of the Natural Areas. However, the overwhelming majority of the archaeological C-APE has not been previously surveyed. Additionally, MEA staff have indicated that archaeological remains not on record at the NWIC, such as the 1894 Midwinter Fair and the Sharp Park Internment Camp, are known to exist within some of the Natural Areas. As such, the presence of archaeological resources within the archaeological C-APE (surface and subsurface) of the proposed project is unknown at this time. Given that the archaeological C-APE encompasses the majority of the remaining undeveloped land in the city, there is an increased possibility that intact archaeological deposits exist within the Natural Areas. Additionally, many of the Natural Areas are located in archaeologically sensitive areas (for both prehistoric and historic-era resources) based on their proximity to productive historic habitats and resource procurement locations (such as creeks, lacustrine environments, marshes, and rock outcrops). Several of the general and site-specific management activities proposed in the SNRAMP could adversely affect archaeological resources. In general, these activities primarily include ground-disturbing activities, such as tree and weed removal, livestock grazing, and activities associated with trail development and maintenance and erosion control.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

c) Paleontological Resources and Unique Geological Formations. The UCMP records search results indicated that there are no known paleontological resources within or adjacent to the Natural Areas, and no further studies are needed (Holroyd 2008). Many of the Natural Areas are on shallow or exposed bedrock and project activities may affect those geologic features. In general, ground-disturbing activities, such as those identified above with regard to archaeological resources, that reach bedrock could possibly impact unknown paleontological resources.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

d) Human Remains. The NWIC records search did not indicate that human remains have previously been encountered within the Natural Areas, nor did it indicate the presence of any modern or historic cemeteries (Humphreys 1853; GLO 1863, 1864a, 1864b; San Mateo County Chamber of Commerce 1931; USACE 1942a 1942b; USGS 1896, 1899, 1915a, 1915b; US Surveyor General 1856, 1857, 1859, 1864, 1868, 1871, 1886). The overwhelming majority of the archaeological C-APE has not been previously surveyed for archaeological resources that may include human remains. As such, the presence of human remains within the archaeological C-APE of the proposed project is unknown at this time. Given that the archaeological C-APE encompasses the majority of the remaining undeveloped land in the City, there is a possibility that intact burials exist within the Natural Areas. As with the archaeological resources discussed above, the location of many of the Natural Areas make them sensitive for prehistoric deposits, including human burials. Ground-disturbing activities, such as those identified above under archaeological resources, would have the possibility to impact burials as well.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

E.5 TRANSPORTATION AND CIRCULATION

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
5.	**TRANSPORTATION AND CIRCULATION— Would the project:**					
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐	☐
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways (unless it is practical to achieve the standard through increased use of alternative transportation modes)?	☐	☐	☒	☐	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☒	☐
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☐	☐	☒
e)	Result in inadequate emergency access?	☐	☐	☐	☒	☐
f)	Result in inadequate parking capacity that could not be accommodated by alternative solutions?	☐	☐	☒	☐	☐
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.), or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes?	☐	☐	☐	☒	☐

a, b) While vehicles would be used during project implementation, the frequency of road trips by those vehicles would be minimal. Workers for the proposed project would either be the ten Natural Areas Program gardeners or periodic groups of volunteers of up to 50 people, with an average group size closer to 10 people. It is assumed that volunteers reside in the San Francisco Bay Area. Also the number and frequency of volunteer groups is expected to be similar to current levels. While visitor numbers may increase, most of the visitors would be locals who would walk or bike to the Natural Areas. As a result, the project would not exceed any level of service standard and would have less than significant impacts on traffic load and capacity of the street system.

These topics will not be discussed in the Environmental Impact Report.

c) The project sites are not in the vicinity of any airports, and the proposed project does not include any activities that would affect air traffic patterns, so there would be no impacts on air traffic.

This topic will not be discussed in the Environmental Impact Report.

d) The proposed project involves the long-term management of the Natural Areas. The proposed project does not include road designs, and therefore the increase in hazards due to design features is not applicable to this project.

This topic will not be discussed in the Environmental Impact Report.

e) Implementation of the proposed project would be within the existing Natural Areas and would not disrupt the access to any adjacent facility or residence. Therefore, no impact on emergency access would result from the proposed project.

This topic will not be discussed in the Environmental Impact Report.

f) The minimal number of trucks or other motor vehicles that would be used during the implementation of the proposed project would either park within the boundaries of the Natural Areas or in available parking spaces in the vicinity. However, the number of trucks or other vehicles that would be used is negligible (typically no more than one vehicle per day at a given Natural Area), and one public parking space at a given Natural Area may be used for a short duration during the day. The demand for parking would increase on those days when volunteer groups are involved in management activities. Impacts on parking as a result of the proposed project would be less than significant.

This topic will not be discussed in the Environmental Impact Report.

g) The proposed project does not include any activities that would affect alternative transportation facilities or use, so it would have no impacts on alternative transportation.

This topic will not be discussed in the Environmental Impact Report.

E.6 NOISE

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6.	**NOISE—Would the project:**					
a)	Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐
b)	Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒	☐
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
e)	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☐	☒
f)	For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☐	☒
g)	Be substantially affected by existing noise levels?	☐	☐	☐	☒	☐

a, d) The project would not generate noise that would exceed standards established in the local general plan or noise ordinance or applicable standards of other agencies. Equipment anticipated to be used during the project includes chain saws, power hedge trimmers, power pruners, gas-powered water pumps, augers, power drills, and cherry pickers[27]. Vehicles would primarily be pickup trucks. During project implementation, equipment operation associated with the management of the Natural Areas, such as weeding and tree removal, would temporarily increase noise levels in the immediate vicinity of the management areas. Although most of the Natural Areas are located within residential districts, the project's implementation would not require extensive use of heavy equipment. Individual pieces of equipment used would comply with the noise limits of the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code) for the Natural Areas within San Francisco and the San Mateo County noise ordinance for management activities in Sharp Park. Further, potential noise impacts are expected to be discontinuous and of very short

[27]Cherry picker—a maneuverable vertical boom with an open bucket or cage at the end from which a worker can perform aerial work such as pruning trees or repairing electrical lines.

duration during the day time. As a result, the impacts associated with noise exposure and temporary ambient noise[28] levels would be less than significant.

These topics will not be discussed in the Environmental Impact Report.

b) The project would not add to the permanent groundborne vibration resulting from the regular traffic in the vicinity of the management areas. Temporary use of the anticipated mechanical equipment would not result in significant groundborne vibration. Because trees would typically be removed limb by limb, tree removal would not cause groundborne vibrations. Additionally, trees would be removed within restricted areas, away from the visitors and nearby residents. Therefore, the project would not result in groundborne vibration or noise impacts.

This topic will not be discussed in the Environmental Impact Report.

c) Using mechanical equipment would increase noise levels, but this noise would be temporary and discontinuous, associated with tree removal, trail creation, and invasive vegetation removal. Because the noise levels are expected to be low and the project would be required to comply with the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code), the project would not result in substantial permanent increases in ambient noise levels.

These topics will not be discussed in the Environmental Impact Report.

e, f) There would be no impact on noise levels around an airport/airstrip because there are no airports/airstrips in the vicinity of the project site.

These topics will not be discussed in the Environmental Impact Report.

g) The project sites are within urbanized areas of San Francisco and Pacifica. The management of the Natural Areas would not be affected by the existing noise levels.

This topic will not be discussed in the Environmental Impact Report.

[28] Ambient noise—the background noise in an area or environment, being a composite of sounds from many sources near and far.

E.7 AIR QUALITY

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
7.	**AIR QUALITY** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☐
f)	Conflict with the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the timetable established in AB 32 (California Global Warming Solutions Act of 2006), such that the project's greenhouse gas emissions would result in a substantial contribution to global climate change or conflict with the San Francisco Local Greenhouse Gas Ordinance?	☐	☐	☒	☐	☐

a) The project involves management of the Natural Areas and includes reintroduction of sensitive species, tree removal in conformance with forestry statements, and erosion-control measures. None of those activities would generate air pollutants that would conflict with applicable air quality plans or standards and conflict with or obstruct implementation of current air quality plans. Therefore, no impacts related to conflicting with or obstructing implementation of the applicable air quality plan would result from the project.

This topic is not discussed in the Environmental Impact Report.

b) The proposed project is within the San Francisco Bay Area Air Basin (SFBAB) and is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Within the SFBAB, ambient air[29] quality standards for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable

[29] Ambient air—outside air; any portion of the atmosphere not confined by walls and a roof.

and fine particulate matter[30] (PM_{10} and $PM_{2.5}$), and lead (Pb) have been set forth by both the State of California and the federal government. California has also set standards for sulfate and visibility. Because SFBAB is designated nonattainment for ozone, PM_{10}, and $PM_{2.5}$, the BAAQMD developed the 2000 Clean Air Plan and adopted the 2005 Ozone Strategy, in January 2006, as the air quality management plan for achieving the state ozone standards. No formal air quality plans are required for the state PM_{10} or $PM_{2.5}$ standards, but the BAAQMD has identified an implementation schedule for new rules and regulations to reduce particulate matter emissions.

Long-Term (Operational) Emissions

Long-term air emissions impacts are typically associated with a change in permanent use of the project site by on-site stationary sources and off-site mobile sources that substantially increase vehicle trip emissions. There are no stationary sources associated with the proposed project, and potential pollutant emissions resulting from motor vehicles accessing the project sites would be similar to what occurs currently as part of ongoing management activities and visitors to the Natural Areas. As discussed in the transportation and circulation section of this document, visitor numbers may increase, but most visitors would be local residents who walk or bike to the Natural Areas; as such, vehicle trips are not expected to increase. Therefore, no additional long-term emissions would result from implementing the proposed project, and long-term emissions impacts would be less than significant.

Short-Term (Implementation) Emissions

Air pollutant emissions associated with implementation of the proposed project would occur over the short term. Management of the Natural Areas could generate exhaust emissions that would affect local air quality and emit greenhouse gases (GHGs).

Management activities could generate combustion emissions from use of chain saws, power hedge trimmers, power pruners, gas-powered water pumps, augers, power drills, cherry pickers, brush blades, string trimmers, mowers, and motor vehicles. Exhaust emissions during implementation would vary daily as management activity levels change. The use of motorized equipment would result in localized exhaust and GHG emissions; however, those equipment types are currently used, and levels of use are expected to be similar to current levels. Due to this and the limited extent of management activities, the projected short-term emissions of criteria pollutants as a result of project activities are expected to be below emissions thresholds established by the BAAQMD, resulting in less than significant impacts. Similarly, because GHG emissions from management activities would be similar to current levels, emissions of GHGs from the project would have less than significant impacts.

[30]Particulate matter—tiny solid or liquid particles, generally soot and aerosols.

This topic is not discussed in the Environmental Impact Report.

c) Implementation of the project's components would result in minimal emissions (motor vehicles and equipment used during the management activities) and particulate matter (from fugitive dust). The project's activities in the San Francisco Natural Areas could cause a temporary increase in particulate matter emissions associated with the management activities, such as removal of trees and other invasive species and the use of light equipment and motor vehicles. Emissions associated with the management activities would vary, depending on the level of activity and specific operation. Because proposed management activities would be similar to current activities and, due to the limited nature of those activities, emissions of criteria pollutants would have less than significant impacts. The San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes, generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008). The amendments would reduce the quantity of dust generated during site preparation, demolition, and construction in order to protect the health of the general public and of on-site workers and to minimize public nuisance complaints. It specifies that construction managers comply with specified dust control measures during site preparation, demolition, or other construction within San Francisco that could create dust or expose or disturb more than 10 cubic yards or 500 square feet of soil. Examples of dust control are wetting down areas near soil improvement operations and limiting the areas subject to excavation and grading at any one time. The proposed project would comply with this ordinance. Therefore, impacts of fugitive dust emissions that would result from management activities at the San Francisco Natural Areas would be less than significant.

Fugitive dust emissions in Sharp Park would be similar to those in the San Francisco Natural Areas and could cause a temporary increase in particulate matter emissions. To reduce the impact of particulate matter emissions during management activities, the SFRPD would implement, as applicable and depending on the level of activity, the BAAQMD recommendations, as detailed in Mitigation Measures M-AQ-1.

Additionally, to further control exhaust in all Natural Areas, the SFRPD would implement M-AQ-2. Compliance with the San Francisco Dust Control Ordinance and implementation of the Mitigation Measures M-AQ-1 and M-AQ-2 would reduce impacts of particulate matter and exhaust to less than significant levels.

This topic is not discussed in the Environmental Impact Report.

d) Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive to poor air quality than the general public because the population groups associated with these places

have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational areas are also considered sensitive receptors, due to the greater exposure of users to ambient air quality conditions and because the presence of pollution detracts from the user's recreational experience. The project would be within and/or adjacent to residential, school, and recreational areas, as well as commercial areas. The SFRPD would comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements, emission standards for operating any stationary, diesel-fueled, compression-ignition engines, and operation restrictions within 500 feet of school grounds when school is in session.

Fugitive dust[31] emissions are associated with land clearing, trail creation, and tree removal. Dust generated daily during implementation would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors[32] and on-site workers may be exposed on a limited basis to blowing dust, depending on the prevailing wind. The BAAQMD emphasizes implementing effective and comprehensive control measures rather than detailed quantification of construction emissions. It recommends implementing all feasible control measures based on the size of the construction area and nature of activities that would occur.

Where applicable, the project proponents would comply with the Construction Dust Control Ordinance. For Sharp Park, the SFRPD would implement BAAQMD recommendations, outlined in Mitigation Measure M-AQ-1 during management activities, such as land clearing, trail creation, and tree removal. Further, the SFRPD would implement Mitigation Measure M-AQ-2 to limit exhaust emissions during applicable management activities in all the Natural Areas. By implementing these mitigation measures, fugitive dust emissions from management activities would be reduced to less than significant.

This topic will not be discussed in the Environmental Impact Report.

e) Organic material in soil can decompose through anaerobic processes[33] and generate methane and hydrogen sulfide gases, which can then be released into

[31]Fugitive dust—fugitive emissions generally refer to those emissions that are released to the atmosphere by some means other than through a stack or tailpipe.

[32]Sensitive receptors—people or institutions with people that are particularly susceptible to illness from environmental pollution, such as the elderly, very young children, people already weakened by illness (e.g., asthmatics), and persons engaged in strenuous exercise.

[33]Anaerobic processes—**a** process which only occurs in the absence of molecular oxygen.

the environment when the soil is exposed. Soil excavation associated with the management activities would be minimal and temporary, and therefore would not generate odors that would affect a substantial number of people. Equipment exhaust could occasionally emit odors attributed to gasoline combustion, but these odors would not be significant. Implementation of Mitigation Measure M-AQ-2 would further reduce the magnitude of this less than significant impact.

This topic will not be discussed in the Environmental Impact Report.

f) Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities that alter the composition of the global atmosphere.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operational phases. The principal GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. (Ozone also contributes to the retention of heat, though it is not directly emitted but is formed from other gases in the troposphere, the lowest level of the earth's atmosphere.) While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Carbon dioxide is the "reference gas" for climate change, meaning that emissions of GHGs are typically reported in "carbon dioxide-equivalent" measures. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs, with much greater heat-absorption potential than carbon dioxide, include hydro fluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. There is international scientific consensus that human-caused increases in GHGs have contributed to global warming and will continue to do so, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.[34] Secondary effects are likely to include a global rise in sea level, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

[34]California Air Resources Board (ARB), 2006a. Climate Change website (http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf) accessed December 4, 2007.

The California Energy Commission (CEC) estimated that in 2004 California produced 500 million gross metric tons (about 550 million US tons) of carbon dioxide-equivalent GHG emissions.[35] The CEC found that transportation is the source of 38 percent of the state's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent, and industrial sources at 13 percent.[36] In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for just over half of the 85 million tons of GHG emissions in 2002 in the Bay Area. Industrial and commercial sources were the second largest contributors of GHG emissions, with about one-fourth of total emissions. Domestic sources (e.g., home water heaters and furnaces) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at 7 percent. Oil refining accounts for approximately 6 percent of the total Bay Area GHG emissions.[37]

Statewide Actions

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.[38]

California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

AB 32 establishes a timetable for the CARB to adopt emission limits, rules, and regulations designed to achieve the intent of the act. CARB staff is preparing a scoping plan to meet the 2020 GHG reduction limits outlined in AB 32. In order to meet these goals, California must reduce its GHG by 30 percent below

[35]Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

[36]California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report*, publication # CEC-600-2006-013-SF, December 22, 2006; and January 23, 2007 update to that report. Available on the internet at: http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm.

[37]BAAQMD, *Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2002*, November 2006. Available on the internet at: http://www.baaqmd.gov/pln/ghg_emission_inventory.pdf.

[38]California Air Resources Board (CARB), *Climate Change Draft Scoping Plan: A Framework for Change,* June 2008 Discussion Draft. Available on the internet at: http://www.climatechange.ca.gov/index.php. Accessed July 29, 2008.

projected 2020 business as usual emissions levels, or about 10 percent from 2006's levels. In June 2008, CARB released its Draft Scoping Plan, which estimates a reduction of 169 million metric tons of CO_2-equivalents ($MMTCO_2$-eq). Approximately one-third of the emissions reductions strategies fall within the transportation sector and include the following: California Light-Duty Vehicle GHG standards, the Low Carbon Fuel Standard, Heavy-Duty Vehicle GHG emission reductions and energy efficiency, and medium and heavy-duty vehicle hybridization, high speed rail, and efficiency improvements in goods movement. These measures are expected to reduce GHG emissions by 60.2 $MMTCO_2$-eq. Emissions from the electricity sector are expected to reduce another 49.7 $MMTCO_2$-eq. Reductions from the electricity sector include building and appliance energy efficiency and conservation, increased combined heat and power, solar water heating (AB 1470), the renewable energy portfolio standard (33 percent renewable energy by 2020), and the existing million solar roofs program. Other reductions are expected from industrial sources, agriculture, forestry, recycling and waste, water, and emissions reductions from cap-and-trade programs. Local government actions and regional GHG targets are also expected to yield a reduction of 2 $MMTCO_2$-eq.[39] Measures that could become effective during implementation of the SNRAMP pertain to construction-related equipment and sustainable forest practices. Some proposed measures will require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act. Applicable measures that are ultimately adopted will become effective during implementation of proposed project and the proposed project could be subject to these requirements, depending on the proposed project's timeline.

Local Actions

San Francisco has a history of environmental protection policies and programs aimed at improving the quality of life for residents and reducing impacts on the environment. The following plans, policies, and legislation demonstrate San Francisco's continued commitment to environmental protection.

Transit First Policy

In 1973, San Francisco instituted the Transit First Policy, which added Section 16.102 to the City Charter with the goal of reducing the City's reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit investments, adopts street capacity and parking policies to discourage increased automobile traffic, and encourages the use of transit, bicycling, and walking rather than use of single-occupant vehicles.

[39] Ibid.

San Francisco Sustainability Plan

In July 1997 the Board of Supervisors approved the Sustainability Plan for the City of San Francisco, establishing sustainable development as a fundamental goal of municipal public policy.

The Electricity Resource Plan (Revised December 2002)

San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for ensuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

The Climate Action Plan for San Francisco

In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02), committing the City and County of San Francisco to a GHG emissions reduction goal of 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions.[40] The Climate Action Plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent GHG reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the plan, and many of the actions require further development and commitment of resources, the plan serves as a blueprint for GHG emission reductions, and several actions have been implemented or are now in progress.

San Francisco Municipal Transportation Agency's Zero Emissions 2020 Plan

The SFMTA's Zero Emissions 2020 plan focuses on the purchase of cleaner transit buses, including hybrid diesel-electric buses. Under this plan hybrid buses will replace the oldest diesel buses, some dating back to 1988. The hybrid buses emit 95 percent less particle matter (or soot) than the buses they replace, they produce 40 percent less oxides of nitrogen (NOx), and they reduce GHG by 30 percent.

LEED Silver for Municipal Buildings

In 2004, the City amended Chapter 7 of the Environment code, requiring all new municipal construction and major renovation projects to achieve LEED Silver Certification from the US Green Building Council.

Greenhouse Gas Reduction Ordinance

In May 2008, San Francisco adopted an ordinance amending the San Francisco Environment Code to establish City GHG emission targets and departmental

[40]San Francisco Department of the Environment and San Francisco Public Utilities Commission, *Climate Action Plan for San Francisco*, Local Actions to Reduce Greenhouse Emissions, September 2004.

action plans, to authorize the Department of the Environment to coordinate efforts to meet these targets and to make environmental findings. The ordinance establishes the following GHG reduction limits and the target dates to achieve them:

- Determine 1990 City GHG emissions by 2008, the baseline level with reference to which target reductions are set;
- Reduce GHG by 25 percent below 1990 levels by 2017;
- Reduce GHG by 40 percent below 1990 levels by 2025; and
- Reduce GHG by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare departmental Climate Action Plans and report to the Department of the Environment GHG emissions associated with the department's activities and activities that they regulate and to prepare recommendations to reduce emissions. As part of this, the San Francisco Planning Department is required to: (1) update and amend the City's applicable General Plan elements to include the emissions reduction limits set forth in this ordinance and policies to achieve those targets; (2) consider a project's impact on the City's GHG reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the "transit first" policy to encourage a shift to sustainable modes of transportation thereby reducing emissions and helping to achieve the targets set forth by this ordinance.

GoSolarSF

On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched its "GoSolarSF" program to San Francisco's businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents.

City of San Francisco's Green Building Ordinance

On August 4, 2008, Mayor Gavin Newsom signed into law San Francisco's Green Building Ordinance for newly constructed residential and commercial buildings and renovations to existing buildings. The ordinance specifically requires newly constructed commercial buildings over 5,000 square feet, residential buildings over 75 feet in height, and renovations on buildings over 25,000 sq. ft. to be subject to an unprecedented level of LEED and green building certifications, which makes San Francisco the city with the most stringent green building requirements in the nation. Cumulative benefits of this ordinance include reducing CO_2 emissions by 60,000 tons, saving 220,000 megawatt hours of power, saving 100 million gallons of drinking water, reducing wastewater and stormwater by 90 million gallons of water, reducing construction and demolition waste by 700 million pounds, increasing the valuations of recycled materials by

$200 million, reducing automobile trips by 540,000, and increasing green power generation by 37,000 megawatt hours.[41]

The Green Building Ordinance also continues San Francisco's efforts to reduce its GHG emissions to 20 percent below 1990 levels by 2012, a goal outlined in the City's 2004 Climate Action Plan. In addition, by reducing emissions, this ordinance also furthers California's efforts to reduce GHG emissions statewide, as mandated by the California Global Warming Solutions Act of 2006.

The City has also passed ordinances to reduce waste from retail and commercial operations. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food service ware and requires biodegradable/compostable or recyclable food service ware by restaurants, retail food vendors, City Departments, and City contractors. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires stores in the City and County of San Francisco to use compostable plastic, recyclable paper, and reusable checkout bags.

The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED Gold Certification.

The City's Planning Code reflects the latest smart growth policies and includes electric vehicle refueling stations in City parking garages, bicycle storage facilities for commercial and office buildings, and zoning that is supportive of high density mixed-use infill development. The City's more recent area plans, such as Rincon Hill and the Market and Octavia Area Plan, provide transit-oriented development policies. At the same time there is also a community-wide focus on ensuring San Francisco's neighborhoods as "livable," including the Better Streets Plan that would improve streetscape policies throughout the city, the Transit Effectiveness Plan, that aims to improve transit service, and the Bicycle Plan, all of which promote alternative transportation options. The CCSF also provides incentives to its employees to use alternative commute modes, and the CCSF recently introduced legislation that would require almost all employers to have comparable programs.

Each of the policies and ordinances discussed above include measures that would decrease the amount of GHG emitted into the atmosphere and decrease San Francisco's overall contribution to climate change.

[41] These findings are contained within the final Green Building Ordinance, signed by the Mayor on August 4, 2008.

Impacts

As previously discussed, implementing the SNRAMP would generate GHGs from the use of chainsaws, power hedge trimmers, power pruners, gas-powered water pumps, augers, power drills, cherry pickers, brush blades, string trimmers, mowers, and motor vehicles. However, the SFRPD uses these equipment types, and future levels of use for managing the Natural Areas are expected to be similar to current levels. Therefore, GHG emissions from implementing the SNRAMP would be relatively similar to current levels.

Similarly, while visitor use is generally expected to increase slightly from management activities identified in the SNRAMP, most visitors would be local residents who would walk or bike to the Natural Areas. Therefore, GHGs from vehicles used to access the Natural Areas would be relatively similar to current levels. As such, impacts of GHG emissions generated by implementing the management activities and the increased number of visitors would be less than significant.

Urban trees can help mitigate climate change by sequestering atmospheric carbon in tissue and by reducing energy use in buildings, consequently reducing carbon dioxide emissions from fossil fuel-based power plants. However, net carbon sequestration[42] can be negative if carbon emissions from decomposition is greater than the amount sequestered by healthy trees. There are an estimated 64,000 trees within the project area. The project includes the removal and replacement of approximately 3,448 trees, 97 percent of which are within the MA-1[43] and MA-2[44] urban forests. Trees would be removed to promote forest health and would focus on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees whose growth is suppressed by overcrowding. Large tree trunks may be left on-site if they provide habitat value, or they may be used for recreation or maintenance within the Natural Area. Unless it can be used to create wildlife habitat, all large woody debris generated by the Natural Areas Program would be composted in Golden Gate Park. Although old large trees are good at storing carbon, they are not as effective as young trees at taking up carbon (Oxarart et al. 2007). Replacing dead, dying, and diseased trees that have limited capability to sequester carbon with young saplings that have long-term carbon sequestration capabilities would result in a net GHG benefit.

Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur (SFRPD 2006). The

[42]Carbon sequestration—the removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests, and soils) through physical or biological processes, such as photosynthesis.

[43]MA-1 represents the priority areas for conservation and management activities.

[44]Areas designated MA-2 are comparatively more resilient to human disturbance than MA-1 areas.

long-term goal in MA-1 and MA-2 is to slowly convert those areas to native scrub, grassland habitats, or oak woodlands. According to an urban forest assessment for San Francisco, the total number of trees in San Francisco is 669,000. San Francisco trees and shrubs remove an estimated 260 tons of air pollution (CO, NO_2, O_3, PM_{10}, SO_2) per year. San Francisco trees sequester 5,200 tons of carbon dioxide annually, which is equivalent to the annual amount of carbon emitted by 3,100 cars (USDA 2007). San Francisco trees are estimated to store 196,000 tons of carbon, or the annual amount of carbon emitted by 118,000 cars (USDA 2007).

As trees die and decay, they release much of the stored carbon to the atmosphere. Thus, carbon storage is an indication of the amount of carbon that can be lost if trees are allowed to die and decompose. Of all the species in San Francisco, eucalyptus trees store and sequester the most carbon (approximately 24.4 percent of the total carbon stored and 16.3 percent of all sequestered carbon). Trees removed in the Natural Areas in San Francisco would be replaced on a one-to-one ratio, although not necessarily in the same location. Eucalyptus trees would be replaced with native trees. Although the net effect on carbon sequestration capacity is unknown for the proposed replacement of mature eucalyptus with native saplings, replacing dying trees with healthy trees typically enhances the carbon sequestration process. In fact, one of the urban forest management strategies to help improve air quality is to increase the number of healthy trees. Further, among mitigation measures recommended by the Intergovernmental Panel on Climate Change is forest management and in particular tree species selection that sequester the most carbon (IPCC 2007). As such, tree replacement is expected to result in a net increase in the amount of carbon sequestered within the Natural Areas. The total number of trees would not change within the Natural Areas of San Francisco and the amount of carbon sequestered would increase in the long term from replacing dead, dying, or diseased trees. Therefore, the project would not conflict with San Francisco's Greenhouse Gas Ordinance, which would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.

Trees removed in Sharp Park would be replaced with native grassland and scrub species. According to a study presented at the American Geophysical Union's meeting, grasslands above 50 degrees latitude reflects more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius. However, in the tropics, forests cool the planet by an average of 0.7 degree Celsius (Jha 2006). Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink (Hu 2001; Conant 2001). Therefore, replacing the trees to be removed in Sharp Park with grassland and scrub habitat would not result in a substantial increase in GHG emissions, and impacts from GHG emissions would be less than significant.

The project would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB32. Additionally, the project would not conflict with San Francisco's Climate Action Plan such that it would impede implementation of the local GHG reduction goals established by San Francisco's Greenhouse Gas Reduction Ordinance.

This topic will not be discussed in the Environmental Impact Report.

E.8 WIND AND SHADOW

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
8.	**WIND AND SHADOW—Would the project:**					
a)	Alter wind in a manner that substantially affects public areas?	☐	☐	☒	☐	☐
b)	Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☐	☐	☐	☒	☐

a) The project does not propose any aboveground structures that would alter wind. The project involves the preservation and restoration of the existing Natural Areas. While the CCSF has not established wind standards for recreational areas and open spaces, such as the Natural Areas, the San Francisco Planning Code has established a hazard level of 26 miles per hour for a single hour of the year for certain downtown areas. A total of 18,424 trees would be incrementally removed as part of the management activities. Of these, approximately 15,000 trees would be removed from Sharp Park. Tree removal of wind-toughened edge trees[45] could expose the interior of a stand of trees to unusual wind conditions. Trees removed within San Francisco would be replaced at a one-to-one ratio, although not necessarily in the same location. Within Sharp Park, trees would be removed in the upper canyon in an inaccessible area and would be replaced with native grassland and scrub species. Trees would be removed in accordance with the Urban Forestry Statements in Appendix F of the SNRAMP. In general, removal within the Natural Areas are planned to take individuals or very small groups of trees within existing forest and scrub habitats to avoid altering the wind conditions. As such, tree removal would not include wind-toughened edge trees and would not result in increased wind hazards or expose trees within a stand to high winds. Therefore, the potential wind hazard or windthrow[46] that would result from the project is expected to be less than significant.

This topic will not be discussed in the Environmental Impact Report.

b) Because the project does not propose any aboveground structures that would create new shadows, it would not result in shadow impacts.

This topic will not be discussed in the Environmental Impact Report.

[45]Wind-toughened edge trees—trees in a stand that have become tough or resistant to the wind.

[46]Windthrow—the effects of wind on a stand of trees.

E.9 RECREATION

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
9.	**RECREATION—Would the project:**					
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☒	☐	☐	☐	☐
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☒	☐	☐	☐	☐
c)	Physically degrade existing recreational resources?	☒	☐	☐	☐	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report for this project and does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

Recreation in the Natural Areas is generally considered to be passive recreation, that which requires no developed sites or facilities. Types of passive recreation include walking, hiking, running, dog walking, and nature watching. Almost all of the Natural Areas include trails, and most provide scenic views of San Francisco. Walking and biking trails were identified as one of the most important recreation facility needs for San Francisco residents according to the 2004 SFRPD Recreation Assessment (SFRPD 2004). Of the individuals surveyed for that assessment, 67 percent participated in running or walking, the highest percentage for any of the 26 activities identified in the survey. Other activities that San Francisco residents participate in included visiting nature areas (61 percent, second on the activities list), bicycling (38 percent, fifth on the activities list), volunteering (22 percent, tenth on the activities list), and dog walking (20 percent, twelfth on the activities list).

Because trails and trail-related activities are a main component of recreation in Natural Areas, the SNRAMP provides recommendations to develop site-stewardship and recreational uses compatible with natural resource protection. Two of the major actions proposed by the SNRAMP that would affect recreation are the modification and closure of trails and the reduction in space allotted for DPAs.

a) The project has the potential to increase the use of existing neighborhood and regional parks. According to the SFRPD Recreation Assessment, the condition of many SFRPD facilities is deteriorating, and the recreation facilities most important to residents are walking and biking trails (SFRPD 2004). The SNRAMP calls for the closure of 54,411 feet (10.31 miles) of trail. Trails could be closed because they are unsafe, because they are social trails, to protect sensitive species or habitat, or to prevent soil erosion. While some new trails would be created, the proposed project would cause a net decrease of 48,514 feet (9.2 miles), or 23.0 percent, of the trails within the Natural Areas. However, primary trails would be improved to provide a more manageable trail system with greater access and easier navigation through the parks. The Natural Areas could experience increased use because of the improved trail system.

The project calls for closing 19.3 acres (20.3 percent) of DPAs within the Natural Areas (Recommendations GR-8a, GR-8b, and GR-8c), which accounts for 16.4 percent of the total acres of SFRPD-maintained DPAs. Under the SNRAMP, the SFRPD would remove the Lake Merced DPA and would decrease the area of two DPAs, one on Bernal Hill and the other in McLaren Park. At least 2.5 acres of the proposed closures are largely inaccessible due to slopes of between 45 and 90 degrees. The possibility for the DPAs in McLaren Park and on Bernal Hill to degrade due to use being concentrated in a smaller area depends on the current and reasonably foreseeable future use of the areas. Through the SFRPD Final Dog Policy (SFRPD 2002), DPAs are to be reviewed every three years for, among other things, degradation of the area.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

b) The SNRAMP promotes passive recreation, or recreation that doesn't require the use of developed sites or facilities. Types of passive recreation include walking, hiking, running, dog walking, and nature watching. Approximately 211,303 feet (40.0 miles) of trail currently exist within the Natural Areas. This includes primary and secondary trails officially designated as routes and social trails that have not been officially designated and are usually user-created trails. The SNRAMP calls for the creation of 5,897 feet (1.1 miles) of new trails and the closure or rerouting of 54,411 feet (10.31 miles) of existing trails. As discussed above, trails could be closed because they are unsafe, because they are social trails, to protect sensitive species or habitat, or to prevent soil erosion. This is a net decrease of 48,514 feet (9.2 miles), or 23.0 percent, of trails within the Natural Areas.

The SFRPD would create new trails primarily in MA-2 and MA-3 areas. Trail placement in these areas would avoid sensitive vegetation and habitat. However, clearing trails for public use could involve removal of vegetation and cause short-term soil erosion.

Of the 95.2 acres of DPAs within the Natural Areas, 19.3 acres (20.3 percent) are proposed for closure (Recommendations GR-8a, GR-8b, and GR-8c). This accounts for 16.4 percent of the total acres of SFRPD-maintained DPAs. Under the SNRAMP, SFRPD would remove the Lake Merced DPA and would decrease the area of two DPAs, one on Bernal Hill and the other in McLaren Park. These DPAs are in areas with sensitive vegetation or habitat that require additional protection. The Lake Merced DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002). The SNRAMP also calls for the monitoring of DPAs for impact on oak woodlands at Buena Vista, Golden Gate Park Northeast, and MA-1 areas of the McLaren Park Shelley Loop.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

c) To address degradation of trails, the project proposes regular maintenance of these resources (Recommendation GR-11a). Posting interpretive signs that educate the public about the sensitive species and habitat in the area and that inform users about why off-trail use is discouraged (Recommendations GR-11c, GR-14b, and GR-14c) would prevent users from creating new social trails.

In the short-term, recreational resources, including trails, DPAs, and scenic viewing areas, could be temporarily closed for restoration efforts if necessary.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

E.10 UTILITIES AND SERVICE SYSTEMS

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
10.	**UTILITIES AND SERVICE SYSTEMS—Would the project:**					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☐	☒
d)	Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☒	☐	☐
e)	Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐
h)	Disrupt operation of or require relocation of local utilities?	☐	☐	☒	☐	☐

a – c, e) The project would not generate wastewater and would not result in the construction of new water, wastewater, or stormwater facilities or the expansions of existing facilities. Therefore, those criteria are not applicable to the project.

These topics will not be discussed in the Environmental Impact Report.

d) Reintroducing native species and replacing trees would require irrigation until they become established. However, irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. Therefore, impacts on water supply would be less than significant.

This topic will not be discussed in the Environmental Impact Report.

f) Minor quantities of solid waste and recyclable material would be generated during the management of the Natural Areas. Unless it can be used to create

wildlife habitat, all large woody debris generated by the Natural Areas Program would be composted in Golden Gate Park. The wood chips may be used to suppress understory invasive vegetation or could be used as beneficial mulch on other revegetation projects in the Natural Areas. Also, large tree trunks may be left on site if they provide habitat value, or they may be used for recreational or maintenance purposes within the Natural Area. As such, the project would not impact landfill capacity.

This topic will not be discussed in the Environmental Impact Report.

g) Solid waste and recyclable material would continue to be managed in accordance with federal, state, or local regulations, resulting in no impacts.

This topic will not be discussed in the Environmental Impact Report.

h) With the exception of two pipelines that cross the Duncan-Castro Natural Area and may need to be removed, relocated, or buried, no other disruption or relocation of utilities is required as part of this project. The two Duncan-Castro pipelines are at the ground surface and currently pose a safety hazard. Because any actions taken regarding these pipelines would be done in such a way as to minimize service disruptions, the project would have less than significant impacts with regards to the operation of local utilities.

This topic will not be discussed in the Environmental Impact Report.

E.11 PUBLIC SERVICES

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
11.	**PUBLIC SERVICES— Would the project:**					
a)	Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☐	☒	☐

a) The project would restore and manage the Natural Areas. The project does not propose any new on-site structures that would bring new residents to the project area, requiring new schools, parks, or other services. No new public services would be required. Workers for the proposed project would either be the ten Natural Areas Program gardeners or groups of volunteers of up to 50 people. The assumption is that the volunteers already reside in the San Francisco Bay Area. Potential increases in visitor use levels, as a result of improved Natural Areas and population growth, would be adequately served by the existing capabilities of service providers. Therefore, the project would not affect public services or public service providers.

This topic will not be discussed in the Environmental Impact Report.

E.12 BIOLOGICAL RESOURCES

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
12.	**BIOLOGICAL RESOURCES— Would the project:**					
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☒	☐	☐
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report for this project and does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

a)

Special Status Species

For this Initial Study, special status and/or sensitive species are defined as species that are legally protected by the California Department of Fish and Game (CDFG) or the US Fish and Wildlife Service (USFWS). Special status species

typically include species that are 1) federally listed as endangered, threatened, or candidate species (US Fish and Wildlife Service [USFWS] 2008a) or 2) state-listed as endangered, rare, threatened, California fully protected, or species of special concern (California Department of Fish and Game [CDFG] 2008). Sensitive species also include those listed on the California Native Plant Society (CNPS) plant list, i.e. the 1A list (plants presumed extinct in California) or 1B list (plants that are rare or endangered in California and elsewhere), or those that are found within the CNPS *Inventory of Rare and Endangered Vascular Plants* (CNPS 2008).

Special status species known to occur or that have been recorded historically in Natural Areas are listed in Table 2. In addition, a number of locally sensitive (LS) species may be found in San Francisco's Natural Areas, including species on the National Audubon Society's Watch List or those under threat of local extirpation as determined by the Yerba Buena chapter of the CNPS or the Golden Gate chapter of the National Audubon Society. The SFRPD has worked closely with such groups as the USFWS, CNPS, and the Audubon Society to appropriately manage special status species and to develop a list of LS species. The list of LS species from the CNPS and Golden Gate Audubon Chapter are in draft form at this time and are presented in Appendix C. All species from all lists are important for local conservation efforts and thus are analyzed in this Initial Study. However, impacts on federal, state, and CNPS 1B listed species are of greater concern because they are more likely to reduce populations, which could lead to species extinction.

Habitat Types

Habitat types within the Natural Areas include annual grassland, perennial grassland, wetland, other herbaceous vegetation, northern Franciscan coastal scrub, central dune scrub, central coast riparian scrub, nonnative scrub, mosaic, native forest, nonnative forest, and "other," which is a general category for areas that either are not dominated by vegetation or are dominated by ornamental vegetation. These correspond roughly to the classification system of Sawyer and Keeler-Wolfe (1995). Special status species that may use these habitat types are presented in Table 2.

Impacts on Special Status Species

Most project activities would benefit special status species and their habitats over the long-term. Management actions would aim to:

- Maintain viable populations of all special status species,
- Maintain and enhance native plant and animal communities,
- Maintain and enhance local biodiversity,
- Re-establish native community diversity, structure, and ecosystem function where degraded,

Table 2
Special Status Species That May Occur Within the Natural Areas

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Invertebrates				
Bay checkerspot butterfly	*Euphydryas editha bayensis*	FT/--/--	Native grasslands on outcrops of serpentine soil. Primary host plant is *Plantago erecta* Secondary host plants are *Orthocarpus densiflorus* and *O. purpurscens*.	P/Reported from Mt. Davidson and Twin Peaks in 1980. Not currently present at either Natural Area.
Mission blue butterfly	*Icaricia icarioides missionensis*	FE/--/--	Grasslands. Larval host plants include *Lupinus albifrons, L. variicolor, and L. formosus.*	C/Reported at Sharp Park and McLaren Park in 1988 and from Bayview Park in 2001. Currently breeds on Twin Peaks
San Francisco silverspot butterfly	*Speyeria callippe callippe*	FE/--/--	Coastal scrub. Host plant is *Viola pedunculata.*	P/Historical population on Twin Peaks that is presumed extirpated.[47]

Federal Status
FE = Endangered. Species in danger of extinction throughout all or significant portion of its range.
FT = Threatened. Species likely to become endangered within foreseeable future throughout all or a significant portion of its range.
FPD = Proposed delisting.

California State Status
SE = Endangered. Species whose continued existence in California is jeopardized.
ST = Threatened. Species, although not presently threatened with extinction, that is likely to become endangered in the foreseeable future.
CSC = Species of Concern.
SFP = State Fully Protected under Sections 3511 and 4700 of the Fish and Game Code.
SR = State Rare

California Native Plant Society
1A = Plants presumed extinct in California
1B = Plants that are rare or endangered in California and elsewhere.

Occurrence
P = Potential
C = Confirmed
U = Unlikely

[47] Extirpate—to remove or destroy totally.

Table 2
Special Status Species That May Occur Within the Natural Areas *(continued)*

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Reptiles and Amphibians				
California red-legged frog	*Rana aurora draytonii*	FT/CSC/--	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development.	C/Historically observed at Lake Merced. Recently observed at Sharp Park.
San Francisco garter snake	*Thamnophis sirtalis elegans*	FE/SE, SFP/--	Freshwater marshes, ponds, and slow moving streams. Prefers dense cover and water depths of at least one foot.	P/Historically reported from Sharp Park.
Western pond turtle	*Clemmys marmorata*	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites and upland habitat for egg-laying.	C/Presently occurs at Lake Merced. Presumed extant at Pine Lake but not recently observed.
Fish				
Tidewater goby*	*Eucyclogobius newberryi*	FPD (FE)/CSC/--	Shallow lagoons and lower stream reaches. Need fairly still, but not stagnant, water and high oxygen levels.	P/Historically collected (1895), not recently observed in San Francisco.
Central California coast steelhead*	*Oncorhynchus mykiss irideus*	FT/--/--	Cold, flowing freshwater.	P/Not available.
Birds				
Bank swallow	*Riparia riparia*	--/ST/--	Requires vertical banks/cliffs with fine-textured, sandy soils near streams, rivers, lakes and the ocean to dig a nesting hole.	C/Currently nests at Fort Funston and forage over Lake Merced.
California black Rail	*Laterallus jamaicensis coturniculus*	--/ST/--	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	P/Historically reported, not recently observed in San Francisco.
Double-crested Cormorant	*Phalacrocorax auritus*	--/CSC/-	Nests on coastal cliffs and in trees.	C/Presently nests at Lake Merced.
Salt marsh common yellowthroat	*Geothlypis trichas sinuosa*	--/CSC/--	Salt and freshwater marshes. Requires thick cover for foraging and dense vegetation for nesting.	C/Presently occurs at Lake Merced and Sharp Park.
Yellow warbler	*Dendroica petechia*	--/CSC/--	Riparian woodlands.	C/Observed at Lake Merced in spring 2000, breeding undocumented.
Mammals				
American badger	*Taxidea taxus*	--/CSC/--	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats, with friable soils. Digs burrows and preys on burrowing rodents.	P/Not available.

Table 2
Special Status Species That May Occur Within the Natural Areas *(continued)*

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Big free-tailed bat*	*Nyctinomops macrotis*	--/CSC/--	Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	P (foraging habitat)/Not available.
Pallid bat*	*Antrozous pallidus*	--/CSC/--	Deserts, grasslands, shrublands, woodlands, and forests.	P (foraging habitat) /Not available.
San Francisco dusky-footed woodrat*	*Neotoma fuscipes annectens*	--/CSC/--	Forest habitat of moderate canopy and moderate to dense understory.	C/Observed in Sharp Park.
Western red bat	*Lasiurus blossevillii*	--/CSC/--	Roosts primarily in trees, 2-40 feet above the ground. Prefers habitat edges and mosaics with trees that are protected from above and open below for foraging.	P/Recorded in Golden Gate Park (2000).
Plants				
Adobe sanicle	*Sanicula maritima*	--/SR/1B	Meadows and seeps, grasslands, chaparral, and coastal prairie.	P/Not available.
Alkali milk-vetch	*Astragalus tener* var. *tener*	--/--/1B	Low ground, alkali flats, and flooded lands; in annual grassland, playas, or vernal pools between 1 and 170 meters elevation.	P/Not available.
Beach layia	*Layia carnosa*	FE/SE/1B	On sparsely vegetated, semi-stabilized coastal dunes, usually behind foredunes, between 0 and 75 meters elevation.	P/Historically reported from San Francisco, location not well mapped, presumed extirpated.
Bent-flowered fiddleneck*	*Amsinckia lunaris*	--/--/1B	Woodlands and grasslands between 50 and 500 meters elevation.	P/Not available.
California seablite	*Suaeda californica*	FE/--/1B	Restricted to the upper intertidal zone of coastal salt marsh along the perimeter of a bay.	C/Recorded at India Basin.
Choris' popcorn-flower	*Plagiobothrys chorisianus* var. *chorisianus*	--/--/1B	Chaparral, coastal scrub, coastal prairie. On mesic sites between 15 and 100 meters elevation.	P/Not available.
Coastal marsh milk-vetch*	*Astragalus pycnostachyus* var. *pycnostachyus*	--/--/1B	Mesic sites in dunes or along streams or coastal salt marshes between 0 and 30 meters elevation.	P/Not available.
Coastal triquetrella	*Triquetrella californica*	--/--/1B	Coastal bluff scrub or coastal scrub habitats. Grows on moss growing on soil between 10 and 100 meters elevation.	C/Recorded on Tank Hill and several other locations within San Francisco.
Coast yellow leptosiphon*	*Leptosiphon croceus*	--/--/1B	Coastal bluff scrub and coastal prairie between 10 and 150 meters elevation.	P/Not available.

Table 2
Special Status Species That May Occur Within the Natural Areas *(continued)*

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Coastal marsh milk-vetch*	*Astragalus pycnostachyus* var. *pycnostachyus*	--/--/1B	Mesic sites in dunes or along streams or coastal salt marshes between 0 and 30 meters elevation.	P/Not available.
Compact cobwebby thistle	*Cirsium occidentale* var. *compactum*	--/--/1B	On dunes and on clay in chaparral; also in grassland, coastal prairie, and coastal scrub. Found between 5 and 155 meters elevation.	P/Historically recorded near Lake Merced.
Crystal Springs lessingia*	*Lessingia arachnoidea*	--/--/1B	Coastal sage scrub, grasslands, and woodlands. Found on grassy slopes on serpentine; also along roadsides. Between 60 and 200 meters elevation.	P/Not available.
Dark-eyed gilia	*Gilia millefoliata*	--/--/1B	Coastal dunes between 2 and 20 meters elevation.	P/Historically recorded within San Francisco.
Dune gilia	*G. capitata* ssp *chamissonis*	--/--/1B	Coastal dunes and coastal scrub between 2 and 200 meters elevation.	C/Presently occurs at Hawk Hill and Lake Merced.
Fragrant fritillary	*Fritillaria liliacea*	--/--/1B	Coastal scrub, grassland, and coastal prairie between 3 and 410 meters elevation.	C/Presently occurs at Bernal Heights.
Franciscan onion*	*Allium peninsulare* var. *franciscanum*	--/--/1B	Woodlands and grasslands, on dry hillsides. Found on clay soils or serpentine between 100 and 300 meters elevation.	P/Not available.
Franciscan thistle	*C. andrewsii*	--/--/1B	Coastal bluff scrub, broadleaved upland forest, coastal scrub. Sometimes serpentine seeps. Between 0 and 135 meters elevation.	P/Historically recorded within San Francisco.
Hairless popcorn flower	*Plagiobothrys glaber*	--/--/1A	Alkali meadows, seeps, coastal salt marshes, and swamps between 5 and 180 meters elevation.	P/Not available.
Hickman's cinquefoil*	*Potentilla hickmanii*	FE/SE/1B	Freshwater marshes, seeps, and small streams in open or forested areas along the coast. Found between 5 and 125 meters elevation.	P/Not available.
Kellogg's horkelia	*Horkelia cuneata* ssp. *sericea*	--/--/1B	Closed-cone coniferous forest, coastal scrub, chaparral, old dunes, coastal sandhills. Between 10 and 200 meters elevation.	P/Recorded within San Francisco.
Marin western flax	*Hesperolinon congestum*	FT/ST/1B	In serpentine barrens and in serpentine grassland and chaparral at 30 and 365 meters elevation.	U/Historically recorded on Mount Davidson.
Marsh microseris	*Microseris paludosa*	--/--/1B	Closed-cone coniferous forest, woodlands, and grasslands between 5 and 300 meters elevation.	P/Not available.

Table 2
Special Status Species That May Occur Within the Natural Areas *(continued)*

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
Marsh sandwort	*Arenaria paludicola*	--/--/1B	Grows up through dense mats of *Typha* spp., *Juncus* spp. and *Scirpus* spp. in freshwater marshes and swamps between 10 and 170 meters elevation.	P/Not available.
Pappose tarplant *	*Centromadia parryi* ssp. *parryi*	--/--/1B	Vernally mesic, often alkaline sites in coastal prairie, meadows, seeps, coastal salt marshes, and grassland. Found between 2 and 420 meters elevation.	P/Not available.
Point Reyes bird's-beak	*Cordylanthus maritimus* ssp. *palustris*	--/--/1B	Coastal salt marsh with *Salicornia* spp., *Distichlis* spp., and *Spartina* spp. between 0 and 15 meters elevation.	P/Habitat exists at India Basin Park.
Point Reyes horkelia *	*Horkelia marinensis*	--/--/1B	Sandy flats and dunes near the coast, in grassland or scrub plant communities between 5 and 30 meters elevation.	P/Not available.
Robust spineflower *	*Chorizanthe robusta* var. *robusta*	FE/--/1B	Sandy terraces and bluffs or in loose sand in coastal habitats between 3 and 120 meters elevation.	P/Not available.
Rose leptosiphon	*Leptosiphon rosaceus*	--/--/1B	Coastal bluff scrub between 0 and 100 meters elevation.	P/Not available.
Round-headed Chinese houses	*Collinsia corymbosa*	--/--/1B	Dunes and coastal prairie between 10 and 30 meters elevation.	P/Not available.
San Francisco Bay spineflower	*Chorizanthe cuspidata* var. *cuspidata*	--/--/1B	Coastal scrub and coastal dunes on sandy slopes and terraces between 5 and 550 meters elevation.	C/Presently occurs at Fort Funston, Golden Gate Heights, and Lake Merced.
San Francisco campion	*Silene verecunda* ssp. *verecunda*	--/--/1B	Coastal scrub, grassland, coastal bluff scrub, chaparral, coastal prairie at elevations between 30 and 645 meters.	C/Presently occurs at Mt. Davidson and Rock Outcrop.
San Francisco collinsia	*Collinsia multicolor*	--/--/1B	Closed-cone coniferous forest and coastal scrub between 30 and 250 meters elevation.	C/Presently occurs at Bayview Hill.
San Francisco gumplant	*Grindelia hirsutula* var. *maritima*	--/--/1B	Coastal scrub and grasslands between 15 and 400 meters elevation.	C/Presently occurs at Mount Davidson, Twin Peaks, Corona Heights, and Balboa Natural Area.
San Francisco lessingia	*Lessingia germanorum*	FE/SE/1B	Open sandy soils relatively free of competing plants, between 20 and 125 meters elevation.	P/Historically recorded at Lake Merced. Only current population found on the Presidio.
San Francisco owl's-clover	*Triphysaria floribunda*	--/--/1B	Coastal prairie and grassland between 10 and 160 meters elevation.	P/Historically recorded near Lake Merced.

Table 2
Special Status Species That May Occur Within the Natural Areas *(continued)*

Common Name	*Scientific Name*	Federal/ State/ CNPS Status	Habitat	Likelihood of Occurrence/Notes on Occurrence
San Francisco popcorn-flower	*Plagiobothrys diffusus*	--/SE/1B	Grassland and coastal prairie with marine influence between 60 and 485 meters elevation.	P/Not available.
San Mateo woolly sunflower*	*Eriophyllum latiobum*	FE/SE/1B	Woodlands between 45 and 150 meters elevation. Found on and off serpentine.	P/Not available.
Santa Cruz microseris	*Stebbinsoseris decipiens*	--/--/1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub. Found in open areas in loose or disturbed soils between 10 and 500 meters elevation.	P/Not available.
Western leatherwood*	*Dirca occidentalis*	--/--/1B	On mesic, brushy slopes. Mostly in mixed evergreen and foothill woodland communities between 3 and 550 meters elevation.	P/Not available.
White-rayed pentachaeta	*Pentachaeta bellidiflora*	FE/SE/1B	Open, dry, rocky slopes and grassy areas, often on soils derived from serpentine bedrock. Found between 35 and 620 meters elevation.	P/Not available.

Sources: CDFG 2008; USFWS 2008; CNPS 2008

Federal Status
FE = Endangered. Species in danger of extinction throughout all or significant portion of its range.
FT = Threatened. Species likely to become endangered within foreseeable future throughout all or a significant portion of its range.
FPD = Proposed delisting.

California State Status
SE = Endangered. Species whose continued existence in California is jeopardized.
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CSC = Species of Concern.
SFP = State Fully Protected under Sections 3511 and 4700 of the Fish and Game Code.
SR = State Rare

California Native Plant Society
1A = Plants presumed extinct in California
1B = Plants that are rare or endangered in California and elsewhere.

Occurrence
P = Potential
C = Confirmed
U = Unlikely

*Indicates species that may occur at Sharp Park only.

- Improve natural area connectivity, and
- Decrease the extent of invasive exotic species cover.

Vegetation management actions would improve structural and habitat diversity, and if feasible, special status species populations would be augmented and/or re-introduced. However, certain actions would disturb special status species and/or their habitats either directly or indirectly over the short-term. These include routine maintenance, small restoration projects, capital projects, invasive plant removal, vegetation management, visitor use, dog use, and dog play areas, and tree removal. In addition to these impacts, management actions to restore the Laguna Salada wetland at Sharp Park would disturb special status species and their habitats over the short term.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

b)

Riparian and Sensitive Habitats

Riparian habitat within the Natural Areas consists of willow scrub as described in the central coast riparian scrub vegetation type under criterion a). This habitat type occurs at Glen Canyon Park, Lake Merced, McLaren Park, and Sharp Park.

Several types of sensitive habitat exist within the Natural Areas, including California sagebrush scrub, dune habitat, oak woodlands, and native grasslands. These were all conspicuous components of the historic San Franciscan landscape, and are considered regionally sensitive due to acreage lost to urban development, high value to special status species, and for oak woodlands, lack of recruitment. Table 3 shows the locations of riparian and sensitive habitat types in the Natural Areas.

Impacts on Riparian and Sensitive Habitats

Overall, plan actions would improve riparian and sensitive habitats throughout the Natural Areas. However, habitat restoration projects, off-lease dog use, and the wetland restoration at Sharp Park could disturb riparian and sensitive habitats either directly or indirectly over the short term.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

Table 3
Riparian and Sensitive Habitat Types Within the Natural Areas

	Natural Area																					
Habitat Type	*Lake Merced*	*Glen Canyon Park*	*Sharp Park*	*McLaren Park*	*O'Shaughnessy Hollow*	*Twin Peaks*	*Hawk Hill*	*Strawberry Hill*	*Golden Gate Park Oak Woodlands*	*Balboa*	*Buena Vista*	*Corona Heights*	*Lily Pond*	*Whiskey Hill*	*15th Avenue Steps*	*Mt. Davidson*	*Rock Outcrop*	*Brooks Park*	*Duncan-Castro*	*Bayview Park*	*Palou-Phelps*	*Bernal Hill*
Riparian	x	x	x	x																x		
California sagebrush scrub	x	x	x			x																
Dune	x						x	x	x	x							x					
Oak woodland	x	x		x		x		x	x		x	x	x	x	x							
Native grasslands	x	x	x	x								x				x	x	x	x	x	x	x

Source: SFRPD 2006

c)

Wetland Habitat

Several different types of wetlands are present within the Natural Areas. A wetland delineation has been conducted at Sharp Park. Although wetland delineations have not been conducted for other wetlands within the Natural Areas, they likely fall under the jurisdiction of Section 404 of the Clean Water Act.

Wetland types within the Natural Areas include free flowing creeks (Glen Canyon Park and Sharp Park), tidal salt marsh wetland (India Basin), open water (Lake Merced, Pine Lake, and Sharp Park), wet meadow (Bayview Park, Lake Merced, McLaren Park, and Sharp Park), and freshwater marsh (Lake Merced, McLaren Park, Pine Lake, and Sharp Park). These areas are likely jurisdictional wetlands or waters of the US and are thus regulated by the US Army Corps of Engineers (USACE). Typical actions that trigger the need for Clean Water Act Section 404 compliance include dredging or filling of wetlands or portions of a wetland or bank alteration.

Impacts on Wetland Habitat

Overall, project activities would protect and enhance wetlands within the Natural Areas. However, certain actions would disturb wetlands either, directly or indirectly, over the short-term through direct removal, filling, hydrological interruption, or other means. These include habitat enhancement at Sharp Park and Glen Canyon.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

d)

Native Resident and Migratory Fish

Native resident and migratory fish are limited in the Natural Areas, but do exist at Lake Merced and Pine Lake. Native resident fish at Lake Merced include hitch (*Lavinia exilicauda*), hardhead (*Mylopharadon conocephalus*), Sacramento blackfish (*Orthodon microlepidotus*), Sacramento sucker (*Catostomus occidentalis*), threespine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), and Sacramento perch (*Archoplites interruptus*). Rainbow trout (*Oncorhynchus mykiss*) are present in Lake Merced, but there is no spawning habitat for them in the lake, so they cannot reproduce. Ongoing stocking would be required to maintain that fishery. Threespine stickleback are found at Pine Lake. The one migratory fish found in the Natural Areas is coho salmon (*O. kisutch*), which was recorded at Lake Merced.

Migratory Birds

Many migratory birds use the Natural Areas for foraging, nesting, and perching habitat, as the Natural Areas provide habitat in an area that is otherwise highly urbanized and provides little habitat. Migratory birds that use the Natural Areas are presented in Appendix C.

Some of the larger Natural Areas, such as Lake Merced, McLaren Park, and Sharp Park, provide a complex mosaic of habitats that are used for foraging, nesting, and roosting by migratory and resident birds, and thus are more important bird habitat compared with the smaller natural areas. In particular, Lake Merced provides open water, freshwater marsh, riparian, and upland habitats that are heavily used by bird species. This location serves as an important resting area for migratory birds, and is a nesting area for approximately 50 species of resident birds (SFRPD 2006). Almost 70 species of birds have been documented nesting within the Lake Merced area, and several of these are of special concern, locally rare, or neotropical migrants.

Among the Natural Areas, India Basin is the only one that borders San Francisco Bay and provides the only habitat for migratory shorebirds. There are ten species of birds that are considered locally sensitive that have been observed at India Basin, and several of these are found at no other Natural Area: black oystercatcher (*Haematopus bachmani*), pelagic cormorant (*Phalacrocorax pelagicus*), Brandt's cormorant (*P. penicillatus*), and pigeon guillemot (*Cepphus columba*). None of the LS species that have been observed are known to breed at India Basin. The restored wetlands and mudflats support nesting American avocet (*Recurvirostra americana*) and killdeer (*Charadrius vociferus*). If restored, the more extensive saltgrass/pickleweed area could provide habitat for California black rail (*Laterallus jamaicensis coturniculus*) and California clapper rail (*Rallus longirostris obsoletus*), both protected under the state and federal Endangered Species Acts.

Smaller Natural Areas, such as Hawk Hill and Grandview Park, may provide suitable nesting and foraging habitat for small songbirds, and may support a prey base for foraging raptors.

Wildlife Corridors

Overall, the Natural Areas provide a mosaic of habitats that are accessible to mobile wildlife species, particularly birds. They offer foraging, nesting, and roosting habitats for many species as they travel within San Francisco and beyond.

Lake Merced is the largest freshwater coastal lake and wetland system between the Pescadero Marsh in south San Mateo County and the Point Reyes Peninsula in Marin County. As such, it provides refuge for many migratory birds, as described above.

Sharp Park is bordered by undeveloped areas, including Sweeny Open Space and Milagra Ridge, which allows it to serve as a relatively undisturbed corridor for wildlife, particularly birds. Sharp Park's connectivity to high-quality natural habitats also allows it to support medium size and large mammals, including numerous general wildlife species such as the black-tailed deer (*Odocoileus hemionus columbianus*), bobcat (*Lynx rufus californicus*), common porcupine (*Erethizon dorsatum epixanthum*), coyote (*Canis latrans*), and mountain lion (*Felis concolor californicus*).

Native Wildlife Nursery Sites

All of the Natural Areas support potential and/or confirmed nesting native bird habitat. Native birds that may nest within the Natural Areas include shorebirds, songbirds, and raptors, and include habitats such as nonnative forests, grasslands, and riparian scrub.

Impacts on Native Resident and Migratory Fish, Migratory Birds, Wildlife Corridors, and Native Wildlife Nursery Sites

Overall, plan activities would improve and connect habitats, thereby improving the ability of native resident or migratory fish or wildlife species to migrate. However, certain actions could disturb these species either directly or indirectly over the short term. These include disruption from visitor use, invasive tree removal, use of DPAs, and habitat restoration activities. In addition, management actions to restore the Laguna Salada wetland at Sharp Park could disturb native resident fish and migratory fish and wildlife species over the short term.

The potential impacts on this topic will be analyzed in the Environmental Impact Report.

e) The SFRPD would comply with all local policies and ordinances protecting biological resources. These include tree protection ordinances, such as the San Francisco Urban Forestry Ordinance. Several Landmark Trees are found in or near the Natural Areas. These include a blue elderberry tree (*Sambucus mexicana*) within Bernal Hill, a Canary Island Date Palm (*Phoenix canariensis*) near Palou-Phelps, and a New Zealand Christmas Tree (*Metrosideros excelsus*) adjacent to the Interior Greenbelt. Other applicable ordinances include the Significant Tree Ordinance of San Mateo County and Ordinance 636-C.S., which limits logging within Pacifica and applies to tree removal at Sharp Park. Management actions would not conflict with these or other applicable ordinances. As a result, there would be no impact due to conflicts with local policies or ordinances.

f) There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans that apply to management of the Natural Areas. Species recovery plans have been finalized for the Bay checkerspot butterfly, mission blue butterfly, CRLF, SFGS, beach layia, Marin western flax (*Hesperolinon congestum*), San Francisco lessingia (*Lessingia germanorum*), and white-rayed

pentachaeta (*Pentachaeta bellidiflora*). These plans are ultimately designed and created to recover the species and the ecosystems on which they depend. This includes protecting and often restoring the habitat in which the species can thrive. These recovery plans would apply to some of the Natural Areas, including those where the species have been documented, including Bayview Park, Lake Merced, McLaren Park, Mount Davidson, Sharp Park, and Twin Peaks. The SFRPD's goal of species preservation and recovery is in accord with these recovery plans. Management actions in the SNRAMP would improve special status species habitat and avoid, protect, and monitor special status species (GR 1-10). As a result, there would be no impact due to conflicts with any of the approved species recovery plans.

E.13 GEOLOGY AND SOILS

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
13. GEOLOGY AND SOILS— Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☒	☐	☐

The main activities in the proposed project that might impact geology and soils include the following:

- Implementing erosion control measures in gullies that have formed due to erosion, including regrading the gullies, emplacing compacted and staked brush, building check dams and small swales, and putting straw bale barriers in place alongside the gullies;
- Implementing erosion control measures for streambank protection, including thinning vegetation to improve riparian habitat, replanting streambanks with native and special status species, and placing erosion control blankets, mats, mulch, or wood chips on the streambank while the new vegetation establishes root;

- Removing nonnative trees and other vegetation and replacing them with native and special status species; and
- Regrading, recontouring, or repaving roads.

The overall scale of the proposed project is relatively small, and while these activities may result in some increased erosion and loss of topsoil in the Natural Areas, these impacts are generally considered less than significant.

a) i) The proposed project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault. The proposed project does not involve the construction of any residences or structures that would be occupied. Ground rupture most commonly occurs along preexisting faults. No known active faults cross the Natural Areas, and the sites are not within an Alquist-Priolo Earthquake Hazard Zone (State of California 1982). Therefore, this criterion is not applicable to the proposed project.

This topic will not be discussed in the Environmental Impact Report.

a) ii) The proposed project would not expose people or structures to potential substantial adverse effects involving strong seismic shaking. The proposed project does not involve the construction of any residences or structures that would be occupied. While there is a potential for strong ground shaking at all 31 of the Natural Areas due to a nearby earthquake, the proposed project would not increase the likelihood that people or structures would experience adverse effects from strong ground shaking. As discussed in Section A, some of the goals of the SNRAMP that may impact geology and soils are a) to maintain and enhance native plant and animal communities, b) to re-establish native community diversity, structure, and ecosystem function where degraded, and c) to decrease the extent of invasive exotic species cover. The proposed project may result in increased visitor use of the Natural Areas due improvements in the Natural Areas, and in this regard, may increase the exposure of people to strong seismic shaking. Because the proposed project would not increase the potential for ground failure in these areas, it would not expose people to potential substantial adverse effects involving strong seismic shaking and would have less than significant impacts.

This topic will not be discussed in the Environmental Impact Report.

a) iii) The proposed project would not expose people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction[48]. According to the most current Hazard Zones Map for the City and

[48]Liquefaction—the process of changing soil and unconsolidated sediments into water mixture immediately following an earthquake; often results in foundation failure, with sliding of the ground under buildings and structures.

County of San Francisco, India Basin Shoreline Park and Lake Merced are the only two Natural Areas that are in areas where there has been a historic occurrence of liquefaction (State of California 2000). Because none of the proposed activities would expose people or structures to potential substantial adverse effects from seismic-related ground failure, the proposed project would have no impact with regard to this criterion.

This topic will not be discussed in the Environmental Impact Report.

a) iv) The proposed project would not expose people or structures to potential substantial adverse effects involving landslides. According to the most current Hazard Zones Map for the City and County of San Francisco, many of the Natural Areas are in areas where there has been a previous occurrence of landslides, or local information indicates the potential for permanent ground displacements (State of California 2000). However, none of the activities in the proposed project would expose people or structures to potential substantial adverse effects from landslides because most of the proposed activities are related to improving natural habitat and minimizing erosion and loss of topsoil. While there may be some short-term impacts related to additional erosion and loss of topsoil from the proposed management activities (removing nonnative vegetation, regrading land, maintaining and improving riparian corridors, paving or regrading roads, and creating new trails), the long-term effects of the proposed project would minimize erosion and reduce the risk from potential landslides. Therefore, the proposed project would have a less than significant impact with regard to this criterion.

b) The proposed project includes some regrading work, tree and vegetation removal and replacement, construction of a detention basin, and possibly some road modifications. All of these activities have the potential to result in erosion. Continued use of DPAs in many of the Natural Areas would result in loss of vegetation, causing topsoil to be exposed; however, the magnitude of this impact is not expected to result in significant erosion. Use of erosion control measures under GR-12b, such as fiber rolls, silt fences, and straw mulch/wood chips, may be appropriate for these areas to ensure that there are minor erosion impacts from the DPAs. The Natural Areas that have the potential to experience substantial soil erosion because of project activities include Bayview Park, Glen Canyon Park and O'Shaughnessy Hollow, India Basin Shoreline Park, and Lake Merced. Each of these is discussed below.

The proposed project also incorporates measures to address these potential impacts, resulting in less than significant impacts with regard to substantial soil erosion and topsoil loss. The general approaches that are included as part of the proposed project and would be utilized at the Natural Areas to minimize erosion include the following:

- Large-scale restoration, such as regrading, recontouring, or repaving roads, constructing a detention basin, or building check dams and swales, would be conducted during the appropriate time of year (generally during the dry season) and at an appropriate scale to minimize erosion. At any one time, the area of vegetation removal would be relatively small to minimize the potential for erosion. (GR-1c). Smaller-scale activities, such as removing weeds and invasive species and replanting, may be conducted year-round but would be conducted at a scale that is appropriate to minimize erosion.
- Work that involves exposure of large areas of soil would be completed during the dry season whenever possible. (GR-12b)
- BMPs would be implemented to reduce the erosion risk during the transition period between removal of vegetation and the establishment of replacement vegetation (GR-12b). Erosion-control BMPs incorporated into the proposed project include fiber rolls, straw bales, silt fences, and straw mulch, wood chips, and rolled erosion control products.

The SNRAMP is intended to be an active living document, using an adaptive management approach in the Natural Areas. As such, adaptations in the management approach would be made in response to changing conditions. For example, if tree replantings were not to take hold, substitute vegetation may be installed. Additionally, if management activities such as tree removal were to result in erosion within a Natural Area, best management practices, such as wood mulch, fiber rolls, and silt fences, would be implemented to minimize erosion.

Bayview Park

Activities outlined in the SNRAMP that might result in erosion or loss of topsoil include removing nonnative vegetation and replacing it with native and special status species (VP-1a through VP-1e[49] and VP-2a[50]), constructing a small berm for water storage (VP-3a[51]), and implementing erosion control measures in

[49] VP-1a—reduce and contain herbaceous and woody invasive plants;
VP-1b—remove approximately 511 of the estimated 6,000 invasive trees (primarily blue gum eucalyptus) to enhance sensitive species habitats;
VP-1c—protect and maintain existing native habitats;
VP-1d—augment existing sensitive plant populations;
VP-1e—reintroduce populations of sensitive plant species to help prevent extinctions of these species in San Francisco.

[50] VP-2a—install coast live oak seedlings and other native plants in gaps and openings in the eucalyptus forest.

[51] VP-3a—construct a small berm to create a seasonal wetland and detention basin, if capital funds are made available.

gullies (VP-9a[52]). While these activities are intended to provide long-term erosion control and natural resources diversity benefits, short-term impacts may occur during their implementation. Erosion or loss of topsoil may occur as soil is moved during regrading activities. Topsoil may be lost as trees and other vegetation are removed, and during the planting of native species. However, the general recommendations that are incorporated into the proposed project would ensure that impacts from these activities are less than significant.

Glen Canyon Park and O'Shaughnessy Hollow

Activities outlined in the SNRAMP that might result in erosion or loss of topsoil include trimming and removing willows in the wet meadow (GC/OH-1e)[53]; maintaining and improving the riparian corridor for Islais Creek by thinning willow trees, removing invasive plants, and revegetating with appropriate species (GC/OH-2a)[54]; installing instream structures, such as wingwalls to create scour and maintain pools (GC/OH-2b)[55]; removing nonnative trees and other vegetation and replacing them with native and special status species (GC/OH-1e); installing boardwalks in wet marshy locations along Islais Creek and at creek crossings (GC/OH-9b)[56]; filling gullies that have formed along the gravel access road due to erosion with gravel, maintaining water bars along the gravel access road, and if funds are available, paving or regrading the gravel access road (GC/OH-10a)[57]; maintaining the existing sediment dam or installing new sediment traps on the lower reaches of the creek, and if funds are available, excavating the soil behind the dam and repairing or replacing the dam (GC/OH-10c)[58].

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[52] VP-9a—create a detailed and complete erosion control plan before beginning work on the large gully near the summit; work would include 1) installing a minimum of two check-dams within the upper portion of the gully, 2) creating soil berms and troughs between these two structures, 3) removing soil from the upper edges of the gully to create at 1:1 slope, 4) installing a staked brush pile or brush box immediately below the upper edge of the gully, 5) install one or two staked brush bundles in the vegetated swale leading into the gully from the direction of the radio tower, 6) install rice straw bales along all edges of the gully, and 7) hand broadcast the entire area with the appropriate native grass seed once construction is complete and before the fall rains.

[53] GC-OH-1e—remove approximately 120 of the estimated 6,000 invasive blue gum eucalyptus trees in Glen Canyon Park to maintain and enhance native habitats.

[54] GC-OH-2a—thin sections of the overstory within the riparian corridor and reduce invasive plants in the understory.

[55] GC-OH-2b—prevent willows from encroaching on open water and create new and stable pool habitats.

[56] GC-OH-9b—install boardwalks in wet marshy locations along the Islais Creek loop trail to prevent damage to existing resources and increased sedimentation in the creek.

[57] GC-OH-10a—fill existing gullies in the access road with gravel to help minimize the input of sediment from the gravel access road, outslope the road the next time it is graded or resurfaced to allow uniform flow of runoff from the hillside across the road to the creek and to eliminate ponding and reduce gullying in the road, evaluate and replace the existing culverts as necessary, and consider paving the access road.

[58] GC-OH-10c—maintain the existing sediment dam and consider installation of new sediment traps on the lower reach of the creek.

While these activities are intended to provide long-term erosion control, improved habitat, and other natural resources diversity benefits, short-term impacts may occur during their implementation. Topsoil may be eroded or lost as soil is moved during regrading, road modification, and gully filling. Topsoil may be lost as trees and other vegetation are removed and when native species are planted. Much of the work at this park would occur along Islais Creek, which can carry eroded soil away, exacerbating the problem. Streambank soil can be easily disturbed during construction, including boardwalks, dams, and sediment traps. However, the general recommendations that are incorporated into the proposed project ensure that impacts from these activities would be less than significant.

India Basin Shoreline Park

Activities outlined in the SNRAMP that might result in erosion or loss of topsoil include removing invasive species from the salt marsh and upland areas (IB-1a)[59]. While these activities are intended to provide long-term erosion control, improved habitat, and other natural resources diversity benefits, short-term impacts may occur during their implementation. Minor erosion or loss of topsoil during activities on the levee may result in negligible sedimentation of San Francisco Bay. Removal of invasive species within the salt marsh can mobilize sediment, impacting water quality in the Bay. However, the general recommendations that are part of the proposed project would ensure that impacts from these activities would be less than significant.

Lake Merced

Activities outlined in the SNRAMP that might result in erosion or loss of topsoil include removing trees that are on the slopes and encroaching into wetlands that surround North, South, and East Lakes (LM-6a)[60] and treating small-scale erosion gullies with gully plugs, brush boxes, energy dissipaters, and water bars, and planting these areas with the appropriate native vegetation to restore habitat and create future erosion barriers (LM-9a)[61]. While these activities are intended to provide long-term erosion control, improved habitat, and other natural resources diversity benefits, short-term impacts may occur during their implementation. Erosion or loss of topsoil may occur as the small-scale gullies are repaired. Furthermore, tree removal along the slopes of North, South, and East Lakes has the potential to cause additional erosion in these areas. However, the general recommendations that would be implemented as part of the

[59] IB-1a—monitor the salt marsh for smooth cordgrass and other invasive species; reduce and contain infestations of upland invasive species.

[60] LM-6a—remove invasive vegetation and enhance native scrub and grassland species in upland sandy soils adjacent to East Lake to allow for western pond turtle nesting. Create piles of logs or rocks to increase and improve basking habitat.

[61] LM-9a—treat small-scale erosion gullies with measures such as gully plugs, brush boxes, energy dissipaters, and water bars, and plant these areas with native vegetation to prevent soil erosion.

proposed project would ensure that impacts from these activities would be less than significant.

This topic will not be discussed in the Environmental Impact Report.

c) The proposed project would not cause a geologic unit or soils to become unstable and would not result in on- or off-site landslide, lateral spreading[62], subsidence[63], liquefaction, or collapse. The proposed project includes some road modifications, tree and vegetation removal, construction of a detention basin, and possibly channel widening and other habitat improvement activities in creek and wetland environments. None of these activities would cause a geologic unit or soil to be come unstable, and none would result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

This topic will not be discussed in the Environmental Impact Report.

d) The proposed project would not create substantial risks to life or property because no buildings would be constructed on expansive soil[64]. The proposed project includes road modifications, tree and vegetation removal, construction of a detention basin, and possibly channel widening and other habitat improvement activities in creek and wetland environments. Because none of these activities would involve the construction of buildings on expansive soil, which could expose people or structures to risks, this significance criterion is not applicable.

This topic will not be discussed in the Environmental Impact Report.

e) The proposed project does not include any work with sewers or septic tanks, and sewers and septic tanks would not likely be installed in the Natural Areas in the future; therefore, this significance criterion is not applicable.

This topic will not be discussed in the Environmental Impact Report.

f) The proposed project would not substantially change the topography or any unique geologic or physical features of the sites. Unique geologic features of the Natural Areas include picturesque rock outcrops and some of the last remaining sand dune systems in San Francisco. Franciscan rock, associated with the tectonic margin at the western edge of California, forms outcrops at Bayview Park, Glen

[62]Lateral spreading—landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement, like water.

[63]Subsidence—a lowering of the land surface in response to subsurface weathering, collapse or slow settlement of underground mines, or the production of subsurface fluids such as ground water or oil.

[64]Expansive soil—soils or rocks characterized by clayey material that shrinks and swells as it dries or becomes wet, respectively. Expansive soils are subject to changes in volume and settlement in response to wetting and drying, often resulting in severe damage to structures.

Canyon Park, O'Shaughnessy Hollow, McLaren Park, Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Duncan-Castro. Rock types that occur in these areas include chert, sandstone interbedded with shale, greenstone, and serpentine, The sand dune systems are most prominent in the Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill group of parks but also occur in Buena Vista Park, Lakeview/Ashton Mini Park and Balboa Natural Area. While the proposed project includes road modifications and some regrading and filling of gullies to minimize erosion and topsoil[65] loss, none of the project activities would substantially change the topography or any unique geologic or physical features of the Natural Areas.

This topic will not be discussed in the Environmental Impact Report.

[65]Topsoil—surface soil usually including the organic layer in which plants have most of their roots and which a farmer turns over in plowing.

E.14 HYDROLOGY AND WATER QUALITY

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
14.	**HYDROLOGY AND WATER QUALITY— Would the project:**					
a)	Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☒	☐	☐	☐	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☒	☐	☐	☐	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐	☐
f)	Otherwise substantially degrade water quality?	☒	☐	☐	☐	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐	☐
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report and does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

Many of the Natural Areas do not have water bodies, and none of the maintenance activities in these Natural Areas are intrusive enough to have significant impacts on hydrology and water quality through stormwater effects. The following Natural Areas currently have or will have water bodies and are the focus of the impact analysis in this section: Bayview Park (proposed detention basin/seasonal wetland), Lake Merced, Pine Lake, India Basin Shoreline Park (San Francisco Bay), Golden Gate Park Oak Woodlands (Stow Lake), McLaren Park, Glen Park and O'Shaughnessy Hollow (Islais Creek), and Sharp Park (Sanchez Creek and Laguna Salada).

The main activities in the proposed project that might impact water quality and flooding include the following:

- Implementing erosion control measures in gullies that have formed due to erosion, including regrading the gullies, emplacing compacted and staked brush, building check dams and small swales, and putting straw bale barriers in place along side the gullies;
- Implementing erosion control measures for streambank protection, including thinning vegetation to improve riparian habitat, replanting streambanks with native and special status species, and placing erosion control blankets, mats, mulch, or wood chips on the streambank while the new vegetation is established;
- Removing nonnative trees and other vegetation and replacing them with native and special status species; and
- Regrading, recontouring, or repaving roads.

The overall scale of the proposed project is relatively small, and while these activities may result in some increased erosion and loss of topsoil in the Natural Areas (see Section E.13, Geology and Soils), it is unlikely that these activities would cause significant impacts on hydrologic processes or water quality in most of the Natural Areas. The one exception to this is at Sharp Park, where the water bodies provide important natural habitat, and management activities may impact the hydrology and water quality of Sanchez Creek and Laguna Salada. Hydrologic and water quality impacts on Sharp Park will be fully analyzed in the Environmental Impact Report. To further lessen impacts of the management activities, the SFRPD would limit large-scale management activities, such as building check dams, regrading, recontouring, repaving roads, or constructing a detention basin to the dry season, which would minimize the potential for erosion and topsoil loss (GR-12b). Smaller scale activities, such as removing weeds and invasive species and replanting, may be conducted year-round but would be conducted at a scale that is appropriate to minimize erosion. Additionally, if such management activities as tree removal were to result in erosion within a Natural Area, best management practices, such as wood mulch,

fiber rolls, and silt fences, would be implemented to minimize erosion and to limit or eliminate associated water quality impacts.

The following sections discuss each of the significance criteria for hydrology and water quality.

a) The proposed project would have no impact with regard to violating water quality standards or waste discharge[66] requirements at most of the Natural Areas but could have a potentially significant impact by violating water quality standards or waste discharge requirements at Sharp Park; impacts on Sharp Park will be fully analyzed in the Environmental Impact Report. The few water bodies that are present in the Natural Areas are described above. The primary project activities that might impact water quality involve removal of invasive, nonnative trees and other vegetation, erosion control work performed in gullies, and stream improvement work. Any management activities that require a Section 404 permit would comply with the BMPs that are made a condition of the permit and BMPs that are proposed as part of the SNRAMP. The primary impact these activities could have on water quality would be to increase the sediment load[67], typically measured as total suspended solids (TSS). While these activities may contribute some sediment to water bodies in or near the Natural Areas, the scale of proposed activities is too small to have a substantial impact on water quality or to cause a violation of a waste discharge requirement, with the exception of Sharp Park, where project activities could have a potentially significant impact.

b) The proposed project would have a less than significant impact on groundwater supplies and groundwater recharge[68] in most of the Natural Areas but could have a potentially significant impact on groundwater supplies and groundwater recharge in Sharp Park; impacts on Sharp Park will be fully analyzed in the Environmental Impact Report. There is no removal of water, either from groundwater or any surface water bodies near the Natural Areas included in the proposed project. The proposed activities may actually increase groundwater recharge in the Natural Areas, by minimizing surface runoff and allowing more of this water to infiltrate into the ground.

c) The proposed project would have a less than significant impact from drainage pattern alterations that result in substantial erosion in most of the Natural Areas, but the project could have a potentially significant impact at Sharp Park. This impact will be fully analyzed in the Environmental Impact Report. There are no

[66]Discharge—the flow of surface water into a stream or canal or the outflow of groundwater from a flowing artesian well, ditch, or spring. Also refers to the discharge of liquid effluent from a facility.

[67]Sediment load—the total quantity of sediment, as measured by dry weight or volume, that moves past a site during a given time.

[68]Groundwater recharge—inflow to aquifers from precipitation, infiltration, through-flow, or other means that replaces groundwater lost through pumping or other forms of discharge. The process of water being added to the saturated zone *or* the volume of water added by this process.

activities included in the proposed project that would significantly alter the existing drainage pattern of the sites, and there is no significant streambed or riverbed alteration proposed in this project, with the exception of the proposed improvements to Sanchez Creek and Laguna Salada. Some of the proposed project activities, such as repairing gullies, recontouring or repaving roads, and implementing streambank erosion control measures, might initially cause some additional erosion or siltation[69] on- or off-site. Additionally, some of the vegetation removal/replacement activities and trail creation may slightly alter drainage patterns at the different Natural Areas and might cause a small increase in the rate of stormwater flow. However, these activities would not cause substantial erosion or siltation and would not significantly alter the existing drainage patterns of the sites. Over time, the proposed project is expected to reduce the amount of erosion and siltation occurring on-site and off-site and may reduce stormwater flows. Reduced erosion, siltation, and stormwater flows would result from increased vegetative cover due to the proposed plantings, erosion control measures implemented for streambank protection and gullies, and regrading and recontouring roads.

d) The proposed project would have a less than significant impact with regard to drainage pattern alterations that result in flooding in most of the Natural Areas, but the project could have a potentially significant impact at Sharp Park. This impact will be fully analyzed in the Environmental Impact Report. There are no activities included in the proposed project which would significantly alter the existing drainage pattern of the sites, or substantially increase runoff such that flooding occurs, with the exception of the proposed improvements to Sanchez Creek and Laguna Salada. Some of the proposed project activities, such as repair of gullies, recontouring or repaving roads and streambank erosion control measures might initially cause some additional surface runoff. However, these activities would not cause substantial additional surface runoff, and would not cause flooding. Over time, the proposed project is expected to reduce the amount of surface runoff by dispersing water more widely over the ground surface, thereby increasing infiltration rates.

e) The proposed project would have a less than significant impact with regard to stormwater drainage systems and polluted runoff in most of the Natural Areas but the project could have a potentially significant impact at Sharp Park. This impact will be fully analyzed in the Environmental Impact Report. The proposed project activities, such as repair of gullies, recontouring or repaving roads, and implementing streambank erosion control measures, are designed to reduce erosion, improve water quality, and improve wildlife habitat. While these activities might initially cause some additional surface runoff, with TSS as the primary pollutant, the quantity of additional runoff caused by the project

[69]Siltation—sediment influx from either erosion or from sediment carried into a water body by inflowing rivers and tributaries.

activities would not cause the capacity of existing or planned stormwater drainage systems to be exceeded, and would not be large enough to be considered a substantial source of polluted water. Additionally, the use of gasoline-powered equipment to perform some of the activities described in the SNRAMP may result in small discharges of gasoline to the ground surface. While this would be a minor source of pollution, as discussed in Section E.15, the SFRPD would implement Mitigation Measure HZ-1, which requires that if any vehicles or equipment required refueling, they would be refueled at least 100 feet from any stream or water body. Mitigation Measure HZ-1 also requires an emergency response plan to be prepared in order to address accidental release of hazardous materials. Implementation of Mitigation Measure HZ-1 would reduce potential impacts from equipments to less than significant.

f) The proposed project would have a less than significant impact with regard to otherwise degrading water quality in most of the Natural Areas, but the project could have a potentially significant impact at Sharp Park. This impact will be fully analyzed in the Environmental Impact Report. As discussed under the prior significance criteria in this section and the Geology and Soils section, the primary pollutant for the project activities would be TSS. Impacts on water quality would be concentrated locally within each Natural Area, and these impacts would be less than significant. The following water bodies might have water quality impacts due to the proposed project:

- Lake Merced;
- Islais Creek (Glen Canyon Park);
- SF Bay (India Basin Shoreline Park);
- Pine Lake;
- Two small creeks in McLaren Park;
- Stow Lake;
- Sanchez Creek (Sharp Park);
- Laguna Salada (Sharp Park); and
- A small irrigation pond, known as Arrowhead Lake, in Sharp Park.

While project activities may increase water flows in some of the creeks and water bodies located in the Natural Areas (Lake Merced, Pine Lake, Islais Creek in Glen Park), these activities would also have a less than significant impact with regard to this criterion.

g) Because there are no houses or other significant structures planned as part of the proposed project, this criterion is not applicable. The only Natural Areas within a 100-year flood hazard area are India Basin, Bayview Park, and Sharp Park, which are discussed under topic h) below.

This topic will not be discussed in the Environmental Impact Report.

h) Development in San Francisco must account for flooding potential. Areas on fill or bay mud can subside to a point at which the sewers do not drain freely during a storm (and sometimes during dry weather), and there can be backups or flooding near streets and sewers. The only Natural Areas that fall within a flood-prone area during storms are India Basin, a small portion of Bayview Park, and Sharp Park, which is outside of San Francisco. However, no structures are proposed in these areas. As required, the sponsor for the proposed project would coordinate a review with SFPUC, to determine if the project would result in ground-level flooding during storms, and would incorporate any required design measures. Therefore, the project would result in less than significant impact on flood flows.

Flood risk assessment and some flood protection projects are conducted by federal agencies, including the Federal Emergency Management Agency (FEMA) and the USACE. The flood management agencies and cities implement the National Flood Insurance Program (NFIP) under the jurisdiction of FEMA and its Flood Insurance Administration. CCSF does not participate in the NFIP, and no flood maps are published for the city. However, FEMA is preparing Flood Insurance Rate Maps (FIRMs) for San Francisco for the first time, and there is a FIRM for Sharp Park, which is outside of San Francisco. FIRMs identify areas that are subject to inundation during a flood having a one percent chance of occurrence in a given year (also known as a base flood or 100-year flood). FEMA refers to the floodplain that is at risk from a flood of this magnitude as a special flood hazard area (SFHA).

Because FEMA has not previously published a FIRM for San Francisco, there are no identified SFHAs within San Francisco's geographic boundaries. Portions of Laguna Salada and Sanchez Creek in Sharp Park are within an SFHA and are designated as Zone A (areas with a one percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage). FEMA has completed the initial phases of a study of San Francisco Bay. On September 21, 2007, FEMA issued a preliminary FIRM of San Francisco for review and comment by CCSF, which has submitted comments on the preliminary FIRM to FEMA. FEMA anticipates publishing a revised preliminary FIRM in 2009, after completing the more detailed analysis that Port of San Francisco and CCSF staff requested in 2007. After reviewing comments and appeals related to the revised preliminary FIRM, FEMA will finalize the FIRM and publish it for flood insurance and floodplain management purposes.

FEMA has tentatively identified SFHAs along San Francisco's shoreline in and along San Francisco Bay, consisting of Zone A (in areas subject to inundation by

tidal surge) and Zone V (areas of coastal flooding subject to wave hazards).[70] On June 10, 2008, the San Francisco Board of Supervisors introduced legislation to enact a floodplain management ordinance to govern construction and substantial improvements in flood prone areas of San Francisco and to authorize the City's participation in NFIP. Specifically, the proposed floodplain management ordinance includes a requirement that any construction or substantial improvement of structures in a designated flood zone must meet the flood damage minimization requirements in the ordinance. The NFIP regulations allow a local jurisdiction to issue variances to its floodplain management ordinance under certain narrow circumstances, without jeopardizing the local jurisdiction's eligibility in the NFIP. However, the particular projects that are granted variances by the local jurisdiction may be deemed ineligible for federally backed flood insurance by FEMA.

Once the Board of Supervisors adopts the Floodplain Management Ordinance, the Department of Public Works will publish flood maps for the City, and applicable City departments and agencies may begin implementing construction and substantial improvements in areas shown on the Interim Floodplain Map.

According to the preliminary map, the only Natural Area within a preliminary SFHA is India Basin, which is within Zone V (an area of coastal flooding subject to wave hazards). However, there are no structures proposed for India Basin. Additionally, the Floodplain Management Ordinance is expected to require, in general, that the first floor of structures in flood zones be constructed above the base flood elevation, or flood-proofed. Similarly, although there are portions of Sharp Park that are within an SFHA, there are no structures planned for these areas. Therefore, the project would result in less than significant impacts from structures within a 100-year flood zone.

This topic will not be discussed in the Environmental Impact Report.

i) The proposed project would have a less than significant impact with regard to exposing people or structures to a significant risk of loss, injury, or death involving flooding. Most of the Natural Areas do not have water bodies and are not located near water bodies. There are no dams near the proposed project sites, and, while India Basin Park has levees that mark the shoreline along San Francisco Bay and proposed activities for Sharp Park include constructing canals to isolate portions of Laguna Salada, none of the proposed management activities (removing nonnative vegetation, implementing erosion control BMPs on the levees, or constructing the canals) would cause failure of levees or expose people or structures to flooding. Because of the distance to structures and residences and the likely force of flow from such a release, the detention basin proposed for

[70] City and County of San Francisco, Office of the City Administrator, National Flood Insurance Program Flood Sheet, www.sfgov.org/site/uploadedfiles/risk_management/factsheet.pdf.

Bayview Park has a small enough capacity (65,000 gallons) that even a failure of the basin and release of the water would have a less than significant impact with regard to this criterion.

The bulk of the proposed activities involve removal of invasive, nonnative trees and other vegetation, with subsequent replacement of vegetation with native and special status species. Vegetation removal will be short term, and while removal of the vegetation might increase water flows in some of the creeks and water bodies in the Natural Areas (Lake Merced, Pine Lake, and Islais Creek in Glen Park), these activities would also have a less than significant impact with regard to this criterion. See additional discussion of flooding under criterion d).

This topic will not be discussed in the Environmental Impact Report.

j) The proposed project would have a less than significant impact with regard to exposing people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow. The City of San Francisco General Plan Community Safety Elements describes tsunamis as follows:

> Tsunamis are large waves in the ocean generated by earthquakes, coastal or submarine landslides, or volcanoes. Damaging tsunamis are not common on the California coast. Most California tsunamis are associated with distant earthquakes (most likely those in Alaska or South America), not with local earthquakes. Devastating tsunamis have not occurred in historic times in the Bay Area. Because of the lack of reliable information about the kind of tsunami run-ups that have occurred in the prehistoric past, there is considerable uncertainty over the extent of tsunami run-up that could occur.

India Basin is the only Natural Area that is considered to be within a tsunami hazard zone in San Francisco (CCSF 1997), but the level of risk is expected to be minor. Sharp Park is within a tsunami hazard zone, and the level of risk in that area is also expected to be minor. While the management activities included in the proposed project may result in increased use of the Natural Areas, none of the proposed project activities would increase the likelihood that people or structures would be exposed to a significant risk of loss, injury, or death due to inundation by seiche, tsunami, or mudflow. Therefore, the proposed project has a less than significant impact with regard to this criterion.

This topic will not be discussed in the Environmental Impact Report.

E.15 HAZARDS AND HAZARDOUS MATERIALS

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15.	**HAZARDS AND HAZARDOUS MATERIALS Would the project:**					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h)	Expose people or structures to a significant risk of loss, injury or death involving fires?	☐	☐	☐	☒	☐

The cleanup and remediation activities for the former rifle range at Sharp Park that are referenced in Recommendation SP-12a are part of a separate process lead by the SFRPD Capital Division; therefore, those activities are not addressed as part of the SNARMP in this Initial Study.

a) Project implementation would require the use of motor vehicles and motorized equipment for the management activities such as tree removal, weeding, erosion control, and trail construction. Additionally, pesticides would be used under the integrated pest management plan. In addition to pesticides,

hazardous materials[71] used during project implementation include fuel, oil, solvents, and lubricants used for equipment maintenance. Hazardous materials would be used in marginal quantities and would be stored off-site. Any activities involving hazardous materials and hazardous waste[72] would be conducted in accordance with strict health and safety standards mandated by the Occupational Safety and Health Administration (OSHA) and included in the integrated pest management plan, reducing the potential hazards to workers, the public, and the environment from the use, transport, and disposal of those materials and wastes. The potential release of these substances to the environment and nearby water bodies is considered a significant impact. The SFRPD would implement Mitigation Measure M-HZ-1, which requires that equipment be refueled at least 100 feet from a water body. It also requires preparation of an emergency response plan for accidental release of hazardous materials, to reduce potential impacts from the transportation, disposal, or release of hazardous materials to less than significant.

This topic will not be discussed in the Environmental Impact Report.

b) Hazardous materials would be used as part of the project implementation and integrated pest management plan, and there would be a potential for incidental spill or release of hazardous materials. Considering the scale of the management activities, incidental spills or releases of hazardous materials would be in minor quantities. However, the potential release of these substances to the environment and nearby water bodies is considered a significant impact. The SFRPD would implement Mitigation Measure M-HZ-1 to reduce potential impacts from the incidental spills of hazardous materials to less than significant.

This topic will not be discussed in the Environmental Impact Report.

c) There are 45 schools within one-quarter mile of the Natural Areas. Project activities would involve the handling of hazardous materials, such as petroleum products, pesticides, and fertilizers. Although hazardous materials would be used in small quantities and the impact from incidental release would be minor, this would be further reduced with the implementation of the Mitigation Measure M-HZ-1. Potential air pollutant emissions from the proposed project are

[71]Hazardous materials—defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment.

[72]Hazardous waste—any material that is relinquished, recycled, or inherently waste-like and falls under Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damages materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including hazardous wastes, as defined by the Resource Conservation and Recovery Act (RCRA), non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

addressed in Section E.7, Air Quality. To reduce potential impacts from air pollution emissions on sensitive receptors such as schools, the SFRPD would comply, as applicable, with the San Francisco Construction Dust Control Ordinance and Mitigation Measures M-AQ-1 and M-AQ-2, as described in Section E.7. Because of the minimal use of hazardous materials, potential impacts on schools from hazardous materials would be less than significant.

This topic will not be discussed in the Environmental Impact Report.

d) The project is not within any sites on the hazardous materials sites list compiled pursuant to State of California Government Code Section 65962.5 (Cortese List), nor is it within one-quarter mile of such a site (DTSC 2008). Therefore, project implementation would not create a hazard to the public or the environment.

This topic will not be discussed in the Environmental Impact Report.

e, f) Because the airport closest to the project sites, San Francisco International Airport, is approximately eight miles south of San Francisco and six miles east of Pacifica, these criteria do not apply.

These topics will not be discussed in the Environmental Impact Report.

g) Because the project implementation would be inside the boundaries of the Natural Areas, it would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the project would have no impacts on emergency plans.

This topic will not be discussed in the Environmental Impact Report.

h) Most of the Natural Areas are in fire hazard areas that are classified as Urban Unzoned. Glen Canyon Park, Mount Davidson, Bayview Park, and Lake Merced are in areas with a fire hazard severity rating of moderate. Management of the Natural Areas would include removing trees, including those that are diseased and dying, thereby reducing easily combustible fuel loads. Also implementing recommendation GR-13a should reduce the presence of vegetation with high fire hazard ratings, such as dense and aging French broom and eucalyptus. Tree removal would reduce the amount of available fuel for fires. More importantly, timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread. Additionally, the management activities would result in healthier trees that are less susceptible to stress from drought; healthy trees are less likely to catch fire than dying trees with dead limbs and needles. However, chain saws and other motorized equipment would increase the risk of fire. Natural Areas Program gardeners would carry fire extinguishers in their trucks, and would use appropriate fire prevention and suppression measures for larger scale tree removal. The SFRPD would continue to hold regular meetings with the San Francisco Fire Department and would coordinate management activities,

such as tree removal, with that department. Therefore, implementing the management activities at the Natural Areas would have less than significant impacts on the Natural Areas.

This topic will not be discussed in the Environmental Impact Report.

E.16 MINERAL AND ENERGY RESOURCES

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16.	**MINERAL AND ENERGY RESOURCES— Would the project:**					
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☐
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐
c)	Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

a, b) All land in San Francisco, including the project site, is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of 1975 (CDMG undated). This designation indicates that there is inadequate information available for assignment to any other MRZ, and thus the Natural Areas are not designated areas of significant mineral deposits. Further, implementation of the project would not result in the loss of known mineral resources or affect an important mineral resource recovery site.

These topics will not be discussed in the Environmental Impact Report.

c) During the project implementation phase, fuel (diesel and gasoline) would be consumed by motorized equipment, such as two-stroke engines, and by trucks. Use of these fuels by the project work crews are expected to be minor. Improved Natural Areas may also encourage more local, nonmotorized forms of recreation, potentially resulting in minor reductions in motorized vehicle miles traveled, thus reducing fuel consumption. Use of energy and fuels by the proposed project is expected to be less than significant. Additionally, implementing Improvement Measure I-ME-1 to increase energy efficiency and Mitigation Measure M-AQ-2 to limit idling of diesel-fueled vehicles would lessen this impact.

This topic will not be discussed in the Environmental Impact Report.

E.17 AGRICULTURE RESOURCES

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17. AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. **Would the project:**					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland of Statewide Importance, to non-agricultural use?	☐	☐	☐	☐	☒

a – c) The project sites are located in the CCSF and Pacifica, which are urban areas and therefore not agricultural in nature. The California Department of Conservation does not designate any land within San Francisco or Pacifica as Williamson Act properties or important farmland.[73] The proposed project would not convert farmland to a nonagricultural use, would not conflict with agricultural zoning or Williamson Act contracts, and would not cause other changes that would lead to the conversion of Farmlands of Statewide Importance[74] to nonagricultural use. Therefore, these criteria are not applicable to the proposed project.

These topics will not be discussed in the Environmental Impact Report.

[73]San Francisco is identified as "Urban and Built-Up Land" on the California Department of Conservation *Important Farmland of California Map,* 2004 (California Department of Conservation 2004). This map is available at the Department of Conservation ftp site (ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/).

Pacifica is identified as "Built-Up Land or Incorporated City Land" on the map of San Mateo County Williamson Act 2006. This map is available at the Department of Conservation ftp site (ftp://ftp.consrv.ca.gov/pub/dlrp/WA/Map%20and%20PDF/San%20Mateo/san_mateo_2006.pdf).

[74]Farmland of Statewide Importance—land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production.

E.18 MANDATORY FINDINGS OF SIGNIFICANCE

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
18.	**MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:**					
a)	Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐	☐
b)	Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐	☐
c)	Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐

In this Initial Study, the Potentially Significant Impact designation is being used solely to identify those topics that will be addressed in detail in the Environmental Impact Report for this project; it does not reflect the findings of any preliminary impact analysis. Those topics are being included in the Environmental Impact Report because there is not sufficient information available at this time on the potentially affected resources or site conditions.

a) In the short-term, the proposed project would result in temporary disturbance of upland and aquatic habitat, potentially degrading the quality of that habitat. The proposed project may also affect archaeological and paleontological resources within the Natural Areas. The potential impacts on this topic will be analyzed in the Environmental Impact Report.

b) Cumulative impacts will be analyzed in the Environmental Impact Report.

c) The proposed project's impacts on human beings are primarily related to noise, air quality, and hazards and hazardous materials. The potential impacts on this topic will be analyzed in the Environmental Impact Report.

F. MITIGATION MEASURES AND IMPROVEMENT MEASURES

This section identifies mitigation measures to reduce significant impacts to less than significant levels and improvement measures to further reduce less than significant impacts.

F.1 MITIGATION MEASURES

The SFRPD would implement the following measures to reduce significant impacts to less than significant levels.

M-CP-1

The SFRPD would conduct an architectural field survey of the Natural Areas using a qualified historian or architectural historian. California Department of Parks and Recreation 523A forms would be prepared for any historical architectural resources within the APE that have not been surveyed within five years. Completed 523A forms would be submitted to the CCSF Historic Preservation Division for review and to the California Office of Historic Preservation for inclusion in the California Historic Resource Information Database. Findings of the survey would be reported in a professional survey document that meets the Secretary of the Interior's *Standards for Historical Documentation*. The SFRPD would maintain close coordination with the CCSF Historic Preservation Division staff to ensure all historical architectural resource concerns were addressed. MEA and the SFRPD would adhere to recommendations made in the report, in consultation with the CCSF Historic Preservation Division staff. Avoiding historic architectural resources is the preferred option and may require modifying the proposed activities, for example, to avoid planting new vegetation species that are dissimilar to historic landscapes.

M-AQ-1

The BAAQMD has determined that implementation of the following control measures would mitigate PM_{10} impacts to a less than significant level. Depending on the level of activities and as applicable, the SFRPD measures to reduce PM_{10} impacts at Sharp Park may include the following:

BAAQMD Basic Control Measures

- Soil, sand, or loose materials transported on the trucks would either be covered or at least two feet of freeboard[75] would be maintained.
- All unpaved access roads, parking areas, and staging areas at the management areas would either be paved, watered three times daily, or nontoxic soil stabilizers would be applied.
- If visible soil material is carried onto adjacent public streets, adjacent streets would be swept daily (with water sweepers).

[75]Freeboard—the space between the top of the transported materials and the top of the truck that is transporting said materials.

BAAQMD Enhanced Control Measures (also applies to sites over four acres)

- As feasible, traffic speeds on unpaved roads would be limited to 15 miles per hour.
- Disturbed areas would be replanted as quickly as possible.

M-AQ-2

To limit exhaust emissions, the SFRPD would implement the following BAAQMD exhaust controls, where applicable:

- Limit the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) to five minutes at any location.
- Use low-sulfur fuels in all stationary and mobile equipment.

M-HZ-1

To reduce impacts from accidental release of hazardous material, the SFRPD would prepare an emergency response plan for each capital project before the project began. The plan would include emergency procedures for hazardous materials releases. These procedures would include requirements for the necessary personal protective equipment, spill containment procedures, and worker training to respond to accidental spills and releases. The plan would also require equipment to be refueled at least 100 feet from any streams or water bodies. A general emergency response plan also would be prepared to address daily management activities. During the project, all hazardous materials, including any hazardous wastes, would be used, stored, transported, and disposed of in accordance with local, state, and federal hazardous materials regulations.

F.2 IMPROVEMENT MEASURES

SFRPD may implement the following measures to further reduce less than significant impacts.

I-ME-1

Consistent with the 2005 California Energy Action Plan II priorities for reducing energy use, the SFRPD would ensure that energy-efficient equipment is used to the extent practicable during project implementation.

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H. GLOSSARY

A zone—A FEMA Flood Zone designation for high risk zones, with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones on the FEMA Flood Insurance Rate Map.

Adaptive management—A flexible, learning-based approach to managing complex ecosystems.

Ambient air—Outside air; any portion of the atmosphere not confined by walls and a roof.

Ambient noise—The background noise in an area or environment, being a composite of sounds from many sources near and far.

Anaerobic process—A process which only occurs in the absence of molecular oxygen.

Architectural resource—The preferred term to refer to a building or structure.

Attainment—A designation used when an area meets an air quality standard.

Basal area—A measure, typically in square feet per acre, of the area covered by trees within a given urban forest. Basal area is used as an index of tree production.

Carbon sequestration—The removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests, and soils) through physical or biological processes, such as photosynthesis.

CEQA area of potential effects (C-APE)—The geographic area or areas within which the proposed project may directly indirectly cause alterations in the character or use of historical resources, if any such properties exist. The C-APE is influenced by the scale and nature of a proposed project and may be different for different kinds of effects caused by the project. The C-APE is likely to be the location physically inspected for cultural resources.

Cherry picker—A maneuverable vertical boom with an open bucket or cage at the end from which a worker can perform aerial work such as pruning trees or repairing electrical lines.

Chippage—Flakes resulting from the process of human modification to lithic materials.

Cultural resource—A generic term that may be used to refer to architectural resources, archaeological resources, and/or traditional cultural properties.

Diameter at breast height (dbh)—A standard means of tree measurement, with the diameter of the trunk measured at breast height, defined as 4.5 feet above the forest floor on the uphill side of the tree.

Discharge—The flow of surface water into a stream or canal or the outflow of groundwater from a flowing artesian well, ditch, or spring. Also refers to the discharge of liquid effluent from a facility.

Ecological restoration—The process of repairing damage caused by humans to natural systems.

Ecotone—A transitional zone between two vegetation communities that contains the characteristic species of each community.

Escape habitat—Natural or man-made features that allow animals to avoid predators or other threats.

Expansive soils—Soils or rocks characterized by clayey material that shrinks and swells as it dries or becomes wet, respectively. Expansive soils are subject to changes in volume and settlement in response to wetting and drying, often resulting in severe damage to structures.

Extirpate—To remove or destroy totally.

Farmlands of Significance

Prime Farmland is land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed.

Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production.

Unique Farmland does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has been used for the production of specific high-economic-value crops.

Farmland of Local Importance is either currently producing crops or has the capability of production but does not meet the criteria of the categories above.

Grazing Land is land on which the vegetation is suited to the grazing of livestock.

Floodplain—Land adjacent to a watercourse over which water flows in times of flood. The limits of the floodplain are defined by the peak level of a 1-in-100-year return period flood.

Fossil fuel—A general term for subsurface combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the Earth's crust over hundreds of millions of years.

Freeboard—The space between the top of the transported materials and the top of the truck that is transporting the materials.

Fugitive dust—Fugitive emissions generally refer to those emissions that are released to the atmosphere by some means other than through a stack or tailpipe.

Greenhouse gas—A gas which traps solar radiation, such as carbon dioxide.

Ground-Borne vibration—The noise that is manifested inside a building or structure as a result of vibrations produced by a source located outside the building (and its foundations) and transmitted as vibration through the ground between the source and the building.

Groundwater recharge—Inflow to aquifers from precipitation, infiltration, through-flow, or other means that replaces groundwater lost through pumping or other forms of discharge. The process of water being added to the saturated zone *or* the volume of water added by this process.

Hazardous materials—Defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment.

Hazardous waste—Any material that is relinquished, recycled, or inherently waste-like and falls under Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damages materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including hazardous wastes, as defined by the Resource Conservation and Recovery Act (RCRA), non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

Herbaceous—Having the texture, color, and other characteristics of an ordinary foliage leaf. Herbaceous vegetation is not woody.

Historic landscape—Landscapes or areas that are either 1) associated with an event or series of events of historical note; or 2) represent the visual perception of a particular period of civilization, a way of life, or patterns of living.

Historic resource—An ambiguous term that is sometimes used to refer to architectural resources or archaeological resources of the historic era.

Historical resource—Any property that is either listed in or eligible for listing in the California Register of Historical Resources.

Hydrology—The science that deals with the waters above and below land surfaces; their occurrence, circulation, and distribution, both in time and space; their biological, chemical, and physical properties; and their reaction with their environment, including their relation to living beings.

Integrated pest management—The use of multiple treatment methods to control undesirable weeds and other pests.

Integrity (archaeological or architectural)—A resource's "intactness" and the extent to which it resembles its original form.

Lateral Spreading—landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement, like water.

Liquefaction—The process of changing soil and unconsolidated sediments into water mixture immediately following an earthquake; often results in foundation failure, with sliding of the ground under buildings and structures.

Neotropical migrant—A bird that breeds in North America and spends the nonbreeding season in warmer climates, often in Central and South America.

Paleontological resource—Fossilized remains or traces of animals, plants, and invertebrates, including their imprints, from a previous geological period.

Particulate matter—Tiny solid or liquid particles, generally soot and aerosols.

Passive recreation—Recreational activities that occur in a natural setting and that require minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

Pathogen—A disease-causing agent, especially a living microorganism such as a bacterium or fungus.

Riparian—land next to a natural watercourse such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank.

Rookery—Colony or aggregation of animals of the same species.

Roosting habitat—Natural or man-made features on which birds perch to rest or sleep.

Sacred site—Locality of traditional significance or importance to a Native American community.

Scenic highway—A highway from which a high quality scenic natural landscape can be seen by travelers and with little intrusion by development.

Scenic resource—The visible physical features on a landscape.

Scenic vista—A visually appealing distant view.

Scrub—Low trees or shrubs collectively.

Sediment Load—The total quantity of sediment, as measured by dry weight or volume, that moves past a site during a given time.

Sedimentation—The deposition of material suspended in a stream system, whether in suspension (suspended load) or on the bottom (bedload).

Sensitive receptor—People or institutions with people that are particularly susceptible to illness from environmental pollution, such as the elderly, very young children, people already weakened by illness (e.g., asthmatics), and persons engaged in strenuous exercise.

Sensitive species—Species that are listed on the California Native Plant Society plant list or *Inventory of Rare and Endangered Vascular Plants*.

Siltation—Sediment influx from either erosion or from sediment carried into a water body by inflowing rivers and tributaries.

Social trail—An undesignated, user-developed pathway that has developed through use of a Natural Area.

Special status species—Species that are accorded special status because of their recognized rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection in federal or state endangered species legislation. Others have been designated sensitive species or species of special concern on the basis of adopted policies of federal, state, or local resource agencies. These species are referred to collectively as special-status species.

Subsidence—A lowering of the land surface in response to subsurface weathering, collapse or slow settlement of underground mines, or the production of subsurface fluids such as ground water or oil.

Suspended particulates (PM_{10} and $PM_{2.5}$)—Particulate matter is a class of air pollutants that consists of solid and liquid airborne particles in an extremely small size range. Particulate matter is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter.

Topsoil—Surface soil usually including the organic layer in which plants have most of their roots and which a farmer turns over in plowing.

Understory—The shrubs and plants growing beneath the main canopy of a forest or stand of trees.

Unique archaeological resource—An archaeological property that meets the criteria listed in Section 21083.2 of the California Public Resources Code. An archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge there is a high probability that it meets one of a set of criteria.

Urban forest—A significant stand of nonindigenous trees.

V zones—A FEMA Flood Zone designation for high risk zones that consist of coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones on the FEMA Flood Insurance Rate Map.

Viewshed—The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

Wetland—A zone periodically or continuously submerged or having high soil moisture, which has aquatic or riparian vegetation components and is maintained by water supplies significantly in excess of those otherwise available through local precipitation.

Williamson Act—Also known as the Land Conservation Act of 1965, this act provides for lowered property taxes for lands maintained in agricultural and certain open space uses. Under a Williamson Act contract, generally the landowner agrees to limit the use of the land to agriculture and compatible uses for a period of at least 10 years. In return, the land is taxed at a rate based on the agricultural production of the land, rather than its real estate market value.

Windthrow—The effects of wind on a stand of trees.

Wind-toughened edge trees—Trees in a stand that have become tough or resistant to the wind.

I. DETERMINATION

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Bill Wycko
Environmental Review Officer
for
John Rahaim
Director of Planning

DATE April 2, 2009

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SCOPING REPORT

for

San Francisco Natural Areas Management Plan
Environmental Analysis Services

Contract No. #4043-06/07

November 2009

Prepared for:

San Francisco Recreation and Park Department

And

San Francisco Planning Department, Major Environmental Analysis

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SECTION 1
INTRODUCTION AND SCOPING OVERVIEW

The San Francisco Planning Department is the lead agency for implementing California Environmental Quality Act (CEQA) requirements for all projects sponsored by the City and County of San Francisco or conducted within San Francisco. The San Francisco Planning Department is preparing an Environmental Impact Report (EIR) to evaluate the environmental and socioeconomic effects of implementing the San Francisco Recreation and Park Department's (SFRPD) Significant Natural Resource Areas Management Plan (SNRAMP).

As part of the EIR process, the San Francisco Planning Department undertook a scoping process from April 22 to May 26, 2009. This report includes a description of the scoping process and a summary of the public and regulatory agencies' comments received during scoping.

1.1 PROJECT DESCRIPTION AND LOCATION

Fragments of unique plant and animal habitats within the City and County of San Francisco have been preserved within parks known as Significant Natural Resource Areas (hereon referred to as Natural Areas). In the late 1990s, SFRPD developed the Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance remnant Natural Areas and to promote environmental stewardship of them.

Over the course of several years, SFRPD developed the SNRAMP. The draft final plan, published in February 2006, contains detailed information on the biology, geology, and trails within 31 Natural Areas. Thirty of those Natural Areas are in San Francisco, and one is in Pacifica (Sharp Park). The plan is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

1.2 NOTICE OF PREPARATION

On April 22, 2009, the San Francisco Planning Department issued a Notice of Preparation (NOP) (see Appendix A) and distributed an Initial Study (IS) to provide more detailed information on the proposed project and the issues to be considered in the EIR. Forty-five copies of the NOP/IS were sent to interested parties. An Environmental Review Notice (see Appendix A) associated with the NOP was published in the *San Francisco Examiner* and *Pacifica Tribune* on April 22, 2009. The NOP

Notice of Availability (NOP NOA) (see Appendix A) was sent to over 2,400 interested parties. The California State Clearinghouse assigned the project the number 2009042102.

1.3 SCOPING MEETINGS

The San Francisco Planning Department held a public scoping meeting on May 12 and May 14, 2009, to solicit input from the public on the appropriate scope of the EIR, mitigation measures, and potential alternatives to the SNRAMP. The May 12 meeting was held in the County Fair Building Auditorium in Golden Gate Park, San Francisco, and was attended by 33 individuals. On May 14, the meeting was held at the Pedro Point Firehouse in Pacifica and was attended by 54 individuals.

The meetings included a presentation on the proposed project and the environmental review process, followed by a formal public comment period. Copies of the meeting materials are presented in Appendix B; transcripts of the meetings are provided in Appendix C.

1.4 WRITTEN COMMENTS

Throughout the scoping process, 45 sets of scoping comments were received. These comments are summarized in Section 2 and are reproduced in Appendix D.

SECTION 2
SCOPING COMMENTS

This section briefly summarizes the received comments and includes recommendations for addressing the comments in the EIR.

2.1 SHARP PARK GOLF COURSE

Comments

- The golf course is not harming the frogs. The number of frogs should have increased as result of ceasing pumping of ponded water and ceasing application of pesticides a few years back. (George Ambrosio)
- Will the EIR be used to satisfy CEQA review requirements for the Sharp Park Golf Course plan? (San Francisco Public Golf Alliance)
- Will the Sharp Park Golf Course plan be subject to an EIR under CEQA? If so, when? (San Francisco Public Golf Alliance)
- What permits and permitting agencies would be involved in a change of use at Sharp Park Golf Course? (San Francisco Public Golf Alliance)
- To what extent at Laguna Salada, Horse Stable Pond, and their associated wetlands created, recharged, or enhanced by irrigation at Sharp Park Golf Course? (San Francisco Public Golf Alliance)
- Over the past five years, what is the monthly volume of irrigation water used at Sharp Park Golf Course (in gallons)? (San Francisco Public Golf Alliance)
- Over the past five years, what is the monthly volume of Sharp Park Golf Course irrigation water that enters the ponds and their associated wetlands (in gallons)? (San Francisco Public Golf Alliance)
- How would complete cessation of irrigation at Sharp Park Golf Course affect the habitat of the California red-legged frog? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)

- How would reduced irrigation at Sharp Park Golf Course affect the habitat of the California red-legged frog? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- How would complete cessation of irrigation at Sharp Park Golf Course affect the habitat of the San Francisco garter snake? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- How would reduced irrigation at Sharp Park Golf Course affect the habitat of the San Francisco garter snake? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- How would complete cessation of irrigation at Sharp Park Golf Course affect the salinity of Laguna Salada, Horse Stable Pond, and their associated wetlands? (San Francisco Public Golf Alliance)
- How would reduced irrigation at Sharp Park Golf Course affect salinity of Laguna Salada, Horse Stable Pond, and their associated wetlands? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- What effect does groundwater generated by Sharp Park Golf Course irrigation have on the hydrostatic pressure affecting the seawall? How would complete cessation of irrigation at Sharp Park Golf Course affect the strength and/or integrity of the seawall? How would reduced irrigation at Sharp Park Golf Course affect the strength and/or integrity of the seawall? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- How is the habitat for the California red-legged frog affected by the continued existence of the seawall? (San Francisco Public Golf Alliance)
- What is the current structural condition of the seawall? Its useful life expectancy? At what point will it need to be repaired or replaced to protect the freshwater habitat of the California red-legged frog? (San Francisco Public Golf Alliance)
- Would replacing the Sharp Park Golf Course fairways with freshwater ponds increase flood dangers to residential neighborhoods north and south of the golf course in the event of storm surges that overtop the seawall? (San Francisco Public Golf Alliance)
- Would replacing the Sharp Park Golf Course fairways with freshwater ponds increase the breeding habitat for mosquitoes? If so, what measures would be necessary to protect residential neighborhoods north and south of the golf course from West Nile Virus? (San Francisco Public Golf Alliance)
- As of May 2009, what aerial spraying is permitted by law for control of mosquito larvae and adults? What aerial spraying is conducted at Sharp Park for control of mosquito larvae and adults, including timing and seasonality? Describe any other mosquito control measures used at Sharp Park. What is the effect of mosquito control measures on the California red-legged frog population? What is the effect of mosquito control measures on residential neighbors of Sharp Park? (San Francisco Public Golf Alliance)
- Would closure and regrading of the Sharp Park Golf Course to create new freshwater ponds and wetlands affect habitat for the California red-legged frog or San Francisco garter snake? Would these actions require take permits from the US Fish and Wildlife Service and the California

Department of Fish and Game? How likely is it that these agencies would grant such permits? (San Francisco Public Golf Alliance)

- What would be the source of water for the proposed freshwater ponds and wetlands at Sharp Park? (San Francisco Public Golf Alliance)
- If the Sharp Park Golf Course is closed or reduced in size, would San Francisco still purchase water from Pacifica's Calera Creek Water Recycling Plant? (San Francisco Public Golf Alliance)
- The Sharp Park Golf Course should be recognized as a significant historic architectural and cultural resource in the EIR. (San Francisco Public Golf Alliance)
- How would closure of the Sharp Park Golf Course affect its recreational users? (San Francisco Public Golf Alliance)
- If anything less than the full 18-hole golf course at Sharp Park is retained, the economic and environmental impact on my family will be great. We'll need to ferry Andrew to HMB or elsewhere to play his golf. Others will be similarly impacted. Please don't take away my golf course. (Laurie Frater)
- So as far as Sharp Park goes, I think it just needs to be dredged, cleaned out, let those frogs and snakes do their thing, allow the golfers to go around it as it has for last 70 years. (Reiner Binsfeld)
- I see no reason why we just can't coexist down at Sharp Park. (Reiner Binsfeld)
- The Sharp Park Golf Course can be retained and preserved while the environment is simultaneously enhanced. (San Francisco Public Golf Alliance)
- As Sharp Park's owner, San Francisco has a stewardship obligation to the golf course, an international masterwork. (San Francisco Public Golf Alliance)
- Maintain all of the remaining Alister McKenzie golf holes at Sharp Park. (San Francisco Public Golf Alliance)
- The easiest solutions can also be the cheapest: dredge and direct water if you're trying to save a species. Keep the golf course intact, keep the history intact. And do minimal amount of impact to the environment. (Steve Rush)
- Planning commission should look into thinning the reeds that are choking the lagoon, which would give the water more area and prevent overflowing in the golf course. This would protect the flow and keep the course playable during the wet season and enhance revenue actually for the course. (George Ambrosio)
- Is there any consideration if SFRPD is not interested in maintaining an 18-hole course in Pacifica, would they consider selling it or doing a long-term lease to the City of Pacifica so we could have some economics in the town of Pacifica? (Chuck Egiziano)
- Consider the possible partnerships with the City of Pacifica on the golf course. (Mike Pacelli)
- Keep the Golden Gate National Recreation Area out of Sharp Park. (Mitch Monroe)
- Alternatives should include leaving, modifying, or removing the Sharp Park golf course to best ensure recovery of the San Francisco garter snake and California red-legged frog. (California Native Plant Society, Yerba Buena Chapter)

- We need the maximum alternative in Sharp Park, and I think that would be a no-golf alternative. (California Native Plant Society, Yerba Buena Chapter)
- Since it was made known that public overflow of water off the course was detrimental to the frogs and the—the pesticides we're using, this has been stopped over the last two or three years. I'm sure the frogs are increasing. If they're not, it's not because of the golf course. (George Ambrosio)
- The land at Sharp Park was donated San Francisco for recreational purposes by the Murphy family and others, and I think it should continue that way. (Jack Rauch)
- Consider the impact of the decrease of golfers visiting West Sharp Park and the area, and the potential economic impact to the City of Pacifica and the impact of a loss of a public golf course serving northern San Mateo County's recreation needs as well that of San Francisco's? (Rabine Runneals)
- Consider the economic impacts of both golf and other recreational uses into the City of Pacifica. (Mike Pacelli)
- Look at how much the golf course contributes to Pacifica's economy. (Steve Sinai)
- From the socioeconomic standpoint, I think it is important that Sharp Park be kept as it is for the general community. (Allan Eisenberg)
- Would replacing the Sharp Park Golf Course fairways with freshwater ponds increase the breeding habitat for mosquitoes? If so, what measures would be necessary to protect residential neighborhoods north and south of the golf course from West Nile Virus? (San Francisco Public Golf Alliance)
- Sharp Park is designed by one of the most famous golf course architects in the world, Alister MacKenzie, one of only four architects in the Golf Hall of Fame. Would be tragic and criminal to destroy one of San Francisco's finest athletic recreation venues unnecessarily. (George Ambrosio)
- Consider the impact of the loss of a golf course, which is a historical attraction to the City of Pacifica also, and how that would affect and tie into the City of Pacifica's current efforts to take the Palmetto Avenue business district and emphasize upon the historic characteristics of that neighborhood and develop that into Pacifica's historical district, which is a current plan being developed in Pacifica here. And all of the historical references that Pacifica is attempting to draw upon for the work done in this neighborhood is all linked to the golf course and everything that the City had in that neighborhood, which is the original downtown, prior to the City's incorporation. (Rabine Runneals)
- How would closure of the Sharp Park Golf Course affect its recreational users? (San Francisco Public Golf Alliance)
- There are nine golf courses in San Francisco; there is one in Pacifica. And this is their community venue. It's the only place you can go and have a banquet just about in the entire city. Yes, you need to work to restore habitat. I believe that. Any solution to this that doesn't include golf, lacks vision. (Tony Belway)
- Keep golf in Sharp Park. There needs to be a lot of different uses in that park, more than just native plants. (Nancy Stafford)

- The deed transferring Sharp Park to San Francisco will be voided if the golf course is destroyed to create wetlands habitat. Any court reviewing those documents would find the proposed property change in violation of the transfer documents, and therefore Sharp Park would revert to the State of California. (Suzanne Valente)
- Recommend that measures around the most environmentally sensitive Sharp Park Golf Course areas (holes 12-15) consider creating native plant/no-golf areas surrounding "island" greens, relocating portions of the holes, incorporating raised causeways, restricting golf cart use, raising fairways, and temporarily closing fairways. (San Francisco Public Golf Alliance)

EIR Recommendations

Because redesigning or eliminating the Sharp Park Golf Course is a separate proposal being studied by SFRPD, it will not be included or evaluated as part of the proposed SNRAMP project analyzed in the EIR. Should changes to the Sharp Park Golf Course be proposed, they would undergo a separate regulatory review, including CEQA environmental review.

2.2 GENERAL PROJECT

Comments

- New areas should not be opened up for trail use; existing trails should be improved or closed. (Nature in the City)
- The plan should be revised to change the beginning of the nesting season from April 1 to February 15 (through July 15). The plan's practices for nesting birds should be applied to the February 15 to July 15 nesting season. Vegetation removal between January 1 and February 15 or July 15 to September 1 should be preceded by surveys for nests and nesting activity. (Golden Gate Audubon Society)
- Regarding GR-6b and c, nest boxes for cavity-nesting birds may be appropriate for woodlands with large trees, but would not be for other Natural Areas. Nest boxes should not be used to enhance nesting for nonnative species. (Golden Gate Audubon Society)
- Tree removal as described under GR-15c is not consistent with the leaving of snags and dead branches under GR-6a. This should be resolved and alternatives to guide the treatment of snags and standing dead trees should be addressed in the EIR. (Golden Gate Audubon Society)
- Regarding A5.15, India Basin Shoreline supports a large and multispecies collection of waterfowl from fall through spring. (Golden Gate Audubon Society)
- Regarding A5.18, Great Blue Herons should also be mentioned in this section. (Golden Gate Audubon Society)
- Regarding PL-2a, this measure should apply to all Natural Areas and include great horned owl, Western screech owl, and barn owl nests. (Golden Gate Audubon Society)
- The Natural Areas Management Plan and the EIR should acknowledge and be consistent with all approved San Francisco resolutions related to this project, including Resolution Number 0608-012 (and the two amendments addressing MA-3 areas and feral cats) and Resolution Number 0608-013. (Nancy Wuerfel)

- Request adding to the SNRAMP the recommendations approved by the Recreation and Park Commission on August 21, 2006, to Resolution Number 0608-012, which states "that where appropriate in the plan that feral cat relocation shall be implemented only upon a determination by the Commission that other methods of population reduction failed to adequately reduce cat populations in natural areas." (Society for the Prevention of Cruelty to Animals San Francisco)
- MA-3 areas should be treated in a manner similar to MA-2 areas. (Marnie Dunsmore)
- Discard the MA-1, MA-2, MA-3 approach to the SNRAMP. (Nature in the City)
- Our natural areas should be managed in a coherent and consistent plan for wildlife, rare plants, and ecosystem processes. The areas are already fragmented between different agencies or institutions. Further fragmentation by designing portions MA-1, MA-2, and MA-3, and allowing fewer restrictions on MA-3 will only speed up the destruction of what's left. (Nancy Rosenthal)
- If the Natural Areas Program does not embrace our forests, then cut them loose. Take them out of the natural areas. Let them be guided by the Urban Forestry Department or a division within SFRPD. (Nancy Wuerfel)
- MA-3 areas should be managed by the Natural Areas Program, not by the Bureau of Urban Forests. (Marnie Dunsmore)
- Regarding GR-15b, replant MA-3 areas with Bay Area native coast live oak savannah trees, rather than eucalyptus, Monterey pine, and Monterey cypress. (Marnie Dunsmore)
- Native grasslands, rather than eucalyptus and other trees, should be the focus of efforts to maximize carbon sequestration. (Marnie Dunsmore)
- The management plan should include development of a trail plan that interconnects Natural Areas where possible, connects Natural Areas to public transit, and maps walking routes through open spaces, parks, and urban areas. Suggested trails could connect Glen Canyon Park to Twin Peaks or to Walter Haas Park and Billy Goat Hill. (Marnie Dunsmore)
- Further evaluate the environmental impact of off-leash dog use. Natural areas cover only 27 percent of park lands. There should be room in the other 73 percent of some dog play areas. (Nancy Rosenthal)
- There is no scientific consensus to support the basic premise behind the GR-8 recommendations. (San Francisco Dog Owners Group)
- Allowing dog access to Natural Areas should be reassessed because dogs are rarely on leash and diminish the Natural Area experience. Dog play areas in Natural Areas should be reconsidered because of the lack of dog control and environmental impacts. (Marnie Dunsmore)
- Ninety percent of the off-leash dog areas in San Francisco are in the natural areas. We need to reduce some of the off-leash dog areas. (Greg Gaar)
- Sharp Park was donated to San Francisco for recreational purposes, and I'm glad to see that. I'd like to see that as a foremost consideration. (Jack Rauch)
- Somebody said 90 percent of the dog play areas on SFRPD land are in Natural Areas, and what the hell is this program for? We're supposed to be preserving our heritage, our natural heritage, and yet we're letting this stuff go on. (California Native Plant Society, Yerba Buena Chapter)

- The modification or loss of existing off-leash areas is not acceptable unless you're going to identify replacement property. (Nancy Stafford)
- Because they created the problem, the Army Corps of Engineers should fix the flooding problems at Laguna Salada. The creek at the north end of Laguna Salada should be redirected to empty into the ocean. Sanchez Creek, at the south end of Laguna Salada, should be redirected to the north end of Mori Point to benefit frogs and snakes. (Frankie Franck)
- Add bicycle trails, single-track trails, and bicycle skills areas to the trail plans for the Natural Areas. (Mitch Monroe)
- The plan should include thinning the reeds that choke Laguna Salada, which would prevent overflow on the golf course, benefiting the frogs and the course. (George Ambrosio)
- The cost of tree removal at Mount Davidson would divert limited resources from the basic maintenance of the park, degrading the public experience. (Miraloma Park Improvement Club)
- Tree removal and trail closure should be mitigated through documentation of all trees removed or felled by storms, removal of any downed trees, quarterly removal of poison oak within 10 feet of trails, maintenance and protection of Works Progress Administration trails and retaining walls, and prohibiting any Natural Areas Program activities that restrict public use or access to Mount Davidson for more than 30 consecutive days. (Miraloma Park Improvement Club)
- Alternatives that cause take of fully protected species are not feasible and cannot be assessed under CEQA; only alternatives that reduce take to zero with reasonable certainty may be assessed as feasible alternatives under CEQA. (Brent Plater)
- Restoration planning for Laguna Salada must consider the effects of climate change and likely modification of the seawall. (Brent Plater)
- A restoration proposal that creates a community-centered model of natural flood control, outdoor recreation, environmental education, and endangered species recovery has been developed and must be considered a feasible alternative in the EIR. (Brent Plater)
- The project cannot consider closing the Lake Merced dog play area (LM-7a) because the SF Recreation and Park Department made this an official off-leash area years ago and promised it to the dog-owning community. Monitoring and mitigation can be proposed, but closure cannot because it was not mentioned in the Management Plan. (San Francisco Dog Owners Group)
- The Management Plan has already been heavily compromised. (Greg Gaar)
- The Natural Areas Program is responsible for 31 natural areas, and the EIR should weigh the values of restoring the areas for maximum biodiversity enhancement, and the effect of this enhancement on the citizens, who have little chance to be exposed to other biological riches. All the natural areas within the City of San Francisco should be evaluated for their natural assets. (California Native Plant Society, Yerba Buena Chapter)
- The Natural Areas falling under Management Area-3 should not be separated from the Management Areas-1 and -2, as suggested by one commissioner. The lands under Management Area-3 are interwoven with Management Areas-1 and -2 and separating them would create administrative confusion. (California Native Plant Society, Yerba Buena Chapter)

- The impacts on Sharp Park should be analyzed separately and not as part of other public lands that lie within the City and County of San Francisco borders and land use authority. (Sierra Club Loma Prieta Chapter)
- The tri-level designation of the Natural Areas as Management Areas-1, -2, and -3 undermines the mandate of Natural Areas to regulate, restore, and steward these places and could result in a fragmented management. (Robert Bakewell)
- The cats indoors program from the American Bird Conservancy is not approved by the San Francisco Society for the Protection of Cruelty to Animals, as it is indicated in GR-7b. (Martha Hoffman)
- There is no feral cat control policy stated in the Quail Recovery Plan, as indicated in GR-7a. Any control program must be developed in coordination with San Francisco Society for the Protection of Cruelty to Animals. (L-Danyielle Yacobucci; Society for the Protection of Cruelty to Animals San Francisco)
- GR-7 continues to be very flawed and should either be removed or completely revised, in cooperation with San Francisco Animal Care and Control and San Francisco Society for the Protection of Cruelty to Animals. Alley Cat Allies (alleycat.org) should be consulted as a resource regarding feral cats. (Martha Hoffman; L-Danyielle Yacobucci; Susan Wheeler)
- There have been no scientific studies to determine the impacts of feral cats or any other predator in San Francisco natural areas. It is unacceptable to say that predators, including feral cats, play a major role, much less an "urgent" role, impacting wildlife in San Francisco parks and open spaces. (Society for the Protection of Cruelty to Animals San Francisco; L-Danyielle Yacobucci)
- Eliminating the release of cats into the wild, as indicated in GR-7b, is unrealistic. The trap-neuter-return programs, coupled with the adoption of tame cats and kittens, will decrease the population of feral cats. (Society for the Protection of Cruelty to Animals San Francisco)
- The language in GR-7c that states "minimal suffering and harm" is too subjective to be protective of animals and must be removed from the General Recommendations. (Society for the Protection of Cruelty to Animals San Francisco)
- Identify and prove the scientific measures that would be used to determine if a predator is negatively impacting a natural area. (Society for the Protection of Cruelty to Animals San Francisco)
- The proposed project is experimental and the results are unpredictable. (Morley Singer)
- The Natural Areas Program should address public safety issues in detail at every park, especially at Sharp Park. (Suzanne Valente)
- Restrictions on off-leash dogs must be enforced in natural areas and other groomed areas. (Golden Gate Audubon Society)
- I'm concerned that there be any further compromises with regards to the number of areas within the environmental review. I would hope at the end of the environmental review, we would continue to have 32 areas for consideration and for inclusion in the Natural Areas Program. (Pat Swain)

- There have been a lot of compromises made in the course of developing the master plan, and I'm hoping at this point, as you move forward, you'll try to hold yourself to that document as much as possible. (Pat Swain)
- Many of the project questions are a result of the very powerful mistrust that the neighbors have of the Natural Areas Program and skepticism of the Planning Department. We've had previous battles with the Natural Areas Program over the past 10 years, and they've demonstrated a striking indifference and callousness to neighborhood interests, to try to cut down all the trees on Tank Hill, and some years ago, trying to cut down all the trees—all the trees in Sutro Forest. (Morley Singer)
- While I think saving native plants is very important, and I support the program, I think the program is too large to be successful. I don't think it's cost-effective or practical in its current situation. One-third of park land is a lot to take away from such a large urban area. (Nancy Stafford)
- Find middle ground, instead of chopping down all the trees and replacing them all with natives. (Ethan Elias)
- Provide information on public education for plan. (L-Danyielle Yacobucci)
- I do support this plan. I don't support the scope, and I would support it if this program was more amenable to working with the neighbors and the public. (L-Danyielle Yacobucci)
- Protect the lagoon area. Remove a couple of golf holes roaming around. Focus on pulling golf away from that lagoon. And also I'd like to see some emphasis on the creek. It's a beautiful creek. It's been channelized over the years, and it was been negatively impacted when they developed the golf course. There are a lot of trees that create kind of a dead zone: eucalyptus, pine, and cypress. I would like to see you guys look at possibly some fixing up the creek, too, that Sanchez Creek. (Ron Maykel)
- We have a ton of trails here in Pacifica. When the tunnel comes in, that whole area is going to open up into trails. (Reiner Binsfeld)
- There's a big volunteer component. So in my experience with what goes on in the Oak Woodlands in Golden Gate Park, there's a big feedback that takes place between the community, school kids, environmentalists, stakeholders of all kinds, and the natural areas staff. So it's not only an adversarial situation. There isn't—there isn't some big hand coming down and telling us what to do, when to do it and how to do it. There's a lot of feedback. There's a lot of community participation. (Rob Bakewell)
- So as far as Sharp Park goes, I think it just needs to be dredged, cleaned out, let those frogs and snakes do their thing, allow the golfers to go around it as it has for last 70 years. (Reiner Binsfeld)
- People say the golfers are predators of the frogs and snakes, but really it's more like the raccoons, 'possums, and red-tailed hawks. (Daniel Lim)
- Stop using the word restore and substitute the word preserve. We already have something good. Let's just preserve what we have. (Dave Diller)
- I hear the argument about using this location for children environmental education, but this lagoon has a large area to the south of the course that is easily accessible to the public for this cause. But I see it hardly ever used by the public. There is plenty of open space area surrounding

the golf course and Mori Point, hiking, nature studies, et cetera. Not like the golf course is in the middle of urban San Francisco. (George Ambrosio)

- The Planning Commission should look into thinning the reeds that are choking the lagoon, which would give the water more area and prevent overflowing in the golf course. This would protect the flow and keep the course playable during the wet season and enhance revenue actually for the course. (George Ambrosio)
- The plan for Sharp Park is the worst of any of the San Francisco park system. It is clearly in violation of the mission statement. They do not take into consideration public safety, which includes West Nile Virus and the need to control mosquitoes, and the recent ruling by the court indicates that they no longer can spray pesticides to control adult mosquitoes. They can only drop larvicide. Clearly we cannot ensure that the public will be safe if you expand the wetlands. (Suzanne Valente)
- It's important to link that lower area, like, particularly the archery range and also where the shooting range is, that you guys clean that up, up to the upper ridges so that you can access the southern parts of Pacifica. (Mitch Monroe)
- You guys talked about volunteerism, the stewardship was part of this plan, and a group I represent is called San Francisco Urban Riders, and we've merged with Craig Dawson Mount Sutro, and we logged over 500 collected hours—man hours of volunteerism. And we plan to do a lot more. So if you guys do end up getting a project up there and want to open up a multi-use trail that's a bicycle lane, I think you'll have a lot of manpower to help get that done, and you won't have to pay for labor. (Mitch Monroe)
- The alternatives analysis should include two or three alternatives in addition to the no project alternative. Other alternatives should consider retaining all 18 holes of Sharp Park Golf Course, installing environmental sensitive habitat areas and educational panels along existing trails, and restoring temporary wetlands to prevent them from drying before tadpoles develop into adults. (Todd M. Bray)
- Include in the analysis the spread impact of certain trees, such as the Tasmanian blue gum, and the possibility of removing all the weed (nonnative) trees. (California Native Plant Society, Yerba Buena Chapter)
- Consider avoiding construction of new trails and soil disturbance where native plants exist. (California Native Plant Society, Yerba Buena Chapter)
- The decision to convert existing forest adjacent to neighboring homes to a sensitive plant museum has been made without proper scientific study or input from residents. Studies prepared by forest experts are needed to assess the impacts of forest conversion. (Denise Lapins)
- The environmental must include an alternative that analyzes the full ecological restoration of Sharp Park. The City and County of San Francisco should select the full ecological restoration alternative for Sharp Park in order to provide suitable habitat for listed species at the site and avoid legal liability to San Francisco for illegal "take" of listed species. The full ecological alternative should prioritize endangered species protection and recovery, natural flood control, outdoor recreation, and sustainable land use. The full ecological alternative should include elimination of the golf course holes that are incompatible with maximizing suitable habitat for listed and sensitive species at Sharp Park; elimination of all lawn-mowing activities and restriction

of the use of pesticides that would impact the San Francisco garter snake and the California red-legged frog; inclusion of buffer areas to prevent runoff of pesticides into aquatic habitats; ceasing all use of inorganic fertilizers and monitoring the extent of pollution from the use of nitrogen and phosphorous; ceasing existing animal burrow management policies; restriction or ceasing at a minimum between September 1 and May 31 all water pumping at Horse Stable Pond; creation of basking and hibernating/estivating habitat for the snake, frog, and western pond turtle within Laguna Salada, Horse Stable Pond, and Arrowhead Lake; controlling invasive species in Laguna Salada, Horse Stable Pond, and Arrowhead Lake, installing unobtrusive fencing along the length of the sea wall; posting interpretive signs around Sharp Park regarding the important habitat areas; removing invasive exotic plants and lawn and replanting the park and Sanchez Creek with appropriate native species. (Center for Biological Diversity)

- Select a full restoration alternative at Sharp Park. (Celeste Langille)
- We would like to see what we call a "maximum ecological restoration alternative" for the SNRAMP. (Nature in the City)
- The SFRPD must consider full restoration of Sharp Park through the CEQA process and cannot assume that the golf course will exist indefinitely. (Brent Plater)
- The EIR must address scaling back the Natural Areas Program to a few Natural Areas that can be well maintained. (San Francisco Dog Owners Group)
- The EIR should study a maximum restoration alternative for each Natural Area. (Sierra Club San Francisco Group)
- The lead criterion for Sharp Park alternatives should be protection of habitat for listed species. (Sierra Club San Francisco Group)
- The potential impacts of the proposed project are a great concern. The SFRPD should not approve this project. (Annemarie A. Donjacour)
- Additionally, the Natural Areas Program park proposal ignores the serious public safety issues that should be addressed, especially at Sharp Park. An EIR must cover the public safety issues for humans at every park in detail, as well as provide substantial, reliable, scientific evidence to justify the proposed ecosystem changes. (Suzanne Valente)
- The EIR should study the effects of unchecked growth of nonnative forests, as well as alternative management scenarios for these forests, including managing for biodiversity, thinning, and allowing the natural succession of native plant communities. (Sierra Club San Francisco Group)
- Preserve the Sutro Forest area. (Martha Hoffman).
- I think it is a great idea to look at how to divert some of that water coming off Sharp Park Road. It's just a big spillway right now, and Highway 1 and all that—and I think that could be done without damaging the creek. (Dan Briesach)
- The Natural Areas Program has its place, and it needs to be kept in that place. It cannot be allowed to trump the clear preferences of the vast majority of park land users in San Francisco. I think that the Natural Areas Program proposal for Sharp Park, as well the other park locations, intends to make major changes in the ecosystems, sometimes with no apparent benefit to wildlife and perhaps detrimental to important wildlife. (Suzanne Valente)

- Closure of the park or the entire golf course to create a natural areas wetlands restoration to benefit the red-legged frog and San Francisco garter snake is the latest proposal under consideration by SFRPD. This is pointless. US Fish and Wildlife did not designate Sharp Park as a critical habitat for the red-legged frog or San Francisco garter snake. Therefore, by the US Fish and Wildlife's own definition, whatever happens to either species in this area will have no impact upon the ultimate survival or failure of the species. There is no legal imperative for expansion of the habitat to benefit these two species. Environmental attorneys explained that there is critical habitat and everything else. So Sharp Park has the same requirements as a habitat as your home's driveway does. The Natural Areas Program report acknowledges that the quality of the habitat at Laguna Salada, Horse Stable Pond, and the adjacent wetlands remains excellent. Make the minor alterations biologists recommend and leave the rest of Sharp Park alone. (Suzanne Valente)
- Support off-road cycling in the other areas of Sharp Park, particularly up to the archery range, also up there beyond the archery range where it connects up to—up beyond the ridge. (Mitch Monroe)
- The Mount Davidson park and monument are important historic entities and should be recorded and documented in preparation for listing on the California Register of Historical Resources. Any historical trails created and enhanced as Works Progress Administration projects should be maintained and remain open. (Miraloma Park Improvement Club)
- Consider closing surfeit trails. (California Native Plant Society, Yerba Buena Chapter)
- In the event that dog activities in places such as Oak Woodlands cause significant impacts, the Natural Areas Program will have the right to require limited dog use. (Robert Bakewell)
- The eastern canyon areas of Sharp Park should be off-limits to dogs. (Celeste Langille)
- Selected alternative should not include an increase in recreational activities in Sharp Park that would result in increased vehicle traffic. (Celeste Langille)
- Consider developing multi-use trails and bicycle skill parks as sustainable uses for the open spaces and parks. (Dayton Crites; Tom Borden; Dan Schneider)
- The proposed project severely limits access to public space to protect endangered species where those species either do not exist or coexist peacefully with other uses. (Lisa Vittori)
- Restriction or elimination of dog play areas has several issues. To name a few: This decision should not be within the Natural Areas Program's jurisdiction because there has been arrangements made over time through the Dog Advisory Committee and the Dog Policy to add more dog play areas; the Natural Areas Program had initially the intention to work with the dog community when a management would be prepared and to continue using the areas for dog walking; the management plan stipulation that environmental studies should be conducted when new dog play areas are planned suggests that the existing heavy use of an area would be ignored and the analysis would consider starting with a pristine area that would be impacted by a new use. Instead of integrating native species into public spaces, the proposed project introduces threatened species and restricts access. (Lisa Vittori)
- Evaluate the impact of trails. Currently, hundreds of miles of trails criss-cross the Natural Areas. Any decision for improving or closing existing trails should be based on a comprehensive approach to trail planning. New trails through natural areas are not necessary. (Nancy Rosenthal)

- I'd like to say I'm particularly interested in McLaren Park because it's the best off-road riding in the City, and I agree with the McLaren Trail Plan in terms of closures and whatnot, except for the fact that bicycles are excluded. And I'd like to especially take issue with this issue MP-7 in the McLaren Park plan that lumps off-road motorcycles and mountain bikes together. We want to work with Natural Areas, we appreciate Natural Areas, we don't think trails—especially narrow trails going through natural areas—are damaging. (Tom Borden)
- It does scare me to have a dog just come up and rush a kid in the face. So, a de facto off-leash policy in our Natural Areas really needs to be looked at carefully. (Marnie Dunsmore)
- In the Oak Woodlands, large canopy trees are very problematic and should be removed in some places. (Robert Bakewell)
- Communicate and coordinate with the San Francisco Animal Care and Control and San Francisco Society for the Prevention of Cruelty to Animals on all policies concerning animals in San Francisco. (Martha Hoffman)
- Educational materials must address respect for all animals and plants and include the input of the San Francisco Animal Care and Control and San Francisco Society for the Prevention of Cruelty to Animals, Department of Recreation and Parks Services, and local wildlife expert Ms. Jamie Ray. (Martha Hoffman; Evan Elias)
- The restoration of Sanchez Creek should be added as a goal. The conservation and restoration goals for Sharp Park should maintain all viable populations of special status species, improve habitat and natural connectivity, and prevent introduction as well as decrease the existing amount of nonnative invasive species. (Celeste Langille)
- Evaluate management alternatives for Sharp Park. The report should provide information for making a selection that maximizes ecological and endangered species management and promotes the recovery of the San Francisco garter snake and the red-legged frog. (Nancy Rosenthal)
- The tree removal is necessary. We only support it during the non-nesting season, and we believe trees such as those used by colonial birds like herons and cormorants should be preserved. So should trees used by hawks and owls for nesting. We urge that habitat that's necessary for birds, such as California quail, spotted towhee, wren-tit, and other species restricted to coastal scrub should be established and maintained with the specific goal of continuing those specific habitat systems. (Golden Gate Audubon Society)
- We support restoration and appropriate management practices at Sharp Park that will ensure it as a viable habitat for red-legged frogs and San Francisco garter snakes. (Golden Gate Audubon Society)
- In terms of Sharp Park, we need to select the restoration alternative that maximizes the probability of protecting the snakes, that they will recover, so that the protection by the Endangered Species Act won't be necessary. The red-legged frog used to be the Jumping Frog of Calaveras County. A lot of plants and animals are becoming endangered because their habitat is strange. (California Native Plant Society, Yerba Buena Chapter)
- With feral cats, how will you implement what's described in the Quail Plan? (L-Danyielle Yacobucci)

- Replacement of the plants on the steep sand-covered areas of the Rock Outcropping at 14th Avenue, Ortega, and Pacheco Streets should be conducted in phases to avoid impacts on sand retention. (Lydia Cassorla)
- An objective study should be prepared in the future to evaluate the positive and negative impacts of feral cats in the urban environment of San Francisco. (Society for the Prevention of Cruelty to Animals San Francisco)
- Urges extra penalties for camping in Natural Areas. (Robert Bakewell)
- The management plan for Sharp Park violates the following mission statement of the SFRPD: "The San Francisco Recreation and Park Department's Mission is to provide enriching recreational activities, maintain beautiful parks and preserve the environment for the well-being of our diverse community." (Suzanne Valente)
- The management plan for Sharp Park intentionally disregards the following performance standard established in the SFRPD's Operational Plan: "The Department shall consider, among other matters, the following issues: Public safety, which shall include the reduction of environmental and other hazards, safe equipment operations, and safe pesticide use." (Suzanne Valente)
- Include new bike trails and a bicycle-specific park in the Archery Range and Shooting Range area of Sharp Park. (Mitch Monroe)
- Address motorcycles separately from bicycles. (Mitch Monroe)
- Consider the Trail Master Plan of the San Francisco Riders when planning trail closures and constructing new trails. (Mitch Monroe)
- Although the plan for the Interior Greenbelt does not indicate trail closures in that Natural Area, the Natural Areas Program is apparently closing this Natural Area to the public. The EIR must acknowledge what has actually happened and presently exists in the Natural Areas. These are omissions in the Initial Study that must be corrected in the EIR. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- Everson/Digby Lots was not subjected to a lengthy public process and therefore should not be included in this EIR. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- San Francisco's large mature trees are truly an endangered species and need to be preserved. (San Francisco Tree Council)
- The IS is mistaken that any commitment has been made to replace all removed trees with native trees. Nor would such a commitment be advisable, given that planting native trees in most of the natural areas would not be successful because they are adapted to sheltered areas that are not representative of the Natural Areas. If they were planted, they would be unlikely to survive. The EIR must evaluate the impact of proposed tree removal, based on the accurate premise that most of the trees will not be replaced. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- There is no basis upon which the IS may assume that nonnative trees designated for removal are dead or dying trees, as stated in GR-15. Tree removal designated by the SNRAMP is within Management Areas-1 and -2 areas for which GR-15 does not apply. (Karin Hu, Mary McAllister, Nancy Wuerfel)

- Removing invasive species does not necessarily enable the survival of native plants if they are no longer adapted to the conditions that have been altered by man. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- What are the details of the plan for dredging Laguna Salada and removing bulrushes, including the permitting requirements? (San Francisco Public Golf Alliance)
- What are the details of the planned creation of a buffer zone between Laguna Salada and the golf course, including the permitting requirements? (San Francisco Public Golf Alliance)

EIR Recommendations

The EIR will address these comments by modifying the project description and including in the analysis a Maximum Restoration Alternative, Maximum Recreation Alternative, and a Maintenance Alternative.

2.3 GENERAL CEQA

Comments

- In accordance with Resolution Number 0710-011, the CEQA documents must analyze impacts at all 31 Natural Areas, including quantification of effects at each Natural Area and cumulative effects on each Natural Area. (Nancy Wuerfel)
- The Initial Study does not address in Sections C.1 and C.2 the requirements of Administrative Code Chapter 63, including reporting, planning, and approval from the San Francisco Public Utilities Commission. The Initial Study does not quantify the capacity of the existing irrigation system, the amount of water needed by the project, or the square footage of land to be irrigated. It also does not include installation of water meters and San Francisco Public Utilities Commission approval of those meters. (Nancy Wuerfel)
- The Initial Study does not acknowledge that the Natural Areas Management Plan has not been approved for implementation and may be subject to further amendments and mitigation measures before approval for implementation. (Nancy Wuerfel)
- The project as outlined in the public meeting seems to ignore many of the 18 items that should be analyzed in the EIR. (Morley Singer)
- A certified arborist should evaluate impacts on trees in Mount Sutro Forest. (Morley Singer)
- Address geology and soils in the EIR. (Nancy Stafford)
- There's so many totally cockamamie things, that to leave out wind effects in the environmental impact report is striking. (Morley Singer)
- As we have in all environmental impact reports, I would like to know what the environmental impacts of a no-management plan alternative. I mean, I think that's required in the plan. (Greg Gaar)
- Address prescribed burning dangers in the EIR. High winds can cause a fire to get out of control. (San Francisco Dog Owners Group)
- Address the impact of poor maintenance in the EIR. Most areas are poorly maintained and plants die. So, that may affect future plans, too. (San Francisco Dog Owners Group)

- This is an EIR on the SNRAMP, not the Natural Areas Program. (Nature in the City)
- If you come up with a good way here to do the things that you're doing, can one of those other proposals override what you're already going to come up with? (Dave Diller)
- The EIR must reanalyze any data provided by the Natural Areas Program regarding environmental impacts of dogs to avoid misrepresentation of data and conclusions. (San Francisco Dog Owners Group)
- The impact analysis should distinguish between the effects of "free-roaming" dogs, those without human oversight, and "off-leash" dogs, those with human oversight. (San Francisco Dog Owners Group)
- The EIR needs to look at the effects of the immediate closures of the off-leash areas that are called for in this management plan, plus the effects of future closures that might be affected by an expansion of the natural areas into the off-leash areas. (San Francisco Dog Owners Group)
- The EIR must address the adverse traffic, air pollution, and global warming impacts associated with the closure of off-leash dog areas and the resulting vehicle trips to the remaining off-leash areas. (San Francisco Dog Owners Group)
- The EIR must address the impacts of overuse of remaining off-leash areas if some of the current off-leash areas are closed. If the Golden Gate National Recreation Area restricts off-leash access to its lands, this also could increase overuse of the remaining off-leash areas. (San Francisco Dog Owners Group)
- The EIR should study the effects of unchecked growth of nonnative forests, as well as alternative management scenarios for these forests, including managing for biodiversity, thinning, and allowing the natural succession of native plant communities. (Sierra Club San Francisco Group)
- Evaluate the impact of leaving 95 percent of the invasive trees in the natural areas. On Mount Davidson, where ground space is open after last winter's storm knocked down some trees, several native plants once again sprouted. Removing more of these understory-killing trees can bring back native plants and reestablish a healthy and diverse ecosystem. (Nancy Rosenthal)
- What are the environmental impacts of leaving 95 percent of the invasive trees in our natural areas? If you go to areas where you have dense eucalyptus, dense cypress, and pine, you'll find there's no biological diversity in the understory because the shading, the fog drift, it destroys the native plants that have been there for hundreds of thousands of years. (Greg Gaar)
- Identify the environmental impacts of the no action alternative. (Greg Gaar)
- The decision to convert existing forest adjacent to neighboring homes to a sensitive plant museum has been made without proper scientific study or input from residents. Studies prepared by forest experts are needed to assess the impacts of forest conversion. (Denise Lapins)
- I just want our questions on the record. They have to do with the relationship between this EIR process and the process that the Board of Supervisors asked the SFRPD to look into, a possible change of use of the golf course when we have a serious environmental question relating to that, and she may have ran through that area, but if they do anything to the golf course, that in itself will be subject to a completely separate EIR than this. (San Francisco Public Golf Alliance)

- I do favor the idea of restoring Sharp Park and restoring the city water corridor as well, and how it connects with other green spaces in the area. I would like to ask that we consider the impact of leaving as many trees as you're suggesting leaving. In my view, 95 percent is an awful lot of trees. I would like to encourage consideration of the trails and the impact that the trails have on hiking, which is increasing in importance by many studies of recreational activities, whereas other activities have gone down on the list. Consider the impact of hiking and environmental education on students and other people regarding the bigger picture, to see where humans fit into the larger frame of things. (Ellen Edelson)
- Further evaluate the environmental impact of off-leash dog use. Natural areas cover only 27 percent of park lands. There should be room in the other 73 percent of some dog play areas. (Nancy Rosenthal)
- I'd like to say I'm particularly interested in McLaren Park because it's the best off-road riding in the city, and I agree with the McLaren Trail Plan in terms of closures and whatnot, except for the fact that bicycles are excluded. And I'd like to especially take issue with this issue MP-7 in the McLaren Park plan that lumps off-road motorcycles and mountain bikes together. We want to work with Natural Areas, we appreciate Natural Areas, we don't think trails—especially narrow trails going through natural areas—are damaging. (Tom Borden)
- As of May 2009, what aerial spraying is permitted by law for control of mosquito larvae and adults? What aerial spraying is conducted at Sharp Park for control of mosquito larvae and adults, including timing and seasonality? Describe any other mosquito control measures used at Sharp Park. What is the effect of mosquito control measures on the California red-legged frog population? What is the effect of mosquito control measures on residential neighbors of Sharp Park? (San Francisco Public Golf Alliance)
- Address environmental impacts of leaving 95 percent of invasive trees in the Natural Areas. (Greg Gaar)
- Identify the impacts of periodic tree removal on the forest in its entirety. (Denise Lapins)
- The Initial Study dismisses the environmental impacts and safety issues that have been experienced in the past. (San Francisco Tree Council; Karin Hu, Mary McAllister, Nancy Wuerfel)
- The Initial Study demonstrates that the author has not understood the SNRAMP, has not visited the natural areas, and ignored basic scientific principles such as carbon sequestration. (San Francisco Tree Council; Karin Hu, Mary McAllister, Nancy Wuerfel)
- A comprehensive EIR represents an opportunity to resolve some of the controversies that the program has generated in the last 10 years of its operation. The EIR should be expanded to include several environmental issues for which the Initial Study is inadequate, inaccurate, or is inconsistent with the reality of past actions of the Natural Areas Program. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The EIR must fully analyze the tree removal issues. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The IS assumes that native plants would survive in the long term. The study does not acknowledge that the ranges of native plant populations are changing in response to global warming. (Karin Hu, Mary McAllister, Nancy Wuerfel)

- Tree removal cannot be done piecemeal. Felling one tree will impact those in the close proximity. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- At Lake Merced, over 100 trees would be removed from the eastern shore of the South Lake. This would expose an old population of huge cypress trees to wind blows at the Harding Park Golf Course. Massive tree failure could result. The EIR should indicate that the PGA Tour has been informed of the tree removal adjacent to the golf course and that the management actions in the SNRAMP will not violate the terms of the contract between the PGA Tour and the City. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The IS makes no mention of Pine Lake tree removals, nor the consequences of those removals. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The EIR must evaluate the potential for windthrow resulting from the removal of 18,500 trees. This evaluation must be done by a qualified consultant with expertise in forestry management. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by revisiting the environmental impact analysis included in the IS.

2.4 GENERAL ENVIRONMENTAL

Comments

- What's the definition of "substantial effect"? (L-Danyielle Yacobucci)
- It's important that the SFRPD and Planning Department keep in mind the mission of the Natural Areas Program, and that's another project program, which is to preserve, restore, and enhance the remnants of Natural Areas of the city. (Paul Koski)
- What's the definition of "environment"? Let's go back to the CEQA law and find out what it intends to protect. (Nancy Wuerfel)
- Why do we possibly acquire that many nonnative trees and put them in the middle of a Natural Areas Program if indeed natural areas were defined only as remnants? (Nancy Wuerfel)
- I just want to point out—first, I want to answer some questions about Laguna Salada, you know, and the flooding. You have two things that took place there. You had where the berm blew out, pushed tons and tons of sand that came in there, and there's like a two- to three-foot-wide area where the lake is extremely shallow where the sand came in. This took place back in 1983, I think. So that is a factor that has caused—contributes to the flooding. (Ron Maykel)
- And also the tules and the cattails, these are deciduous plants. You know, they die off and then all of the thatch from these plants creates—basically assists in the build-up, which creates—makes the lake become shallower and shallower over years and years. The debris just builds up. And that's a big part of the siltation there. And I think that's one of the bigger—bigger reasons why that's happening. (Ron Maykel)
- The Corps of Engineers built the wall. When they built the wall, they blocked a natural stream that was on the north end of the park. The Corps of Engineers then changed it so that the drainage went into the Laguna Salada. They then attached all the drainage to the freeway and

everything else to that drain. So the Corps of Engineers actually put all that silt in there. Now, it's full and backing up because San Francisco hasn't done anything about it. They haven't either replaced the stream or exited the north end or anything else, which means the City of Pacifica then has to spend money pumping out the water, which doesn't make any sense to me. I don't know why Pacifica doesn't just send San Francisco a bill. (David Marshall)

- The second thing is that there's another issue, which is the recycled water. San Francisco Public Utilities Commission is supposed to kick in some money for recycled water, which will help keep the pond in a more consistent level, but as part of this new study, it's my impression that they're trying to just renege on the whole deal. (David Marshall)
- We need to get together and work to solve our common problems, which I think is painfully evident now, Laguna Salada is dysfunctional. (Dan Briesach)
- There's an overflow pipe at Horse Stable Pond that used to function, and now it's silted in. (Dan Briesach)
- I love the golf course. I want to thank the people trying to preserve the frogs and the snakes. (Chuck Egiziano)
- Consider the berm, the conditions of the berm. (Mike Pacelli)
- The City and County of San Francisco must comply with the California Coastal Act. The City of Pacifica has a certified Local Coastal Program (LCP) and the portion of Sharp Park west of Highway One is within the LCP. Therefore, a Coastal Development Permit (CDP) should be obtained for project activities affecting west Sharp Park. (City of Pacifica)
- The proposed project is subject to Pacifica's Logging Operations Ordinances, Ordinance Numbers 636 C.S. and 673 C.S. Any tree removal, destruction, or harvesting of twenty or more trees within one year is prohibited unless considered in the CDP or unless the Pacifica Public Works Director makes specific findings regarding the tree removal operations. (City of Pacifica)
- Given that Sharp Park is not listed by the US Department of the Interior Fish and Wildlife Service as critical habitat for threatened or endangered species, what is San Francisco's liability concern with respect to compliance with the Endangered Species Act conservation requirements? (Juanita Mercado; Suzanne Valente)
- Removing the 15,000 trees in Sharp Park will jeopardize the habitat of 20 special status species. The citizens of Pacifica intend to demand their city officials hold the SFRPD to the terms of Pacifica's anti-logging ordinance. (Suzanne Valente)
- The EIR should address compliance with the Pacifica Logging Ordinance. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The EIR should address compliance with the San Francisco General Plan, specifically Policy 2.9 of the Recreation and Open Space Element. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by revisiting the environmental impact analysis included in the IS.

2.5 CUMULATIVE IMPACTS

Comments

- The EIR should analyze the cumulative impacts on the Mount Sutro Forest and the neighboring properties and residents associated with the SNRAMP and the University of California/Federal Emergency Management Agency grant proposal. (Denise Lapins; Morley Singer; Evan Elias)

EIR Recommendations

The EIR will address this comment by including this project in the cumulative impact analysis.

2.6 LAND USE AND LAND USE PLANNING

Comments

- Request that the Environmental Impact Report include an analysis of the project's consistency with the Pacifica local coastal land rules and policies and any pertinent Pacifica land use regulations. We also believe that a local coastal development permit may be required and ask that the EIR include an analysis of that requirement. (City of Pacifica)
- Pacifica is in the process of updating its general plan and local coastal plan, which could alter or modify existing land use policies or result in new policies that could impact the areas covered in the proposed Natural Areas Management Plan. (City of Pacifica)
- Contrary to what is stated in the Initial Study, the SNRAMP changes land use by restricting access to the Natural Areas. The SNRAMP has the potential to eliminate all forms of recreation other than walking on a designated path as it implements its goals. The proposal to transfer or develop joint management of Sharp Park with the Golden Gate National Recreation Area indicates the potential for ownership of Natural Areas to change in the pursuit of restoration goals. These changes in land use must be acknowledged and evaluated in the EIR. Recreation access not identified by the IS must also be evaluated by the EIR. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by including analysis of the project's consistency with the Pacifica local coastal program and the Pacifica general plan and addressing indirect change in land use within the Natural Areas.

2.7 AESTHETICS

Comments

- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)
- Preserve the beautiful forest. (Morley Singer)
- Use a scientific evaluation process with respect to recreation and aesthetics. (Andrea O'Leary)

- How would views from the surrounding residences be impacted by the three scenarios, views into the park as well as our views to the beach and the ocean? (Rabine Runneals)
- The EIR must address the adverse aesthetic impacts from poor maintenance of the Natural Areas. (San Francisco Dog Owners Group)

EIR Recommendations

The EIR will address how tree removal affects views at Mount Davidson and Sharp Park. The San Francisco Planning Department approves of the evaluation process used to analyze potential impacts. The EIR assumes proposed actions would be implemented correctly, but it cannot assume poor maintenance would occur.

2.8 POPULATION AND HOUSING

No comments were received on this topic.

2.9 CULTURAL AND PALEONTOLOGICAL RESOURCES

Comments

- The Sharp Park Golf Course should be recognized as a significant historic architectural resource in the EIR. (San Francisco Public Golf Alliance)
- The Mount Davidson park and monument are important historic entities and should be recorded and documented in preparation for listing on the California Register of Historical Resources. Any historical trails created and enhanced as Works Progress Administration projects should be maintained and remain open. (Miraloma Park Improvement Club)
- One of the things about Sharp Park is that Alister MacKenzie designed the course. That has a lot of history involved with it. Goes back to a lot of the famous golf courses that are currently being used, and I think that should be taken into consideration. (Steve Rush)
- Looking at the historical and cultural part of the environment, it is a famous golf course. Also, the clubhouse was done by the Willis Polk firm. (Kathleen Manning)

EIR Recommendations

To address these comments, a Historical Resource Evaluation Report will be prepared to evaluate the Sharp Park Golf Course and Mount Davidson. The results of that report will be incorporated into the EIR. The EIR will also address these comments by stating that redesign or elimination of the Sharp Park Golf Course is not part of the proposed project. Proposals for redesign/elimination of the golf course would be addressed in the cumulative setting.

2.10 TRANSPORTATION AND CIRCULATION

Comments

- If you close off-leash areas, people will have to drive to a park across town in order to get to a legal off-leash area. This will affect traffic, air pollution, and global-warming. (San Francisco Dog Owners Group)

EIR Recommendations

The EIR will address this comment by assessing the impacts of increased vehicle trips resulting from project implementation.

2.11 NOISE

Comments

- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)

EIR Recommendations

The EIR will address noise impacts on sensitive receptors that would result from removing trees at Mount Davidson.

2.12 AIR QUALITY

Comments

- Suggesting that native plants would be more effective in the removal of carbon dioxide is absolute nonsense. (Morley Singer)
- Address global warming from tree removal. (Morley Singer)
- Closing off-leash areas will force people to drive to a park across town in order to get to a legal off-leash area. This will affect traffic, air pollution, and global warming. (San Francisco Dog Owners Group)
- Removing trees will necessarily have a negative impact on global warming. (Marnie Dunsmore)
- The author of the IS does not provide a full reference to the claim that young trees have long-term carbon sequestration, which results in a net greenhouse gas benefit. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The release of carbon stored in the 18,500 trees that would be removed would certainly swamp whatever benefit there may be in replacing some of the trees. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- Because of the cumulative effect of all the sources of carbon release predicted by the SNRAMP, the effect of prescribed burns on carbon release and air pollution must be considered by the EIR. Consideration of prescribed burns by a separate and later environmental review is not acceptable. (Karin Hu; Mary McAllister; Nancy Wuerfel)
- Carbon sequestration by trees and plants is directly proportional to their size. Therefore, a small sapling is incapable of sequestering as much carbon as a large tree, whether it is healthy or not. The US Department of Agriculture reports that tree cover is less than 12 percent of San Francisco's area, yet trees remove about 19 percent more air pollution than shrubs in San Francisco. This finding refutes the claim that converting many acres of trees into grassland will benefit air quality in San Francisco. (Karin Hu, Mary McAllister, Nancy Wuerfel)

- The removal of seedlings and saplings is incremental to the designated removal of 18,500 trees. This would result in additional reduction in carbon sequestration that should be quantified. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The IS does not consider the potential for the death of many native trees if sudden oak death continues to spread. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The author of the IS does not provide a full citation of the claim that grassland above 50 degrees latitude reflects more sun than forest canopies. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The reflected light argument is based on the comparison between dark forests and the reflected light of snow in northern latitudes. It is clearly a stretch to apply this concept to the local climate where there is no snow. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- Increased temperature on the forest does not reduce the carbon sequestering abilities of the forest that are a by-product of photosynthesis. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- If nonnative plants and trees are removed from 25 percent of all park acreage in San Francisco and it proves impossible to successfully grow native plants in those locations, there will clearly be no carbon sequestration benefit from these efforts. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will analyze the impacts on global warming and greenhouse gases that would result from removing trees, replacing mature trees with young native trees or with grassland, and the potential risk of native trees dying. Additional air pollutant emissions associated with increased vehicle trips also will be assessed, if necessary.

2.13 WIND AND SHADOW

Comments

- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)
- The Sutro Forest is always damp. It sucks out water from the fog, and it's always wet in there. I sail on the bay, and maybe two days out of the year, the wind comes from the east; 363 days a year, it comes from the west. The forest is a windbreak for all of the structures east of the forest, from Parnassus Street all the way to up to the top of Twin Peaks, and if you take down the trees, then the westerly winds would just fan a fire that's coming from the forest area. (Morley Singer)
- Investigate wind patterns. (Nancy Stafford)
- When you get to the impact of removing trees, you have to look at wind, increased wind, and you have to look beyond the park itself. (San Francisco Dog Owners Group)
- The EIR must address the adverse wind impacts resulting from the removal of trees and nonnative plants. (San Francisco Dog Owners Group)
- Include in the EIR the virtues of eucalyptus trees. Those trees are unique in that they actually grow in the sandy soil and withstand the fierce winds blowing off the Pacific. Studies have

shown that eucalyptus trees slow the wind down at least 30 percent in the Presidio. (San Francisco Tree Council)

EIR Recommendations

The EIR will analyze the wind effects of removing trees, including those effects on residential neighborhoods near the Natural Areas. The analysis will also assess the ability of the replacement native trees to act as wind barriers, compared to the eucalyptus trees.

2.14 RECREATION

Comments

- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)
- The cost of tree removal at Mount Davidson would divert limited resources from the basic maintenance of the park, degrading the public experience. (Miraloma Park Improvement Club)
- Consider biking trails and their impacts within the archery range and other hilly areas. More public and legal bike trails are needed. (Adam LaBarge)
- This analysis should address the whole issue of designated off-leash areas within the Natural Areas. (California Native Plant Society, Yerba Buena Chapter)
- Address the impacts of restricting public access for the protection of sensitive habitat plantings within the interior greenbelt and at the Belgrave trailhead in particular. (Denise Lapins)
- You also have to look at the impact on recreation of the introduction of the especially threatened native species. What we see at Sharp Park is that if there's a threatened or endangered species, or even a sensitive species, suddenly the federal government just gets involved, and we lose all local control of those areas, and that's not something we necessarily want to do. We have to make sure that we retain local control of our local parks. (San Francisco Dog Owners Group)
- Use a scientific evaluation process with respect to recreation and aesthetics. (Andrea O'Leary)
- Glen Park has so much urine from dogs in it that it's hard to go there. (Marnie Dunsmore)
- Introducing endangered or threatened species into areas where there are none would threaten active recreational opportunities when open space is at a premium. (Nancy Stafford)
- Contrary to what is stated in the IS, the SNRAMP changes land use by restricting access to the Natural Areas. The SNRAMP has the potential to eliminate all forms of recreation other than walking on a designated path as it implements its goals. The proposal to transfer or develop joint management of Sharp Park with the Golden Gate National Recreation Area indicates the potential for ownership of Natural Areas to change in the pursuit of restoration goals. These changes in land use must be acknowledged and evaluated in the EIR. Recreation access not identified by the IS must also be evaluated by the EIR. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address the effects that removing and replacing trees at Mount Davidson will have on the recreational experience. The EIR will discuss funding sources for the activities proposed under the SNRAMP and any potential issues with bike trails and other recreation within the Natural Areas, including the archery range. The EIR will discuss the impacts of dog play areas on recreation and measures to minimize those impacts. The EIR will address the policies of general public access and trail access in the Natural Areas and the protection of sensitive habitats within all of the Natural Areas, including the Interior Greenbelt. The EIR will address whether the proposed management actions would restrict or otherwise affect recreation opportunities within the Natural Areas. The EIR will address the adaptive management approach, which will equally evaluate the management of recreation and any potential impacts on aesthetics within the natural areas. The EIR will address the operation and maintenance of dog play areas and its impact on Natural Area visitors.

2.15 UTILITIES AND SERVICE SYSTEMS

Comments

- The Initial Study does not address in Sections C.1 and C.2 the requirements of Administrative Code Chapter 63, including reporting, planning, and approval from the San Francisco Public Utilities Commission. The Initial Study does not quantify the capacity of the existing irrigation system, the amount of water needed by the project, or the square footage of land to be irrigated. It also does not include installation of water meters and San Francisco Public Utilities Commission approval of those meters. (Nancy Wuerfel)
- The EIR must include the analysis of additional water use. Any irrigation in Natural Areas is new and incremental. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by including information on the capacity of the existing irrigation water system, the increase in water demand from the project, and the projected increase in the size of the areas to be irrigated. Also included will be a discussion of Administrative Code Chapter 63 and additional San Francisco Public Utilities Commission requirements.

2.16 PUBLIC SERVICES

No comments were received on this topic.

2.17 BIOLOGICAL RESOURCES

Comments

- Regarding A4.4, Best Management Practices, Erosion Control, use of wood chips for erosion control should be evaluated for impacts or wildlife, including bees and birds, some of which use dirt areas for dust baths. (Golden Gate Audubon Society)
- Regarding A5.15, India Basin Shoreline supports a large and multispecies collection of waterfowl from fall through spring. (Golden Gate Audubon Society)
- Regarding A5.18, Great Blue Herons should also be mentioned in this section. (Golden Gate Audubon Society)

- Regarding LM-6c, access to the East Lake shoreline between September 1 and March 31 would affect several nesting species, including the "San Francisco" common yellowthroat. (Golden Gate Audubon Society)
- Table 2 should not be limited to breeding birds, but include species dependant on Natural Areas during some part of the year: tri-colored blackbirds in Lake Merced during the fall and winter and brown pelicans and peregrine falcons occasionally present at Lake Merced and India Basin. (Golden Gate Audubon Society)
- The EIR should include an updated, comprehensive biological inventory of all species of concern in San Francisco, their distributions, and their population conditions. If not for the entire city, then at least for the Natural Areas. (Golden Gate Audubon Society)
- How is the habitat for the California red-legged frog affected by the continued existence of the seawall? (San Francisco Public Golf Alliance)
- As of May 2009, what aerial spraying is permitted by law for control of mosquito larvae and adults? What aerial spraying is conducted at Sharp Park for control of mosquito larvae and adults, including timing and seasonality? Describe any other mosquito control measures used at Sharp Park. What is the effect of mosquito control measures on the California red-legged frog population? What is the effect of mosquito control measures on residential neighbors of Sharp Park? (San Francisco Public Golf Alliance)
- The proposed level of tree removal at Mount Davidson would significantly impair the habitat for birds and animals. (Miraloma Park Improvement Club)
- The importance of Sharp Park for the long-term survival and recovery of the San Francisco garter snake cannot be overstated. It is the northernmost population within the species, and as climate change shifts species habitats northward, this population is the most likely to successfully adapt to changing conditions. Because it is the most genetically intact of any population, it would best serve as a source for reintroduction of the species into historic habitats. (Brent Plater)
- The EIR should include an assessment of dog impacts on plants and wildlife based on scientific studies done for urban parks, not for wilderness areas (San Francisco Dog Owners Group)
- Extensive clearing of underbrush and blackberry removal must be studied in terms of potential impacts on wildlife, such as raccoons, skunks, possums, etc. In this regard, Jamie Ray, Director of the San Francisco Wildlife Rehabilitation Program, must be consulted. (Martha Hoffman)
- A listing of all the animals present within the Natural Areas must be added to the environmental document. (Martha Hoffman)
- The are many predators other than feral cats in the Natural Areas of San Francisco, such as the western scrub-jay, common raven, American crow, Cooper's, sharp-shinned, and red-tailed hawk, owl, gray fox, striped skunk, northern raccoon, domestic cat, California ground squirrel, red fox, coyotes, feral pigs, frogs, snakes, cormorants, herons, turtles, badger, mice, rats, bobcats, and humans. (L-Danyielle Yacobucci)
- Cats in the Natural Areas of San Francisco are sterilized, fed, and monitored. (L-Danyielle Yacobucci; Susan Wheeler)
- Replacing eucalyptus trees with native plants might not be successful in a modern urban setting. (Morley Singer)

- The nonnative blackberry bushes are great habitat for many animals. Carefully consider any changes that could impact the animals living in the City parks. (Annemarie A. Donjacour)
- The IS is inaccurate with the statement that ". . . no important bird habitat has been designated in the Interior Greenbelt." The following birds were observed: yellow warblers, Steller's jays, bush-tits, song sparrows, owls, and red-tailed hawks. There are potentially more sensitive bird species living in or utilizing the Interior Greenbelt that would be negatively impacted with the removal of the eucalyptus trees and brush. (Evan Elias)
- The IS identified "no site specific wildlife related areas" within the Interior Greenbelt. This area is home to skunks, raccoons, opossums, and feral cats. The Himalayan blackberry provides nesting area and protection for these local mammals. (Evan Elias)
- The feral cats within the Interior Greenbelt behave as part of the ecosystem, not as a top predator. They are cautious and on guard in this environment, and their territory is small. The birds and mammals do not fear them, and the cats do not exhibit hunting behavior. (Evan Elias)
- What are the environmental impacts of leaving 95 percent of the invasive trees in our natural areas? If you go to areas where you have dense eucalyptus, dense cypress, and pine, you'll find there's no biological diversity in the understory because the shading, the fog drift; it destroys the native plants that have been there for hundreds of thousands of years. (Greg Gaar)
- What are the environmental impacts of cutting new trails through sensitive natural areas/wildflower fields? (Greg Gaar)
- The issue of trees, you mentioned 64,000 trees in the Natural Areas. Adolph Sutro did not plant that many trees. They have been increasing by reseeding reproduction for many decades now, and so much so that they're imperiling their own health. They're way too crowded; for their own benefit, they need thinning. And I think that the EIR ought to consider the impact both on the trees themselves, but more particularly on the biodiversity. Every year that passes, there are fewer and fewer native plants and more and more weeds. And trees can be weeds, too. (California Native Plant Society, Yerba Buena Chapter)
- What would be the impact of no nonnative animals—raccoons, possums, cats. If you remove them all, what will be that impact? How will the rodent population be affected? (L-Danyielle Yacobucci)
- What's the definition of a "native animal plant," "weed," "predator"? (L-Danyielle Yacobucci)
- What's the effect of keeping the natives—nonnatives, what will the effect be of removing all those eucalyptus trees? (L-Danyielle Yacobucci)
- Protect the animals. (Martha Hoffman)
- Look at the endangered species that use Sharp Park and how they also use those contiguous lands. (Mary Keitelman)
- Address the beach areas being used for the western snowy plover threatened under the Endangered Species Act, black oyster catcher, which I think is just not even of concern. It's on the edge, maybe being threatened. And other birds that use that beach for roosting, as well as breeding. (Mary Keitelman)

- On East Sharp Park, there's a large population of newts in the pond that drains under the freeway, and it's of concern to me and to a lot of other people that those newts are free of chloramine and able to survive and thrive. (Mary Keitelman)
- Do some kind of study on populations of San Francisco garter snake, red-legged frog. (Steve Sinai)
- The Natural Areas Program proposal would result in major changes to the ecosystem without apparent benefit to wildlife or even detriment to important wildlife. The EIR should provide scientific evidence of the benefits of the proposed ecosystem changes. (Suzanne Valente)
- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)
- Address environmental impacts of off-leash dog areas and new trails within sensitive natural areas. (Greg Gaar)
- Address the impacts of herbicide application on people, animals, and insects. (Denise Lapins)
- Address chloramine in the water affecting amphibians. (Mary Keitelman)
- Removing the 15,000 trees in Sharp Park will jeopardize the habitat of 20 species of special status species. The citizens of Pacifica intend to demand their city officials hold the SFRPD to the terms of Pacifica's antilogging ordinance. (Suzanne Valente)
- Leaving tree stumps on the ground would create an ideal breeding medium for treehole mosquitoes as well as other types of mosquitoes. The western treehole mosquito is the primary vector of dog and cat heartworm in California. (Suzanne Valente)
- The EIR should analyze the impacts of herbicide use on wildlife in the Natural Areas. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by including additional information and analysis of the suggested sensitive, invasive, and pest species, where appropriate and feasible. Further, the EIR will carefully consider the effects on biological resources caused by trail creation, herbicide application, and dog use areas.

2.18 GEOLOGY AND SOILS

Comments

- Regarding E.13, Geology and Soils, impacts once the projects are in place should be addressed in the EIR. At Pine Lake, off-leash dogs cause erosion that destroys restoration sites. Dog and feral cat waste causes soil and water contamination. These impacts also likely occur at Buena Vista Park, Lake Merced, and McLaren Park. (Golden Gate Audubon Society)
- Regarding E.13, Geology and Soils, Lake Merced, impacts of leaving cypress and pine trees along steep banks that can't support them and resulting soil removal and erosion caused by them falling should be evaluated. (Golden Gate Audubon Society)

- Address the effects of tree removal at Mount Davidson on the quality of the human experience and the hill's viewpoint, including increased noise, altered wind and fog patterns, growth of poison oak, and increased erosion. (Miraloma Park Improvement Club)
- Assess the erosion impacts on neighboring homes that would result from tree removal. (Denise Lapins)
- Address erosion impacts of the removal of 54,000 trees in Sharp Park. (City of Pacifica)
- Address landslides and earth movement that would result from tree removal at Mount Sutro Forest. (Morley Singer)
- Erosion is a significant problem in Golden Gate Heights area, the natural areas, and Grandview, and sand is a significant problem when ice plant's been removed and it goes into the neighbors' yards. (San Francisco Dog Owners Group)
- A forester should evaluate the erosion impacts from cutting trees down. (Nancy Wuerfel)
- The EIR must address the adverse erosion impacts resulting from the removal of trees and nonnative plants. (San Francisco Dog Owners Group)
- Include in the EIR the virtues of eucalyptus trees. Those trees are unique in that they actually grow in the sandy soil and withstand the fierce winds blowing off the Pacific. Studies have shown that eucalyptus trees slow the wind down at least 30 percent in the Presidio. (San Francisco Tree Council)
- Erosion in Sharp Park is a very serious issue and should be addressed immediately, especially with the plan to remove 15,000 trees. (Suzanne Valente)
- The removal of nonnative trees and vegetation prescribed by the SNRAMP is likely to exacerbate the erosion situation. The analysis should evaluate the impacts on the surrounding neighborhoods that would result from tree removal from and destabilization of sand hills. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The EIR must study past erosion sites in the Natural Areas and evaluate the SNRAMP for its potential to cause further erosion in the future. (Karin Hu, Mary McAllister, Nancy Wuerfel)

EIR Recommendations

The EIR will address these comments by including information on the measures outlined in the SNRAMP that are intended to minimize erosion during tree and vegetation removal activities, such as the Best Management Practices that are proposed in the SNRAMP. Additionally, we will incorporate our assessment of erosion effects that was presented in the Initial Study.

2.19 HYDROLOGY AND WATER QUALITY

Comments

- Regarding E.13, Geology and Soils, impacts once the projects are in place should be addressed in the EIR. At Pine Lake, off-leash dogs cause erosion that destroys restoration sites. Dog and feral cat waste causes soil and water contamination. These impacts also likely occur at Buena Vista Park, Lake Merced, and McLaren Park. (Golden Gate Audubon Society)

- To what extent are Laguna Salada, Horse Stable Pond, and their associated wetlands created, recharged, or enhanced by irrigation at Sharp Park Golf Course? (San Francisco Public Golf Alliance)
- How would complete cessation of irrigation at Sharp Park Golf Course affect the salinity of Laguna Salada, Horse Stable Pond, and their associated wetlands? (San Francisco Public Golf Alliance)
- How would reduced irrigation at Sharp Park Golf Course affect salinity of Laguna Salada, Horse Stable Pond, and their associated wetlands? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- What effect does groundwater generated by Sharp Park Golf Course irrigation have on the hydrostatic pressure affecting the seawall? How would complete cessation of irrigation at Sharp Park Golf Course affect the strength and/or integrity of the seawall? How would reduced irrigation at Sharp Park Golf Course affect the strength and/or integrity of the seawall? What are the effects in low-rainfall months vs. high-rainfall months? (San Francisco Public Golf Alliance)
- Address the proposed project impacts on drainage patterns and flood hazards within the Sharp Park area. Analyze the risk of flood hazard on Sharp Park and adjacent residential areas. (City of Pacifica)
- Address the impacts of sea-level rise on the western portion of Sharp Park. (Celeste Langille)
- Address runoff impacts that would result from tree removal at Mount Sutro Forest. (Morley Singer)
- Consider flooding in the EIR—flooding impact, including out into the neighborhood and proposed methods to prevent flooding in all three of the scenarios. (Rabine Runneals)
- Consider the impacts of the storm drainage system off Sharp Park Road, you know, the golf course area. (Mike Pacelli)
- Address the impacts of herbicides on groundwater. (Morley Singer)
- Address the increase in water consumption that would be required for the native plantings. (Morley Singer)
- The removal of 18,500 nonnative trees has the potential to significantly change drainage patterns in many Natural Areas because many are steep hills and canyons. The EIR must evaluate the impact of tree removal on existing drainage patterns in all Natural Areas. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- Provide details on the drainage from Horse Stable Pond to the beach, including water level of the outflow pipe, pump capacity, pump condition, water level and capacity of the gravity outflow line, and the operational status of the gravity outflow line. (San Francisco Public Golf Alliance)

EIR Recommendations

The EIR will address these comments by including information from the Laguna Salada hydrology study in the EIR and including information on expected sea level rise related to global climate change. Additionally, available information on the amount and type of herbicides used in the Natural Areas will be used to evaluate potential groundwater impacts from herbicides.

2.20 HAZARDS AND HAZARDOUS MATERIALS

Comments

- As of May 2009, what aerial spraying is permitted by law for control of mosquito larvae and adults? What aerial spraying is conducted at Sharp Park for control of mosquito larvae and adults, including timing and seasonality? Describe any other mosquito control measures used at Sharp Park. What is the effect of mosquito control measures on the California red-legged frog population? What is the effect of mosquito control measures on residential neighbors of Sharp Park? (San Francisco Public Golf Alliance)
- Address the impacts of herbicide application on people, animals, and insects. (Denise Lapins)
- The EIR must address the adverse impacts of herbicide application needed to control the spread of nonnative plants that results from poor maintenance of the Natural Areas. (San Francisco Dog Owners Group)
- Address the use of hazardous materials for controlling mosquitoes and what you use to keep the mosquitoes down when you increase the number and size of ponds and things like that. (San Francisco Dog Owners Group)
- The proposed activities at Laguna Salada, such as changes to the depth, shape, and vegetation, would result in the development of mosquitoes, which would necessitate the application of pesticides. The staff of the San Mateo Mosquito and Vector Control District would like to work with the Planning Department during the design phase to ensure that changes at the Laguna Salada minimize the potential for mosquito development. (San Mateo Mosquito and Vector Control District)
- The EIR must address the adverse impacts of creating habitat that encourages mosquito breeding, increasing the public health risk from West Nile Virus. (San Francisco Dog Owners Group)
- How will mosquitoes be controlled? (Rabine Runneals)
- Address the impact of increasing mosquito breeding in EIR. That's a real problem at Sharp Park. (San Francisco Dog Owners Group)
- Expanding the wetland will enhance mosquito breeding and will create an uncontrollable situation, knowing that a recent court ruling bans the San Mateo County Mosquito and Vector Abatement District from spraying pesticides to kill adult mosquitoes. (Suzanne Valente)
- Leaving tree stumps on the ground would create an ideal breeding medium for treehole mosquitoes, as well as other types of mosquitoes. The western treehole mosquito is the primary vector of dog and cat heartworm in California. (Suzanne Valente)
- Address the impacts of prohibiting pesticides use on mosquito populations, especially the mosquito carrying the West Nile Virus. The EIR should analyze the impacts of herbicide use on wildlife in the Natural Areas. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- There is no evidence of significant advantage of native trees to resist fire. The Mount Sutro Forest captures moisture from the fog, and tree removal has the potential to dry out this area and alter the wind patterns. Tree removal has the potential to increase fire hazard on the homes near the Mount Sutro Forest. (Morley Singer)

- The restored landscape of native grassland and dune scrub is not less flammable than the nonnative that would be removed. (Karin Hu, Mary McAllister, Nancy Wuerfel)
- The EIR must address the adverse impacts on adjacent homes should prescribed burning escape control. (San Francisco Dog Owners Group)
- The track record for the use of prescribed burns to support restoration efforts indicates that they can burn out of control. The EIR should analyze fire hazards and the use of prescribed burns. (Suzanne Valente)
- The Natural Areas Program should address public safety issues in detail at every park, especially at Sharp Park. (Suzanne Valente)
- Additionally, the Natural Areas Program park proposal ignores the serious public safety issues that should be addressed, especially at Sharp Park. An EIR must cover the public safety issues for humans at every park in detail, as well as provide substantial, reliable, scientific evidence to justify the proposed ecosystem changes. (Suzanne Valente)
- Consider hazardous waste in the EIR. Hazardous waste and materials should be considered because the Natural Areas Program has used pesticides to control invasive species. (Nancy Stafford)
- Toxic lead in the soil east of Highway One is a concern and should be addressed. The possibility of the lead leaching into the groundwater, the stream in the canyon, and flowing to Laguna Salada wetlands would result in the contamination of the sites that the Management Plan intends to restore. (Suzanne Valente)
- Removal of nonnative plants and trees would enhance habitat for small mammals that carry ticks and cause the spread of Lyme disease in the residential neighborhood. (Suzanne Valente)

EIR Recommendations

The EIR will address the potential increase in mosquitoes as a result of the proposed project. Further, the analysis will include the recommendations of the staff of the San Mateo Mosquito and Vector Control District, following consultation on the best measures to limit potential growth of the mosquito population in Laguna Salada. Impacts of using herbicides on the local population, on wildlife, and on groundwater will also be analyzed. The EIR will also address the potential fire hazards that would result from removing trees. Public safety within the Natural Areas will also be addressed. The level of toxic lead in the soil east of Highway One and the potential of lead flowing to Laguna Salada will be analyzed in the EIR. The EIR will also assess the potential spread of lime disease from enhancing the habitat for small mammals that carry ticks.

2.21 MINERAL AND ENERGY RESOURCES

No comments were received on this topic.

2.22 AGRICULTURAL RESOURCES

No comments were received on this topic.

Appendix A

Scoping Notices

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Notice of Preparation of an Environmental Impact Report

Date:	April 22, 2009
Case No.:	**2005.1912E**
Project Title:	**Natural Areas Management Plan**
Project Size:	1,105 acres
Project Sponsor	Daniel LaForte, San Francisco Recreation and Park Department (415) 831-2742
Lead Agency:	San Francisco Planning Department
Staff Contact:	Jessica Range – (415) 575-9018 jessica.range@sfgov.org

PROJECT DESCRIPTION

Fragments of unique plant and animal habitats within San Francisco and Pacifica, known as Significant Natural Resource Areas (Natural Areas), have been preserved within parks that are managed by the San Francisco Recreation and Park Department (SFRPD). In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan (SNRAMP).

Over the course of several years, the SFRPD developed a new SNRAMP, with the final draft plan published in February 2006 and based on the 1995 plan. This SNRAMP contains detailed information on the biology, geology, and trails within 31 Natural Areas, 30 of which are in San Francisco and one (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

A detailed project description can be found in the Initial Study attached to this Notice of Preparation.

FINDING

This project may have a significant effect on the environment and an Environmental Impact Report is required. This determination is based upon the criteria of the State CEQA Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and for the reasons documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

PUBLIC SCOPING PROCESS

Pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, two public scoping meeting will be held to receive oral comments concerning the scope of the EIR. These meetings will be held on **Tuesday, May 12, from 6:30 pm to 9:30 pm** at **County Fair Building Auditorium in Golden Gate Park (9th Avenue and Lincoln Way)** and

Thursday, May 14, from 6:30 pm to 9:30 pm at **Pedro Point Firehouse in Pacifica (1227 Danmann Avenue).** Written comments will also be accepted at this meeting and until the close of business on **May 26, 2009**. Written comments should be sent to Bill Wycko, San Francisco Planning Department, Natural Areas Management Plan, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

If you work for a responsible State agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

April 20, 2009
Date

Bill Wycko
Environmental Review Officer

PLANNING DEPARTMENT
ENVIRONMENTAL REVIEW NOTICE

Notice is hereby given to the general public of the following actions under the Environmental Review Process. Review of the documents concerning these projects can be arranged by calling (415) 558-6378 and asking for the staff person indicated.

NOTICE OF PREPARATION OF EIR

The initial evaluation conducted by the Planning Department determined that the following project(s) may have significant effects on the environment and that an Environmental Impact Report (EIR) must be prepared.

Case No. 2005.1912E: Significant Natural Resources Areas Management Plan
In February 2006, the San Francisco Recreation and Parks Department developed the Significant Natural Resource Areas Management Plan (SNRAMP), addressing 31 Natural Areas in San Francisco and Pacifica. The SNRAMP guides natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance over the next 20 years.

The SNRAMP delineates Natural Areas into management area categories and proscribes both general management activities for all Natural Areas and activities for each Natural Area [RANGE].

Notice is hereby given to the general public as follows:

1) A Notice of Preparation of an EIR was published on April 22, 2009 by the Planning Department in connection with this project.

2) An Initial Study in connection with this project has now been prepared by the Planning Department. A copy of the report can be obtained for public review and comment at the Planning Department offices at 1660 Mission Street, 1st Floor Planning Information Center. The report can also be viewed on-line starting April 22, 2009 at www.sfgov.org/planning. Referenced materials are available for review by appointment at the Planning Department's office at 1650 Mission Street, 4th Floor. (Call 575-9018 to schedule an appointment.)

3) Public scoping meetings will be held to receive oral comments concerning the scope of the EIR on **Tuesday, May 12, from 6:30 pm to 9:30 pm** at **County Fair Building Auditorium in Golden Gate Park (9th Avenue and Lincoln Way)** and **Thursday, May 14, from 6:30 pm to 9:30 pm** at **Pedro Point Firehouse in Pacifica (1227 Danmann Avenue)**.

4) Public comments concerning the scope of the EIR will be accepted from April 22, 2009 to 5:00 p.m. on May 26, 2009. Mail written comments to the San Francisco Planning Department, Attn. Bill Wycko, Environmental Review Officer, Significant Natural Areas Management Plan NOP/IS, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

SAN FRANCISCO EXAMINER

This space for filing stamp only

450 MISSION ST 5TH FL, SAN FRANCISCO, CA 94105
Telephone (415) 359-2723 / Fax (415) 359-2659

VIRNA BYRD
S.F. PLANNING DEPT
1650 MISSION ST #400
SAN FRANCISCO, CA - 94103

EXM#: 1574645

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California)
County of SAN FRANCISCO) ss

Notice Type: GPN - GOVT PUBLIC NOTICE

Ad Description: ENVIRONMENTAL REVIEW NOTICE - PRELIMINARY MITIGATED NEGATIVE DECLARATION

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of the SAN FRANCISCO EXAMINER, a newspaper published in the English language in the city of SAN FRANCISCO, county of SAN FRANCISCO, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of SAN FRANCISCO, State of California, under date 10/18/1951, Case No. 410667. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

04/22/2009

Executed on: 04/22/2009
At Los Angeles, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Signature

PLANNING DEPARTMENT ENVIRONMENTAL REVIEW NOTICE

Notice is hereby given to the general public of the following actions under the Environmental Review Process. Review of the documents concerning these projects can be arranged by calling (415) 575-9025.

PRELIMINARY MITIGATED NEGATIVE DECLARATION

The initial evaluation conducted by the Planning Department determined that the following projects could not have a significant effect on the environment, and that no environmental impact report is required. Accordingly, a Preliminary Mitigated Negative Declaration has been prepared.

Public recommendations for amendment of the text of the finding, or any appeal of this determination to the Planning Commission (with $500 filing fee) must be filed with the Department within 20 days following the date of this notice. In the absence of an appeal, the Negative Declaration shall be made final, subject to any necessary modifications, 20 days from the date of this notice.

2007.1464E : 1036 – 1040 Mission Street - The 15,192 square foot (sf) project site at 1036 - 1040 Mission Street (Assessor's Block 3703, Lots 79 and 80) in the South of Market neighborhood is zoned C-3-G (Downtown Commercial District) and is within a 120-F height and bulk district. The proposed project includes demolition of an existing surface parking lot, and construction of a thirteen-story, 120-foot-tall building with up to 132 affordable housing units (130,000 gross square feet [gsf]), ground-floor retail/non-profit space (up to 1,300 gsf), and about 7,450 square feet of open space in a ground-floor podium-level courtyard and roof deck. No off-street parking is proposed. (CONTRERAS)

NOTICE OF PREPARATION OF EIR

The initial evaluation conducted by the Planning Department determined that the following project(s) may have significant effects on the environment and that an Environmental Impact Report (EIR) must be prepared.

2005.1912E : Significant Natural Resources Areas Management Plan In February 2006, the San Francisco Recreation and Parks Department developed the Significant Natural Resource Areas Management Plan (SNRAMP), addressing 31 Natural Areas in San Francisco and Pacifica. The SNRAMP guides natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance over the next 20 years.

The SNRAMP delineates Natural Areas into management area categories and proscribes both general management activities for all Natural Areas and activities for each Natural Area [RANGE].

Notice is hereby given to the general public as follows:

1) A Notice of Preparation of an EIR was published on April 22, 2009 by the Planning Department in connection with this project.

2) An Initial Study in connection with this project has now been prepared by the Planning Department. A copy of the report can be obtained for public review and comment at the Planning Department offices at 1660 Mission Street, 1st Floor Planning Information Center. The report can also be viewed on-line starting April 22, 2009 at www.sfgov.org/planning. Referenced materials are available for review by appointment at the Planning Department's office at 1650 Mission Street, 4th Floor. (Call 575-9018 to schedule an appointment.)

3) Two public scoping meetings will be held to receive oral comments concerning the scope of the EIR on **Tuesday, May 12 at 6:30 p.m. at the County Fair Building Auditorium in Golden Gate Park (9th Ave and Lincoln Way) and on Thursday, May 14 at 6:30 p.m. at Pedro Point Firehouse in Pacifica (1227 Danmann Ave.).**

4) Public comments concerning the scope of the EIR will be accepted from April 22, 2009 to 5:00 p.m. on May 26, 2009. Mail

* A 0 0 0 0 0 1 1 1 4 1 6 1 *

written comments to the San Francisco Planning Department, Attn. Bill Wycko, Environmental Review Officer, Significant Natural Areas Management Plan NOP/IS, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

SAN FRANCISCO PLANNING DEPARTMENT
ENVIRONMENTAL REVIEW NOTICE

AFFIDAVIT OF PUBLICATION OF LEGAL NOTICE in the

Pacifica TRIBUNE

STATE OF CALIFORNIA } ss.

County of San Mateo

PUBLIC NOTICE

SAN FRANCISCO PLANNING DEPARTMENT

ENVIRONMENTAL REVIEW NOTICE

Notice is hereby given to the general public of the following actions under the Environmental Review Process. Review of the documents concerning these projects can be arranged by calling (415) 558-6378 and asking for the staff person indicated.

NOTICE OF PREPARATION OF EIR

The initial evaluation conducted by the Planning Department determined that the following project(s) may have significant effects on the environment and that an Environmental Impact Report (EIR) must be prepared.

Case No. 2005.1912E: Significant Natural Resources Areas Management Plan

In February 2006, the San Francisco Recreation and Parks Department developed the Significant Natural Resource Areas Management Plan (SNRAMP), addressing 31 Natural Areas in San Francisco and Pacifica. The SNRAMP guides natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance over the next 20 years.

The SNRAMP delineates Natural Areas into management area categories and proscribes both general management activities for all Natural Areas and activities for each Natural Area [RANGE].

Notice is hereby given to the general public as follows:

1) A Notice of Preparation of an EIR was published on April 22, 2009 by the Planning De-

ELAINE LARSEN declares under penalty of perjury:

That she is and at all times hereinafter mentioned was a citizen of the United States, over the age of eighteen years and a resident of Pacifica, California, and was at and during all said times the printer, Editor and Publisher of PACIFICA TRIBUNE, a newspaper published weekly in the City of Pacifica, County of San Mateo, State of California; that said newspaper is and was at all times herein mentioned, a newspaper of general circulation as that term is defined by Section 6000, 6001, and 6008 of the Government Code of the State of California, and that a judicial decree establishing the newspaper as one of general circulation has been obtained, as provided in Title 1, Division 7, Chapter 1, of said Government Code, and as provided by said sections is and was at all times herein mentioned in compliance with the requirements of Title 1, Division 7, Chapter 1, of said Government Code; that at all said times said newspaper has been established and published in said City of Pacifica, County of San Mateo, State of California, at regular intervals for more than one year preceding the first publication of the Legal Notice herein mentioned; that said Notice was set in type not smaller than nonpareil and was preceded with words printed in black face type not smaller than nonpareil describing and expressing in general terms and purport and character of the Notice intended to be given; that the Legal Notice in the above entitled matter, of which the annexed is a true printed copy, was published in said newspaper on the following dates, to wit:

April 22, 2009

that the date of the first publication of said Notice in said newspaper is

April 22, 2009

Executed on April 22, 20 09 at Pacifica, California

Elaine Larsen

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

PUBLIC NOTICE

Availability of a Notice of Preparation of an Environmental Impact Report for Natural Areas Management Plan

Planning Department Case No. 2005.1912E

A Notice of Preparation (NOP) has been issued by the San Francisco Planning Department in connection with this project. A copy of the NOP is available for public review at the Planning Department offices at 1660 Mission Street, 1st Floor Planning Information Counter. The NOP is also available at the Planning Department web site: http://www.sfgov.org/planning/mea.

Project Description:

Fragments of unique plant and animal habitats within San Francisco and Pacifica, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks that are managed by the San Francisco Recreation and Park Department (SFRPD). In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first Significant Natural Resource Areas Management Plan (SNRAMP).

Over the course of several years, the SFRPD developed a new SNRAMP, with the final draft plan published in February 2006 and based on the 1995 plan. This SNRAMP contains detailed information on the biology, geology, and trails within 31 Natural Areas, 30 of which are in San Francisco and one (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

The SNRAMP delineates the acreage within each Natural Area into management area categories based on the management priority—MA-1, MA-2, and MA-3. The management area categories represent differing levels of sensitivity, species presence, and habitat complexity. The SNRAMP proscribes both general management activities that apply to all Natural Areas and management activities specific to each Natural Area.

A detailed project description can be found in the Initial Study that is attached to the NOP.

Public Scoping Process:

Pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, two public scoping meetings will be held to receive oral comments concerning the scope of the EIR. These meetings will be held on **Tuesday, May 12, from 6:30 pm to 9:30 pm** at **County Fair Building Auditorium in Golden Gate Park (9th Avenue and Lincoln Way)** and **Thursday, May 14, from 6:30 pm to 9:30 pm** at **Pedro Point Firehouse in Pacifica (1227 Danmann Avenue)**. Written comments will also be accepted at this meeting and until the close of business on **May 26, 2009.** Written comments should be sent to Bill Wycko, San Francisco

Planning Department, Natural Areas Management Plan, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

If you work for a responsible State agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

If you have any questions about the **environmental review** of the proposed project, please call Jessica Range at 415-575-9018.

Appendix B

Scoping Meeting Materials

May 12 Scoping Meeting

SAN FRANCISCO
PLANNING DEPARTMENT

Agenda
Natural Areas Management Plan Environmental Impact Report
Public Scoping Meeting

County Fair Building Auditorium, Golden Gate Park
Tuesday, May 12, 6:30 PM

I. Introduction

- Meeting logistics
- Introductions to EIR Preparers and Project Sponsor
  - Jessica Range – SF Planning Department (EIR Coordinator)
  - Sarah Jones- SF Planning Department (EIR Supervisor)
  - Daniel LaForte – San Francisco Recreation and Park Department (Project Sponsor)
  - John Bock – Tetra Tech (EIR Consultant)
- Purpose of meeting
- Meeting format

II. Brief Overview of Proposed Project

- Questions on the proposed project

III. Summary of California Environmental Quality Act (CEQA) Process

- Notice of Preparation/IS (30-day public review period)
- Scoping Meeting
- Draft EIR (45-day public review period, Planning Commission hearing)
- Comments and Responses Document (approx. 14-day review)
- Final EIR Certification (Planning Commission hearing)
- Questions on the CEQA Process

IV. Public Comment

- Comments on environmental review issues from speakers who fill out a speaker card
- Time limit for each speaker

V. Final Reminders

- Submit written comments to **Environmental Review Officer, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103**, by close of business, **May 26, 2009**.
- If you have questions or comments regarding the proposed project and the environmental process, please contact **Jessica Range** at **(415) 575-9018.**

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

San Francisco Planning Department
Speaker Card

To aid in the preparation of minutes or a transcript, you are requested, but not required, to provide this information:

Please **PRINT** then give to meeting moderator

Please provide a phonetic pronunciation guide to your name if necessary

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

San Francisco Planning Department
Speaker Card

To aid in the preparation of minutes or a transcript, you are requested, but not required, to provide this information:

Please **PRINT** then give to meeting moderator

Please provide a phonetic pronunciation guide to your name if necessary

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

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Planning
Information:
415.558.6377

EIR Public Scoping Meeting
Natural Areas Management Plan
May 12, 2009

PRINT NAME	ORGANIZATION	ADDRESS	E-MAIL ADDRESS	FUTURE NOTIFICATION METHOD
PATRICK SKAIN	PINELAKE PARK NEIGHBORHOOD ASSOC.	300 CRESTLAKE DR SF CA 94132	patskain@att.net	✓ Regular Mail __ E-mail
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EIR Public Scoping Meeting
Natural Areas Management Plan
May 12, 2009

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May 14 Scoping Meeting

SAN FRANCISCO
PLANNING DEPARTMENT

Agenda
Natural Areas Management Plan Environmental Impact Report
Public Scoping Meeting

Pedro Point Firehouse, Pacifica
Thursday, May 14, 6:30 PM

I. Introduction

- Meeting logistics
- Introductions to EIR Preparers and Project Sponsor
  - Jessica Range – SF Planning Department (EIR Coordinator)
  - Sarah Jones- SF Planning Department (EIR Supervisor)
  - Daniel LaForte – San Francisco Recreation and Park Department (Project Sponsor)
  - John Bock – Tetra Tech (EIR Consultant)
- Purpose of meeting
- Meeting format

II. Brief Overview of Proposed Project

- Questions on the proposed project

III. Summary of California Environmental Quality Act (CEQA) Process

- Notice of Preparation/IS (30-day public review period)
- Scoping Meeting
- Draft EIR (45-day public review period, Planning Commission hearing)
- Comments and Responses Document (approx. 14-day review)
- Final EIR Certification (Planning Commission hearing)
- Questions on the CEQA Process

IV. Public Comment

- Comments on environmental review issues from speakers who fill out a speaker card
- Time limit for each speaker

V. Final Reminders

- Submit written comments to **Environmental Review Officer, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103**, by close of business, **May 26, 2009**.
- If you have questions or comments regarding the proposed project and the environmental process, please contact **Jessica Range** at **(415) 575-9018.**

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

San Francisco Planning Department
Speaker Card

To aid in the preparation of minutes or a transcript, you are requested, but not required, to provide this information:

Please **PRINT** then give to meeting moderator

Please provide a phonetic pronunciation guide to your name if necessary

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

San Francisco Planning Department
Speaker Card

To aid in the preparation of minutes or a transcript, you are requested, but not required, to provide this information:

Please **PRINT** then give to meeting moderator

Please provide a phonetic pronunciation guide to your name if necessary

Name: _____

Organization (if any): _____

Address: _____

E-mail Address: _____

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EIR Public Scoping Meeting
Natural Areas Management Plan
May 14, 2009

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Appendix C

Scoping Meeting Transcripts

SAN FRANCISCO PLANNING DEPARTMENT

TRANSCRIPT OF

NATURAL AREAS MANAGEMENT PLAN

ENVIRONMENTAL IMPACT REPORT

PUBLIC SCOPING MEETING

COUNTY FAIR BUILDING AUDITORIUM, GOLDEN GATE PARK

TUESDAY, MAY 12, 2009, 6:30 P.M.

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FILE NO.: A303FA8

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SARAH JONES, EIR SUPERVISOR

FOR THE RECREATION AND PARK DEPARTMENT:

DANIEL LA FORTE, PROJECT COORDINATOR
DAWN KAMALANATHAN, PLANNING DIRECTOR
LISA WAYNE

FOR TETRA TECH:

JOHN BOCK, EIR CONSULTANT
NIHAL OZTEK
MAREN ANDERSON

FOR 3D VISIONS:

KATE GILLESPIE
NICOLE WEST

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TUESDAY, MAY 12, 2009, 6:30 P.M.

--o0o--

MS. RANGE: All right. Good evening, ladies and gentlemen. Welcome to the Significant Natural Areas Management Plan Environmental Impact Report Scoping Meeting.

Tonight, let me just start with the logistics. We have restrooms located right there to your left, and then we also have a drinking fountain. We also have beverages in the back. And there's four exits, and that's in case we need to leave quickly.

So, tonight I hope when you came in you signed in and got a copy of -- we have an agenda. We also have the Notice of Preparation, the one-page notice that we sent out. We also have a CEQA Process Flow Chart; that will help you when we give our presentation on CEQA. We also have a comment form so that you can make written comments to us tonight. We are accepting comments until May 26th at 5:00 p.m., close of business.

We also have a speaker card. So, if you have not done so, and you would like to speak tonight, please get a speaker card from our ladies over there, and fill it out and give it back to them, and we'll be calling people by the speaker card.

All right. I'm going to introduce myself. I'm

Jessica Range. I'm the EIR Coordinator with the San Francisco Planning Department.

This is Sarah Jones. She's the EIR Supervisor. She's also with the Planning Department.

Then we have Dawn Kamalanathan. She's with Rec & Park. We also have Daniel LaForte with Rec & Park, and we have Lisa Wayne with Rec & Park. And we have Kate Gillespie helping us with the scoping meeting this evening.

The purpose of this meeting is to take public comment on the scope of the environmental review for the Natural Areas Management Plan, and we'll get a little bit more into what "environmental review" means. We'll talk to you about the CEQA process.

Tonight, we're going to present a brief overview of the proposed project, the Natural Areas Plan, and we'll take comments at that time on -- or not comments, questions. If you have some questions on what the project is, we'll take questions then. We will then give you an overview of the CEQA process, explain where we are, and we'll take questions on CEQA at that time. Then, we will open it up to public comment.

And we do have a court reporter here to take public -- to help record the comments, so if you can please state your name when you speak, that would really

be helpful for us.

And then just a reminder: We'll be taking public comments until May 26th, close of business, and if you have any questions, you can contact myself, Jessica Range. We will have my contact information up there, or I also have business cards.

So, with that, I'm going to turn it over to Lisa Wayne, who will be giving you the overview of the project.

MS. WAYNE: Can everybody hear me okay? Great.

Thanks, everyone, for coming out.

Again, My name is Lisa Wayne, from the Recreation and Park Department Natural Areas Program.

Here we are again, and it's kind of unusual to not have an overflow room when Natural Areas is on the agenda, but we're glad you're all here today.

So, I'm tasked with basically talking about the management plan: a little bit of the history and a little bit of the conclusions. For those of you who haven't been involved in this process for a while, it will give you some background information.

Do I have some kind of clicker or --

Okay. So, natural areas -- natural areas are remnants of San Francisco's heritage -- natural heritage, and they contain wetlands, and creeks, and

sand dunes and oak woodlands, as well as urban forests, and scrub environments, and grasslands. They contain rare, and endangered, and unique species. They also have a habit for wildlife: a number of common wildlife species -- birds, butterflies, lizards, snakes, and things like that; and they also offer recreational amenities, so benches, viewing, a respite from the city, nature trails, and opportunities for environmental stewardship.

There are 32 natural areas in -- that are going to be covered by the EIR. The management plan covers 31, but since the time of the publication of the Management Plan in February 2006, we discovered another very small natural area, known as the Everson/Digby Lots, kind of near -- in the central part of the city near Billy Goat Hill and Fairmount Park. And these places range from under an acre to a few hundred acres, and as you can see all of the green spots around the map there, they're spread throughout the city, as well as in Sharp Park in the city of Pacifica in San Mateo County.

Natural areas acreage, there's some 1,105 acres covered under the Natural Areas Management Plan. About 237 of those are in Pacifica, the remainder of those are in San Francisco. And you can see the breakdowns of land versus water mass, and then the proportions of

Recreation and Park Department land that is made up of these natural areas.

The Natural Areas Program began in 1997 when a number of civic, and environmental, and community organizations lobbied the Recreation and Park Department, and then General Manager Joel Robinson, to initiate a community-based restoration program. And essentially, since that time, the staff has grown from one to nine at this point in time with a mission to preserve, and restore, and enhance remnant natural areas through community-based stewardship.

So, part of the initial selling the program to our department was to say: You can get lots and lots of volunteers and community members involved in this work. And, on average, we work with about 13,000 volunteer hours per year doing habitat restoration, erosion control, trail maintenance, and everything else you can imagine in natural areas.

The background now on the plan itself, you could almost see it back to 1991 with the adoption of the open space element of the General Plan, which is Policy 2.13, which is now being actually revised to some extent, and that plan identifies some basic policy decisions around natural areas: that they should be preserved, that they should be managed, that they should be -- you know,

recreational opportunities should be allowed as long as they're in keeping with the natural environment.

In 1995, our commission adopted the Significant Natural Resource Areas Management Plan, and the development of the plan that we're discussing today as the project for the environmental review really began in 1998, and it was a -- it's a refinement of that 1995 plan. So, as you can see, we've been working on this for a good long decade now as a department.

There's a number of other relevant plans that are also considered, and you can read more about them in the plan itself.

So, the -- did he get the keys -- no, I'm sorry. Before. One more. Okay, yeah.

So, actually, when this slide was done, it was eight years to develop. Now, I guess, we can say 10 years to develop.

There's been a number of drafts. In 2002, the citizen task force draft was released, and there are a number of advisory committees that evaluated it.

In June 2005, the public draft -- hit it again, if you would, John -- the public draft was released in 2005, and there was a six-week comment period, three major workshops that took place around this plan, and 2,700 comments were received on that plan. And from

those comments then, the final draft was prepared in February 2006, and it was approved by our commission as the project to receive environmental review. So, now, that's essentially where we are today.

The "Management Plan Goals" -- there's a number of goals that are outlined in there. There are kind of the general categories: conservation and restoration, education, research, stewardship, on down the line. And essentially, there are then different objectives within those categories. So, for example, it identifies in the "Restoration and Conservation" category to prioritize restoration work, to identify important wildlife areas, and protect and improve them, for example, working with local universities and schools to foster environmental education, and research, and so on.

So, more specifically, some of the Management Plan objectives -- I won't read through all these here, because I think I only have 10 minutes -- but essentially, develop an inventory, which we've done. It's all in a geographic information system -- looks at the plants that are found in that area, the wildlife, the soils, the trails; develop recommendations for improving wildlife habitat and sensitive species, prioritize restoration activities, develop guidelines for recreational uses, et cetera.

The organization of the plan, it's -- I forgot to bring a copy -- it's about that big (indicating), and it's organized by these chapters and numbers, and the parenthesis give the chapter numbers. So, the introductory chapters really deal with: What's the setting right now? What's it look like on the ground in these various places?

And then general recommendations that apply to many different natural areas, so having to do with, say, for example, preserving breeding-bird habitat by avoiding particular times of year for vegetation removal.

And then what may be of most interest to everyone is in Section 6, is every single natural area broken down with recommendations. And again, it has to do with plants, and animals, and trails, and other related features.

And as a way to prioritize the work for the natural areas, we broke down each natural area into management areas -- Management Areas 1, 2 and 3. And the Management Area 1 are the most sensitive, so they would contain your rare, and endangered, and unique species; Management Area 3 would be your least sensitive. So, this is a way to prioritize, again, nine staff, 1100 acres, 13,000 volunteer hours. You can kind

of do the math. It's really important to have a prioritization, so that's built into the plan.

And so, if you look in the naturalist plan at the end of each chapter, you'll find what's known as the "Management Area and Trail Plan Map." And so -- it's a little bit hard to see in this, but you can see this is Mount Davidson. The whole land mass is broken down into those red, gold and green colors that correspond to those MA1's, MA2's, and MA3's.

And each of the charts themselves that are on this page will outline a summary of the actions that would happen in each one of those specific polygons.

So, what I like to say to people is, "If you don't want to read the" -- I forgot what it is -- "800-page report, and you're interested in a particular set of natural areas, this is the place you want to go, the last page of each chapter."

So, in general, just kind of summarizing overall what the plan talks about, particularly focusing in on impact areas and summaries of more, say, controversial items, if you will, in the category of trees and vegetation, the plan identifies places for the reintroduction of sensitive species for local conservation purposes, and those are listed species as well as locally significant ones; reduction of invasive

plant cover, revegetation and replacement of trees and vegetation where invasive species are removed.

So, in the category of invasive trees, this is primarily the Tasmanian Blue Gum, and we've estimated that there's something like 64,000 invasive trees in these natural areas. Again, that's an estimate.

The plan identifies approximately 3400 of those to be removed. These numbers are rounded, and so, 95 percent of them, essentially, to remain. And in Pacifica, in the upper watershed, where you've got much higher, in many ways, conservation value, the recommended numbers of trees to remove are much higher, so 28 percent of the trees in the upper watershed.

In the category of "Animals and Wildlife," there's "Improving Habitat for Sensitive Species." So, I know there's people from Pacifica here, and we have a couple of very important sensitive species down there, but, also, it talks about more common species that we really don't find anymore in San Francisco or in very few places, like the Pacific Horse Frog.

Improving wildlife habitat, protecting nesting sites, and, to a certain extent, to modify -- to maintain but modify the off-leash dog use in parks.

Then "Trails and Access," we mapped approximately 40 miles of trails in a one-square-mile land mass, if

you can put your head around that. And the plan identifies roughly 30 miles of those trails to remain, and about -- you can't see it very well, but the red says, "Social trails to close 10.3 miles." So, about 25 percent of the social trails to close.

And social trails are shortcuts off of major trails, maybe they lead from people's backyards. They often go straight up and down hills and have issues about erosion and -- and whatnot. And then 1.1 miles of new trail.

So, that is kind of the quick-and-dirty in my ten minutes.

The Management Plan is online on our website on SFNAP.org. You click on "Natural Areas 20-Year Management Plan," and it's broken down by chapter, so if you're interested in a particular natural area, say like Glen Canyon, you can just click on "Glen Canyon" and see what the recommendations are, including the maps.

That's it. Are there any questions about my presentation or the Management Plan?

MS. KAMALANATHAN: Good evening, everyone. My name is Dawn Kamalanathan. I'm the Planning Director for the Recreation and Park Department, and I'm actually here today just to give a brief update on some legislation that many of you, or some of you, might be

aware of and have some questions on that's been working its way through the Board of Supervisors over the past week and actually passed at its second reading at the full Board of Supervisors.

This legislation that was introduced by Supervisor Mirkarimi directs the Recreation and Park Department over the next three months to develop three concept plans for the golf course at Sharp Park, and those three concept plans, one is keeping the existing 18-hole golf, the second is a partial -- a 9-hole golf course, and then some partial restoration of natural habitat, and the third concept plan is the elimination of golf as a use at Sharp Park.

The legislation further directs that the Department continue to explore with the GGNRA, and also consult with the City of Pacifica and County of San Mateo, to explore options for transferring the property to one of those entities over the long term.

So, I wanted to just kind of give an update on that legislation and where we are with it.

We are moving forward with this analysis, and we hope to present to the Rec/Park Commission and the Board of Supervisors our findings at the end of the summer. But it's important, I think, for folks to understand that any direction that the Board of Supervisors or

Rec/Park Commission gave to the Department with respect to converting the golf course in whole or in part would be addressed through a separate environmental review process from this Significant Natural Resource Areas Management Plan. So, just to make that clear, those issues will be addressed through a separate environmental review process should the Board and/or Rec/Park Commission feel it's appropriate to give us direction to pursue a change of use at the golf course.

So, I wanted to make that announcement. Okay. Great.

MS. JONES: Sara Jones. I think I'll keep going without the microphone.

Hi, I'm Sarah Jones. I work for the Planning Department, and the reason that we are involved with this process right now in Planning is that the San Francisco Planning Department is charged with conducting environmental review on all projects, public and private, within the city of San Francisco or under the jurisdiction of San Francisco.

So, we're moving on now into the discussion about why we're here tonight, which is the environmental impact report being prepared on the Natural Areas Program.

We'll go -- and what I'm going to describe to you

is just a little bit about what the California Environmental Quality Act is meant to accomplish and what you can expect to see out of this process.

So, the reason that CEQA exists, the purpose of CEQA, is to provide information to decision-makers about potential environmental effects of any kinds of projects. It is meant to be an informational document, and it is meant to provide the information that decision-makers need.

Completing a document, an environmental document, under CEQA, does not indicate any type of approval or disapproval of a project; it is simply providing information and public disclosure of the environmental effects of a project.

So, what do we look at under CEQA? What topics are we going to analyze?

You see here a list of 18 -- or 17, separate topic areas that we are required to analyze. The State sets this out for us in their guidelines that -- called the "California Environmental Quality Act Guidelines," the CEQA guidelines, and that is the State document that guides us in our work.

We have, I believe, some copies of our checklist that we use. Basically, within each of these topic areas that are covered, we have several questions that

we need to answer on -- in terms -- in order to identify the potential areas in which a project might have impact.

Some of you might have seen the initial study that was prepared for the Natural Resource Area Program. Several of these topic areas were what we call, "scoped out" in that initial study. What that document allows us to do is say -- we go through our entire checklist and determine what areas do not have potential significant environmental effects, and, you know, put out the disclosure about that, and then that allows us to then focus the actual environmental impact report on the significant impact, so we don't have to get into the issues that really aren't pertinent to a particular project.

This is an interesting process -- just as a side note, this is an interesting process for those of us in the Planning Department, because, I'm sure, as you can imagine, most of the projects we're looking at are buildings and projects where we're not too concerned about things like biological resources or other topics that are generally not pertinent in San Francisco, so, that has been an interesting project for us to be working on.

UNIDENTIFIED SPEAKER: I have a quick question on

that slide.

MS. JONES: Uh-huh.

UNIDENTIFIED SPEAKER: Is that what an EIR does, looks all of those 18 issues?

MS. JONES: Yes.

UNIDENTIFIED SPEAKER: And answers them?

MS. JONES: And answers a number -- there's several questions within each of those issue areas.

UNIDENTIFIED SPEAKER: What about the initial study? Does that still -- does that go over those 18 items?

MS. JONES: It does go over the 18 items, but for some of the items, it says there are potentially significant impacts. We're looking at that in the EIR. So, for some of the items -- and you can see our initial study either online, we have a copy here, and you can get copies from us, and you'll see --

UNIDENTIFIED SPEAKER: But if they don't do an EIR, we don't get that. You could stop now.

MS. JONES: No, we can't stop now. We can't -- we can't because we've determined that there are potentially significant environmental impacts from this project, so, under CEQA, we are required to analyze those in the EIR.

UNIDENTIFIED SPEAKER: So you'll be doing a full

EIR?

MS. JONES: Yes.

UNIDENTIFIED SPEAKER: And not a mitigated?

MS. JONES: Not a mitigated negative declaration.

In a mitigated negative declaration, you go through the same initial study, but under one of those, you determine that all potentially-significant impacts can be mitigated to a level of less-than-significant. So, you have specific measures that you put into place to say, you know, "This will reduce these impacts."

If you can come to that conclusion in your initial study, then you can go ahead and issue what's called a "mitigated negative declaration."

We did not come to that conclusion in this initial study, so that is why we put out a notice that said we are preparing an environmental impact report on this project.

UNIDENTIFIED SPEAKER: And that's here today.

MS. JONES: Yeah, that's what we're doing here.

UNIDENTIIED SPEAKER: And you mentioned that some things were eliminated for consideration. Which of those 17 things were eliminated?

MS. JONES: I am going to let Jessica answer that question, or John. I don't remember off the top of my head, so I don't want to say something incorrect.

UNIDENTIFIED SPEAKER: And on the list that is there, where is forestry?

MS. JONES: Forestry would come under "Biological Resources."

MR. BOCK: So, actually, most of the resource areas, because of things like public services, and mineral and energy resources, just aren't even germane to the topic. So, the six areas that are right now being carried forward into the EIR are land-use and land-use planning.

UNIDENTIFIED SPEAKER: Can you speak up?

MS. JONES: Yeah. Why don't you --

MR. BOCK: So, the first topic area that's being carried forward into the EIR is number one on the list, land-use and land-use planning, and that provides some of the general context for these actions that are taking place both for the property itself as well as surrounding land uses for each of the natural areas.

We're also carrying forward cultural and paleontological resources, and further down the list we're looking at recreation, because that is a central component of the management of the natural areas; also looking at biological resources, hydrology, and water quality. And then, I believe, cumulative impacts is one of the other topic areas that wasn't a focus of the

initial study that will be addressed in detail in the EIR.

MS. JONES: I also want to add that if, upon review of the initial study, you feel that we have, you know, missed something or come to -- you know, if you don't agree with the conclusion, or you think that we do need to address a point in more detail, that's part of the purpose of this scoping process. We are scoping out this next step in the analysis.

So, that's what -- you know, this is not set -- what we've said in the initial study is not the last word on the topic.

MR. BOCK: I would just add to what I said. I skipped over "Esthetics"; that's another one that we're looking at, particularly with regard to the issue of tree removal. So, we've been doing an initial simulation to show where there are some of the large-scale tree removals scheduled that will be part of the EIR analysis as well.

MS. JONES: But these are questions specifically -- or, generally, about the CEQA process --

UNIDENTIFIED SPEAKER: There are questions, yes --

MS. JONES: -- but if they're specific to the environmental review on the project, I'd rather take them in the scoping time, so --

UNIDENTIFIED SPEAKER: Well, my question is: When you say "we" are doing this environmental review, in the time the Department normally reviews the scope of structures, this is an enormously complex subject --

MS. JONES: Right.

UNIDENTIFIED SPEAKER: -- so when you say "we," who's doing it? Is there a consultant or --

MS. JONES: We have a consultant. Tetra Tech is the consultant, and John --

UNIDENTIFIED SPEAKER: Who hired them, and what are their qualifications -- special qualifications?

MS. JONES: John Bock, who just spoke, is the project manager from the consultant, and we reviewed their qualifications and selected them for the work, and, you know, you can -- we have detailed information on their qualifications, and we have their proposal that is available for review if you'd like to arrange to do that.

UNIDENTIFIED SPEAKER: Was there a competitive search for other consultants or --

MS. JONES: The consultant is actually chosen by the Recreation and Park Department. The Planning Department had input into it, but the consultants are -- -- that's the responsibility of the project sponsor, so that was -- so they managed that process.

UNIDENTIFIED SPEAKER: Did you give any specific instructions to the consultant?

MS. JONES: We gave specific -- once the consultant is hired, we give specific direction. We work -- once the consultant is hired, then they're essentially consulting to us, to the Planning Department, and we give the direction to them as to the scope and content of their work.

UNIDENTIFIED SPEAKER: And you tell them you'd like to get through, and you want to cut down acres of trees, and "You make this happen for us"?

MS. JONES: No, that's not what -- that's not our purpose here. What we're doing is, we say, "Here's the project that was defined that is being proposed by" -- in this case, a public agency. We say, "This is the project that is being proposed. Will you give us the analysis of what the environmental impact of that would be?"

UNIDENTIFIED SPEAKER: And how much does that cost?

MS. JONES: I don't recall the amount of the --

UNIDENTIFIED SPEAKER: Who pays for it?

MS. JONES: The Recreation and Park Department.

UNIDENTIFIED SPEAKER: 800,000.

UNIDENTIFIED SPEAKER: Rec & Park is sponsoring

it, and they're hiring a consultant?

MS. JONES: This is how the consultant contracts are managed for the Planning Department. We have an agreement with the consultants that they are reporting to us and not to the project sponsor.

UNIDENTIFIED SPEAKER: Someone just said that it cost $800,000. Is that --

MS. JONES: That sounds about right.

UNIDENTIFIED SPEAKER: And that's coming from the Park & Rec's budget?

MS. JONES: Yes.

UNIDENTIFIED SPEAKER: And then you're cutting and firing gardeners in Golden Gate Park?

MR. LA FORTE: Sir, if you have no specific questions about the content --

UNIDENTIFIED SPEAKER: No, sir, I have a specific question.

MR. LA FORTE: My name's Daniel LaForte. I'm a planner with the Recreation and Park Department. I manage the RFP process for the Tetra Tech contract. In their RFP, we did look for special qualifications.

MS. JONES: What's a RFP?

MR. LA FORTE: Request for Proposals.

So, we did go through that process, and we did bid out this project, and we did -- the Recreation and Park

Commission did award the contract to Tetra Tech in October of 2007. The amount of the contract that was awarded was, I believe, $722,000.

I'd be happy to share that information with any of you who ask for it.

Again, in the RFP, we did a request for specific qualifications, and we were looking for specific consultants that had a background in these kind of issues. And we felt that after reviewing Tetra Tech's proposal, that they had met those qualifications and were certainly qualified to do this work.

UNIDENTIFIED SPEAKER: Thank you.

MS. JONES: Next?

UNIDENTIFIED SPEAKER: At this point, I just wanted to clarify -- number 13 is "Geology and Soils." One of the concerns in this program is about the erosion that happens to be a part of the program, not because it of it, but it just happens to be a part of it. And I was really shocked to see that there's nothing specifically checked off. It is my understanding that that does not rise to the level in doing all of the proposed work, that geology doesn't have any --

MS. JONES: Well, that's actually -- that comment is one to raise in the -- when we actually take the scoping comments.

UNIDENTIFIED SPEAKER: Obviously, it hasn't been raised in any other way; is that correct?

MS. JONES: It was analyzed in the initial study. I don't recall off the top of my head what the conclusion in the initial study was, as to whether it was a --

UNIDENTIFIED SPEAKER: I want to make sure, because I'm curious.

MS. JONES: The initial study reached the conclusion that geology would not result in significant impact. Again, if you disagree with that conclusion, then raise it in the scoping comments, and we'll revisit the topic in the context of the EIR.

Yes?

UNIDENTIFIED SPEAKER: Was number 15, the "Hazardous Materials" --

THE REPORTER: I can't hear her.

MS. JONES: You know what? Again, this is just about the general CEQA process right now, because -- the reason that I'm trying to hold it to that is that there's a certain -- once the comments are made on the scoping, that's what's in our record and that's what we're dealing with, and we have to make sure we capture everything, and also, that's a comment period.

So, I want to give people an opportunity to ask

questions about the general environmental review process, but if you have specific issues about the review for this project, the next item on the agenda will be the opportunity to raise that.

UNIDENTIFIED SPEAKER: I'm sorry. Could you tell us what numbers you're going to been covering? Is it going to be mentioned again?

MS. JONES: Yeah. You know what --

MR. BOCK: Yeah, so there are -- the six topic areas that are being carried forward in the EIR are number one, land-use and land-use planning, number two, esthetics, number four, cultural and paleontological resources, number nine, recreation, number 12, biological resources, number 14, hydrology and water quality. And then outside of those specific resource topics, we'll also be looking at the cumulative impact, which will be looking at the impact of this project on what other projects are happening around the natural areas, and looking at the -- this total impact resulting from this combined action.

UNIDENTIFIED SPEAKER: Wind and shadow is not covered?

MR. BOCK: Wind and shadow, and all the other ones that I didn't mention, have all been screened out through the initial study process as being less than

significant for -- less than significant and mitigable impact through the -- that initial CEQA review process.

UNIDENTIFIED SPEAKER: Okay. Thank you.

MS. JONES: Just to -- you know, just to add, it is -- you know, if you want to take the opportunity, we still have about two weeks left in the scoping process. If you want to take the opportunity between now and the end of the scoping period to review the initial study, I know it's kind of onerous because it's a fairly thick document, but the best way to -- the most effective way to comment on the EIR scope is to review what the conclusions were in the initial study, and if you do that, you can submit your comments in writing. There's no different weight given to written versus oral comment, and you can -- you know, you can submit us a dissertation in written comments, and -- there's no limit.

So, I definitely encourage people to take the full opportunity that the scoping period offers to do that.

I'm going to move on and finish up this part, and then we can get to your comments.

This outlines the steps in the CEQA process. This is a brief version of this handout, which is available up at the front.

We are at the -- at the top bullet, there's a

"Notice of Preparation and Initial Study," and we are holding this scoping meeting to provide people the opportunity to comment orally if they wish to do so. We will take all of the comments that we receive during this scoping period, both written and oral, and take them into account in our preparation of the next document that we're preparing, which is the draft environmental impact report, and that's the document where we go into detail on those potentially-significant impacts, and discuss them, and look at alternatives to the project that would reduce or avoid, you know, some or all of the potentially-significant impacts.

We also have to look at a no-project alternative in terms of what would result if this project does not go forward.

We will publish that draft document, and everybody will get notice when it's available, and there will be a public hearing before the Planning Commission on that document, and, again, another opportunity to submit written comments, and then we take all of those comments that are submitted on the draft EIR and respond to them in writing in a comments and responses document, make whatever changes to the EIR are needed, and that is -- that modified document with the responses is what is brought to, again, the Planning Commission for

certification.

And by certifying an environmental document, what the Planning Commission is declaring is that the document is full, and complete, and prepared in accordance with the requirements of CEQA. So, again, it's not saying that it's a good project, or a bad project, or a project that they think should be approved; they're saying: We did the environmental review.

So, those are the steps that we will be going forward with over the next several months.

Here are some of the logistics. I think all of this information is available in one way or another up at the front, but, again, you have until May 26th to submit your comments. The Notice of Preparation is available online. If you don't have access to it that way, you can get in touch with Jessica. She can get you a copy or let you know where you can go to review one.

Also, as Lisa mentioned, you can go to the Natural Area Program website to actually look at the plan itself.

Your comments are sent to Bill Wyko. He is the Environmental Review Officer, so he's in charge of the Major Environmental Analysis Division of the Planning Department. Send him your comments. If you have any

questions, call Jessica.

And I think that about covers it.

Oh, and we'll just go over the -- how we'll conduct the public comment period.

Again, the purpose of this public comment is to get your comments onto the record, so we're not responding to the comments; we're just taking them at this time, and we'll respond to them in the environmental document. So, please, you know, obviously, general sort of kindergarten rules -- be respectful. Also, speak clearly.

We noted here that it's optional to state your name. Actually, we need you to state your name. That's the only way we know to be able to follow up with you, if necessary, and to make sure you get all the future documents.

We're going to have a three-minute time limit tonight, so if you could adhere to that, that would be great. And again, if you have more to say, you know, please submit it in writing.

And again, this is about what should be included in the environmental review document, so it's not about the merits of the Natural Resources Area Management Plan; it's about what you think we need to be analyzing on the environmental side.

So, that's it, and we'll get to your comments now.

Oh, I'm sorry.

UNIDENTIFIED SPEAKER: We still get to ask questions after this or what?

MS. JONES: Well, again, if you have any more questions about the general environmental review process, ask them now; otherwise, if you want to talk to me afterwards, that's fine, too.

MR. LA FORTE: I'll be coming around, also, with the microphone so that everyone can hear the comments, so I'll be passing around the microphone.

UNIDENTIFIED SPEAKER: This is a general question. In terms of the biological resources, will Tetra Tech be relying on information from, I guess, 1995, or will they be doing their own measurements, or what?

MS. JONES: They were -- I believe their scope involves -- excuse me, independent information gathering as well.

UNIDENTIFIED SPEAKER: What?

MS. JONES: Independent information gathering.

Since what they're analyzing is the Natural Resources Area Plan, they need to, you know, look into the issues in a different way than they did. But if you have detailed questions about that, you can definitely ask John afterwards.

UNIDENTIFIED SPEAKER: One more general question. What is the percentage of time in the EIR -- final EIR, that say you have actually incorporated public comment? Would you know a general percentage?

MS. JONES: I'm sorry?

UNIDENTIFIED SPEAKER: When people make comments, it might be worthy of being considered affecting your final recommendation. Can you tell us what that percentage of that frequency might be? Five percent of the time for incorporating public comments? 50 percent of the time?

UNIDENTIFIED SPEAKER: Would you repeat the question? I'm sorry.

MS. JONES: She wanted to know how often we actually incorporate what is said by members of the public, and I think it's more -- if there are -- you know, if there are issues that are relevant to the environmental analysis that we are not otherwise addressing, then we incorporate them. You know, it's -- I think probably every EIR we prepare is -- is directed to some degree by -- to one degree or another by issues raised by the public.

MR. BOCK: And just to build on what Sarah presented, and what's going to come out of the general presentation, the purpose for the scoping period of what

we're actually trying to do is to scope out the issues that should be addressed in the EIR.

So, we've already gone through that initial internal process. By comparing the initial study to that process, we've identified what we think are the important issues to carry forward into the full EIR analysis. If you disagree with that, or think we missed something, or there's additional information that we didn't incorporate into that analysis that we didn't identify in reviewing the initial study, then those are some of the topics that we want to hear about today and over the next couple of weeks through the period that Sarah mentioned.

As Sarah mentioned, we're not here to vote for or against implementing the plan. We're really trying to focus on the environmental issues. That's one of the reasons we were presenting that slide with those 18 topic areas. If you can make your comments either specific to those or specific to one individual natural area, that will focus our analysis on what you wanted to be addressed in the EIR.

And so, as we mentioned, we're going to start off with the first speaker. If you haven't turned in a yellow comment -- speaker comment card, please turn it in to one of the women manning the sign-in table. We've

got probably about 15 or 20 folks right now in hand, so we're going to go through this list, and please, if you can, keep it to three minutes, and speak as clearly and slowly as you can so the court reporter can report accurately all the things you're saying so we can make our documentation on that.

And so, our first speaker will be Richard Harris, and he'll be followed by Patrick Swain.

MR. HARRIS: I'm Richard Harris. I'll be speaking for the San Francisco Public Golf Alliance.

We have questions that I put in an eight-page letter that I've submitted, and so if any of the participants here are interested in those questions, see me, and I'll give you a copy of the letter.

I just want our questions on the record. They have to do with the relationship between this EIR process and the process that the Board of Supervisors asked the Park & Rec to look into a possible change of use of the golf course when we have a serious environmental question relating to that, and she may have ran through that area, but if they do anything to the golf course, that in itself will be subject to a completely separate EIR than this.

So, with that, I will submit my letter, put it on the record, and thank you very much.

MR. SWAIN: Good evening. My name's Pat Swain. I'm a member of the Pine Lake Park Neighborhood Association. I was on the Advisory Committee for the Natural Areas Program, so I met quite a few people who are here tonight, and I've heard quite a few comments with regard to the Natural Areas Program over the years.

One comment I do have to make is, I'm concerned that there be any further compromises with regards to the number of areas within the environmental review. I would hope at the end of the environmental review, we would continue to have 32 areas for consideration and for inclusion in the Natural Areas Program.

I specifically live close to Pine Lake Park. This is a rather large area under consideration. It has had a capital improvement project take place within its boundaries in the last three years, and as a result of that, a lot of the issues that were brought up in the environmental review were also at least discussed with the community over the years. Unfortunately, at the end of that process, not all of them, indeed, have been maintained, or a lot of the comments or promises made by Rec & Park lived up to. This has to do with staffing, but also the result of conflicts within various user groups.

I find the problem with the Recreation and Parks

Department, which can be problematic, particularly as to the Natural Areas Program. I would like it to be the Parks and Recreation Department in terms of dealing with natural areas, but that's not necessarily the case.

So, there have been a lot of compromises made in the course of developing the master plan, and I'm hoping at this point, as you move forward, you'll try to hold yourself to that document as much as possible.

Neglect has taken place, unfortunately, with regard to enforcement. A lot of the outcome of your review may not reach fruition in the future. There are problems with other agencies interfacing with Recreation & Parks. Last year in Pine Lake Park alone there were instances where people came in and stole ducks. We've had problems with off-leash dogs in the lake. The entire west end of the lake -- the west end of the park is supposed to be on-leash.

We've all tried to mitigate these things and work together, but the environmental review really does -- it needs to be tough on some of these issues and realistic. There's a lack of enforcement on the part of the police department. So, there are certain agencies that will fail this process. Rec & Park may be one of them. The police department certainly will be with regards to enforcement from historic perspectives.

So, I'm hoping in terms of the environmental impact report you'll be realistic, you'll be strict in terms of adhering yourself to the management plans that currently exist, and I'm really hoping at the end of this what we can find ourselves a way to move forward. All of us have interests in seeing that these areas are better. Our off-leash dog friends have interests. They have activities they want to participate in. They also have areas they want to see restored, maintained, and improved.

So I'm hoping you can pull all that together in the context of the environmental impact report. We need to have significant efforts made to try to improve these areas.

Thank you.

MR. BOCK: As I mentioned earlier, if you can keep to the time limit, that will be appreciated. We want to make sure everyone that's interested in speaking tonight gets a chance. Obviously, the speaking forum this evening is not your only opportunity to comment. You can fill out one of the comment cards and turn that in at the sign-in table, or you can send in your written comments any time over the next two weeks before the end of the comment period on May 26th.

So, our next speaker is Nancy Rosenthal followed

by Morley Singer.

MS. ROSENTHAL: Hi, I'm Nancy Rosenthal, a 27-year resident of San Francisco. The last five years I volunteered with the Natural Areas Program. I came before you two years ago to promote the NAP, and I'm here again to encourage you to proceed with the environmental impact report.

The following are concerns I would like the report to address:

Number 1, the fragmentation of natural areas. Our natural areas should be managed in a coherent and consistent plan for wildlife, rare plants, and ecosystem processes. The areas are already fragmented between different agencies or institutions. Further fragmentation by designing portions MA1, 2, and 3, and allowing less restrictions on MA3, will only speed up the destruction of what's left.

Two, evaluate the impact of leaving 95 percent of the invasive trees in the natural areas.

On Mount Davidson, where ground space is open after last winter's storm knocked down some trees, several native plants once again sprouted. Removing more of these understory-killing trees can bring back native plants and reestablish a healthy and diverse ecosystem.

Three, further evaluate the environmental impact of off-leash dog use. Ninety percent of dog play areas are in our significant natural areas. Natural areas cover only 27 percent of park lands. There should be room in the other 73 percent of some dog play areas.

Number 4, evaluate the impact of trails. Currently, hundreds of miles of trails criss-cross the natural areas. Any decision for improving or closing existing trails should be based on a comprehensive approach to trail planning. New trails through natural areas are not necessary.

Number 5, evaluate management alternatives for Sharp Park. The report should provide information for making a selection that maximizes ecological and endangered-species management and promotes the recovery of the San Francisco garter snake and the red-legged frog.

MR. BOCK: Thank you.

Our next speaker is Morley Singer, followed by Dan Murphy.

MR. SINGER: I'm speaking for a substantial number of the neighbors around the Sutro forest, and I will submit detailed comments in writing subsequently, but I'm just astounded by some of this process. I don't mean to malign the good people who are doing a complex

job up there, but is global-warming a secret, and the effect of trees? They take up carbon dioxide and give off oxygen.

There are several organizations around the city devoted to having more trees in San Francisco. Trees are precious in any city. It's a beautiful forest. The light is beautiful, it's full of birds, it's full of animals, it's full of places to walk. Why not just relax and enjoy the unique beauty of it? I don't understand any thought of cutting down trees and destroying this magnificent forest.

The second major item which I'd like to have on the record is that much of the questions here are a result of the very powerful mistrust that the neighbors have of the Natural Areas Program and skepticism of the Planning Department. We've had previous battles with the Natural Areas Program over the Past 10 years, and they've demonstrated a striking indifference and callousness to neighborhood interests, to try to cut down all the trees on Tank Hill, and some years ago, trying to cut down all the trees -- all the trees in Sutro forest.

Just in case some of you neighbors were doubtful or think I'm extreme, I have a picture here that two weeks ago a sign was put up at the Belgrave entrance to

Sutro forest that says "No Public Access." I have a picture of it if you're doubtful. Now, why would that sign go up without talking to the neighbors? There's hundreds of people in the neighborhood walk in there every day with their dogs and cause no harm in the forest.

The third major item I want to address is using the threat of fire to instill fear in people. That forest is always damp. It sucks out water from the fog, and it's always wet in there. I sail on the bay, and maybe two days out of the year, the wind comes from the east; 363 days a year, it comes from the west. The forest is a windbreak for all of the structures east of the forest, from Parnassus Street all the way to up to the top of Twin Peaks, and if you take down the trees, then the westerly winds would just fan a fire that's coming from the forest area.

There's so many totally cockamamie things, that to leave out wind effects in the environmental impact report is striking. It makes me skeptical about the qualifications and the charts given to the consultants, like "Get this through at any cost."

I don't want to take any more of my time. I'll submit a detailed comment that the neighborhood is going to oppose this project. I suggest, to save the taxpayer

money, you abort the project now. It's amazing that you spent $800,000 on the project when the city is cutting back on all kinds of essential services.

MR. BOCK: Thank you, Mr. Singer.

Our next speaker is Dan Murphy, followed by Tony Belway.

MR. MURPHY: I'm Dan Murphy, and I represent Golden Gate Audubon Society.

Golden Gate Audubon supports restoration of habitat for wildlife, particularly birds. The tree -- I'll just make a number of points here, basically.

The tree removal is necessary. We only support it during the non-nesting season, and we believe trees such as those used by colonial birds like herons and cormorants should be preserved. So should trees used by hawks and owls for nesting. We urge that habitat that's necessary for birds, such as California quail, Spotted Towhee, Wrentit, and other species restricted to coastal scrub should be established and maintained with the specific goal of continuing those specific habitat systems.

We support restoration and appropriate management practices at Sharp's Park that will ensure it as a viable habitat for red-legged frogs and San Francisco garter snakes.

And finally, we certainly agree that restrictions on off-leash dogs must be enforced in natural areas and other groomed areas as the earlier speakers mentioned.

Thank you.

MR. BOCK: Thank you.

The next speaker is Tony Belway, followed by Greg Gaar.

MR. BELWAY: My name is Tony Belway. I think I have a kind of unique perspective to this. I'm a native to San Francisco. I've lived here for more than 50 years. My wife is a school teacher at Terra Nova High School in Pacifica. We consider ourselves environmentalists: Members of the San Francisco Beekeepers, organic gardeners.

I'm also an avid golfer. I believe that we should not be making choices of golf versus the environment; that lacks vision.

What we do know is that 75, 80 years ago, an artificial ecosystem was created at Sharp Park. In that 80 years, they built housing surrounding that park for 35,000 people. The golf course and the property around there is the singlemost important community venue in that city.

Also in those 75 years, we know that frogs, salamanders, and snakes, that is where they survived, is

on the golf course in this artificial ecosystem that was created with the construction of the golf course.

We know that the property was given to the City of San Francisco specifically for this golf course. It's not nature. Golf at its best embraces nature, but it's not nature.

So, if you close Sharp Park and tear down 13,000 trees, and tear -- you'll need to also tear down the seawall if you want to make it nature -- are you going to have more lizards? Are you going to have more frogs? You're going to have another artificial ecosystem that will be different, but you can't tell nature what to do, and if you go into this thinking that you are going to -- that golf is an obstacle to make way for nature, you're just short-sighted.

There's room for everybody here. Right now there's room for the lizards, and the frogs, the salamanders, and the golfers. I know. I was out there this weekend. They worked -- the Recreation and Park Department has done a great job in reducing the use of pesticides on golf courses, working around the nesting areas. There can be more that can be done.

But I think when you look at the issues that you brought up about cultural issues, you talked about this being a community-based deal, have you talked to the

community of Pacifica? Believe me, they have their own very strong points about this. There are nine golf courses in San Francisco; there is one in Pacifica.

And this is their community venue. I know this weekend there was the major fundraiser for the Terra Nova High School athletic programs, which was a golf tournament. Next week there's one for the Cabrillo School middle school, a music program, another golf tournament at Sharp Park. It's the only place you can go and have a banquet just about in the entire city.

Yes, you need to work to restore habitat. I believe that. But I don't think that golf is an obstacle, and any solution to this that doesn't include golf, lacks vision.

MR. BOCK: Thank you for your comments.

Our next commentor is Greg Gaar, followed by Jack Rauch.

MR. GAAR: My name is Greg Gaar. I'm with Nature in the City, and I've been volunteering for the Natural Areas Program since it started in 1997. And when you go out and work with the Natural Areas Program, you learn about the impact of the invasive trees, the off-leash dogs, the non-native plants, and you realize that we're running out of time to save San Francisco's natural areas.

So, my concerns may be similar to other people who will speak here tonight, but I would like to know what the environmental impacts are of leaving 95 percent of the invasive trees in our natural areas. If you go to areas where you have dense eucalyptus, dense cypress and pine, you'll find there's no biological diversity in the understory because the shading, the fog drift, it destroys the native plants that have been there for hundreds of thousands of years.

Ninety percent of the off-leash dog areas in San Francisco are in the natural areas. We need to reduce some of the off-leash dog areas.

I love dogs. I get along better with dogs than people, as a matter of fact, but if we're going to save the less cuddly critters, like the alligator lizards, the native birds, the garter snakes, we need to reduce the off-leash dog areas in our sensitive natural areas.

I'm concerned about the cutting of new trails through sensitive natural areas -- a mile and a half of new trails to be constructed. I would like to know the environmental impact of cutting new trails through wildflower fields and how that will have an environmental impact.

The management plan has already been heavily compromised during a process over the last three or four

years, and you need to take that into consideration.

And finally, as we have in all environmental impact reports, I would like to know what the environmental impacts of a no-management plan alternative. I mean, I think that's required in the plan.

Thank you very much.

MR. BOCK: Next up is Jack Rauch, followed by Jake Sigg.

MR. RAUCH: I don't think I'll need that. Thanks.

My name is Jack Rauch -- that's spelled R-a-u-c-h -- and I live in Pacifica, and I'm also a member of San Francisco Archers, which has an archery range there in the Sharp Park property that San Francisco has in the Sharp Park area.

I'd like to say a number of things, but, first of all, thanks for the coffee this evening. That was very nice of you.

Another is that I'm encouraged by the fact that you got an outside organization to look at this closely. It saves us from pseudoscience, and people with their own agendas, and people who never saw a piece of land they think didn't belong to them and they should have control over it.

Sharp Park was donated to San Francisco for

recreational purposes, and I'm glad to see that the focus -- some focus will be there. I'd like to see that as a foremost consideration. Obviously, I'm an archer and not a golfer, but the people who donated it to San Francisco wanted it to continue in that fashion; that's why they gave the land to San Francisco, for recreational purposes.

There's no reason why changes can't be made that will accommodate the preservation of species and also the preservation of golfers. Archery, by its very nature has a very low impact on the environment, and so our ox isn't being gored here, but I think that, you know, really, recreation ought to be something that's very closely looked at. The benefits of it to all of us are enormous.

I want to thank you very much.

MR. BOCK: Next is Jake Sigg, followed by Nancy Stafford.

MR. SIGG: Jake Sigg, California Native Plant Society.

The issue of trees, you mentioned 64,000 trees in the natural areas.

UNIDENTIFIED SPEAKER: I can't hear you, Jake.

MR. SIGG: Adolph Sutro did not plant that many trees. They have been increasing by reseeding

reproduction for many decades now, and so much so that they're imperiling their own health. They're way too crowded; for their own benefit, they need thinning. And I think that the EIR ought to consider the impact both on the trees themselves, but more particularly on the biodiversity. Every year that passes, there are fewer and fewer native plants and more and more weeds. And trees can be weeds, too.

So, you know, most of that is lack of funding, but we need to reverse that trend, and we need to consider cutting far more than the minuscule amount of trees. 64,000 is really absurd.

Somebody said 90 percent of the dog-play areas on RP land are in natural areas, and what the hell is the this program for? We're supposed to be preserving our heritage, our natural heritage, and yet we're letting this stuff go on.

So, that should be addressed.

In terms of Sharp Park, we need to select the restoration alternative that maximizes the probability of protecting the snakes, that they will recover, so that the protection by the Native Species Act won't be necessary.

The red-legged frog used to be the Jumping Frog of Calaveras County. A lot of plants and animals are

becoming endangered because their habitat is strange. We need the maximum alternative in Sharp Park, and I think that would be a no-golf alternative.

MR. BOCK: Thank you. Our next speaker is Nancy Stafford, followed by Sally Stephens.

MS. STAFFORD: My name is Nancy Stafford. I'm with the San Francisco Professional Dog Walkers' Association.

To modify or -- or loss -- I mean, the modification or loss of existing off-leash areas is not acceptable unless you're going to identify replacement property. 35 to 40 percent of households have dogs nationwide. In San Francisco, I suspect that number is closer to 40 percent. As many as 150,000 dogs reside in San Francisco, and the number continues to grow. How are you going to accommodate them?

Introducing -- I want to address -- the reason such a large percentage of off-leash areas are next to natural areas is because dog owners used the land when no one else wanted to use it. It wasn't good for building on, no one wanted to go up in the hills, and the dog owners used it, and now you want to prevent us from using these areas.

Introducing endangered or threatened species into areas where there are none would threaten active

recreational opportunities when open space is at a premium. The esthetics of tree removal is only part of the equation when talking about trees. The effects of the wind patterns, existing species, erosion, all needs to be investigated; geology and soils need to be part of the equation; and hazardous waste should be considered because -- hazardous waste and materials should be considered because the Natural Areas Program has used pesticides to control invasive species.

I think that, overall, while I think saving native plants is very important, and I support the program, I think the program is too large to be successful. I don't think it's cost-effective or practical in its current situation. One-third of park land is a lot to take away from such a large urban area.

Thank you.

Oh, and I support golf in Sharp Park. I think there needs to be a lot of different uses in that park, more than just native plants.

MR. BOCK: Next is Sally Stephens, followed by Ethan Elias.

MS. STEPHENS: Hi, my name is Sally Stephens, S-t-e-p-h-e-n-s, and I'm from San Francisco Dog Owners' Group, and also Golden Gate Heights Neighborhood Association.

Several quick comments: When you talk about -- if you close areas that are currently off-leash and close them, you have to look at the environmental impact on traffic, air pollution, and global-warming, the reason being that most people walk to their neighborhood park with their dog. If you close off those neighborhood parks, they're going to have to drive to a park across town in order to get to a legal off-leash area. And Muni and public transit is not an option because you can't have dogs on the Muni during rush hour. Before and after work is the normal time for walking your dog.

In addition, the EIR needs to look at the effects of the immediate closures of the off-leash areas that are called for in this management plan, plus the effects of future closures that might be affected by an expansion of the natural areas into the off-leash areas.

The 90 percent number, by the way, is wrong. I believe the management plan is at 80 percent. Still, it's a significant amount of off-leash that's going to be lost.

In addition, I think that when you look at recreation as one of your things, you also have to look at the impact on recreation of the introduction of the especially threatened native species. What we see at Sharp Park is that if there's a threatened or endangered

species, or even a sensitive species, suddenly the federal government just gets involved, and we lose all local control of those areas, and that's not something we necessarily want to do. We have to make sure that we retain local control of our local parks.

When you get to the impact of removing trees, you have to look at wind, increased wind, and you have to look beyond the park itself. All of our parks are surrounded by densely-populated areas, lots and lots of trees. In the Golden Gate Heights area, the natural areas, and Grandview in particular, have lots of houses right around there. You have to look at the impact on the homes and the people who live around there of removing trees on wind. Also erosion is a significant one in that area, and sand is a significant problem when ice plant's been removed and it goes into the neighbors' yards.

I think you also have to look at -- the initial study said that you're going to proscribed burning. You have you to look at the impact -- potential impact on, again, these neighboring houses if you have a wildfire that goes out of control. We get really high winds there in the afternoon. Any kind of proscribed burning down there, it can be potentially quite disastrous.

And finally, if you actually look at the impact on

the -- the impact of increasing mosquito breeding. That's a real problem at Sharp Park, and that gets into the issue of these hazardous materials and what you use to keep the mosquitoes down when you increase the number and size of ponds and things like that.

And finally, just look at the impact of poor maintenance on a lot of these problems. If you look at most of these areas now, maintenance is extremely poor, lots of plants die. So, that may affect future plans, too.

Thank you very much.

MR. BOCK: Next is Ethan Elias, followed by L-Danyielle Yacobucci.

MR. ELIAS: Hi, I'm a neighbor near the Mount Sutro forest.

There seem to be a couple of groups that are clearing, but I think the natural area the Rec people have already started clearing near the Belgrave entrance where that "No Public Access" sign is posted, if it's any indication of what's to come, it looks terrible. Esthetically, it's a mess. There are stumps left. Everything's been clearcut. And the neighbors weren't notified at all.

There's a thriving biodiversity of birds in that area, and it's literally become quite silent now. It

was shocking. It was very shocking to go up there and see it, and the neighbors were completely shocked.

It also took away any privacy from one of the houses right next to the park.

I believe in native plants, and I believe in restoration, but I also believe in a middle ground, and if these eucalyptus trees were maintained and perhaps thinned, because some of them are dying, you know, we might be able to work out something where everybody could get their needs met a little bit. It seems very Draconian to me to chop down all the trees and replace them all with natives.

To be truthful, none of us are natives here. If we wanted to give San Francisco back to the Miwoks, then I'd understand, but I just think a compromise is necessary.

Thank you.

MR. BOCK: Thank you. L-Danyielle Yacobucci followed by Tom Borden.

MS. YACOBUCCI: Hi. Thanks for having us at the meeting tonight.

It's quite shocking you can cut down a tree if birds aren't nesting in it. I just think that's just outrageous. I would like the EIR to -- you need to look into that. If you take these trees down, where are the

birds going to nest?

Calling a tree a "weed" is another outrageous statement, with all due respect, I have to say. Maybe we need to include in the EIR what is a weed and what is not. That's part of my definitions problem with this document. The definitions are really lacking.

I'm glad to hear that there's going to be a full EIR. I didn't realize that.

I'd like to know what would be the impact of no non-native animals -- raccoons, possums, cats. If you remove them all, what will be that impact? How will the rodent population be affected?

Before I forget, habitat loss for humans is being lost for recreation. It's not just wild animals, native animals, non-native animals; it's humans, also.

I would like the definition of "native." What's the definition of a "native animal plant"? Is it determined by when the animal came here, started living here, transported here?

I'd really like the definition of "substantial effect." It's really important. The study, to me, was lacking -- very lacking, and I'm -- you know, we need more.

What's the definition of a "predator"?

We need definitions. We need all this stuff. We

need a really full impact study.

With feral cats, how you will implement what's described in the Quail Plan? It cannot be one person; it's got to be all the stakeholders.

We were told the plan would be left as is in 2006, and the EIR would answer all our questions, so my comment was we need a full EIR, so I'm really glad we're getting that.

I already mentioned one person in charge of the feral cat recovery, or they're calling it the "Control Plan" now? I don't think it was called the "Control Plan" and the "Quail Plan." I'll have to go back and look that up.

All's we need is clarity of what the NAP is going to do, and I don't get it in this study, and the effect of those actions. Just like somebody said they want to know what's the effect of keeping the natives -- non-natives, what will the effect be of removing all those eucalyptus trees? I mean, if they're not healthy, let's make them healthy. Why do we have to remove them?

We need potential impacts of all topics analyzed.

Education of the public. That's eventually going to be done. These materials need to be approved by public meetings to encourage stakeholders' support so you'll get support from the public. It can't be

materials only from Rec & Park. There are no good versus bad, which is usually what we hear when the educational materials come out. Respect for all plants and animals needs to be nourished and developed.

And I do support this plan. I don't support the scope, and I would support it if this program was more amenable to working with the neighbors and the public; that would be great, too.

Oh, I'm L-Danyielle Yacobucci, which you probably can't spell.

MR. BOCK: Okay, next is Tom Borden, followed by Andrea O'Leary.

MR. BORDEN: Hi, I'm Tom Borden. I'm here representing San Francisco Urban Riders. We're a bicycle advocacy group.

We'd like to see bicycle riding off paved roads in San Francisco parks decriminalized. And I am a criminal like so many other people in San Francisco. Since I moved here from 1979 from Palo Alto, I have been riding my bicycle off the paved roads in San Francisco parks.

And my point is that this is a reality, and, you know, this should really -- bicycle riding off-road should be decriminalized and managed rather than just sort of pretending like people don't do it or shouldn't do it. And that's where we've been working: We've

submitted a plan to Park & Rec.

And we're responsible people. We like to ride our bikes in the dirt, and we want to work with Park & Rec and not be antagonistic.

I'd like to say I'm particularly interested in McLaren Park because it's the best off-road riding in the city, and I agree with the McLaren Trail Plan in terms of closures and whatnot, except for the fact that bicycles are excluded. And I'd like to especially take issue with this issue MP7 in the McLaren Park plan that lumps off-road motorcycles and mountain bikes together, and that's really just -- you know, an off-road motorcycle has more than a hundred times the power than a person on a bicycle, and yet an off-road motorcycle on one pass through the park can leave a rut that you can follow without even having an Eagle Scout badge.

So, I really would like to see those two separated. Motorcycles do a tremendous amount of damage. Most of the trails that are marked for closure that appear on the map are due to motorcycle hill climbs, and we totally agree with that. We want sustainable trails that aren't damaged by people riding their bikes or walking on them.

So, really, my -- what I'd like to say is: We want to work with natural areas, we appreciate natural

areas, we don't think trails -- especially narrow trails going through natural areas, are damaging. And bicyclists will stay on the trails.

Bicyclists will work to maintain the trails. We have a high level of volunteerism. We've got 500 hours in on trails so far this year. So, we just hope that we can work with Park & Rec on this plan.

Thank you.

MR. BOCK: Thank you.

Andrea O'Leary, followed by Peter Brastow.

MS. O'LEARY: I'm Andrea O'Leary, Environmental Quality of Urban Parks.

And this has been a long time coming. I'm really happy to see this finally coming about, and I'm really glad to see that Rec & Park has selected somebody who seems to have all the professionalism that we need, because I think one of the things that's been driving the whole process has been pseudoscience. Everybody is an expert here. And so, one thing in this whole process, which is that whole advisory process, it's getting so bogged down with this whole thing about define, define, define. Well, you defined it, now start all over again, and keep defining it, and define it the way I want to hear it. And it's just madness. It's absolute madness.

So, it's really good that we are at this point here.

One of the big sticklers on this whole thing is this whole thing about, well, define "recreation." If we have 120,000 dogs, then we should have 120,000 acres for the dogs and dog activities. Well, if that's the claim, then we should have more playgrounds in some of these natural areas. We should take some of those areas that are not being respected by off-leash dog owners, where boundaries are absolutely irrelevant -- Pine Lake's a perfect example -- to design berms, naturalistic-type elements so that dogs know that's a berm and not go beyond it -- it absolutely does not work. But a playground has a defined area, which, for the most part, lots of people recognize. So, if that's the criteria, then maybe we should really think about a lot of other recreation. I'm being silly here, but that's the point, is that has to be scientific.

I think that another issue that has to be really closely looked at are some of the sort of weird things called esthetics. Well, when I look at Mount Davidson and I see all that fuzz up there, I don't think that's esthetically pleasing. When I compare it to the hills, the natural rolling hills right nextdoor to where some of our friends on Mount Davidson have been working for

years, that's beautiful. You see the contours. You see the subtleties of that hill that I think are quite beautiful and quite esthetic.

So, once again, what does that mean? Seeing dogs roaming up there on Mount Davidson may be a beautiful sight for somebody who likes that activity, but it's not going to be so beautiful for a lot of other people who are being displaced because of that.

So, I really think that we have to get out of the emotion of this, and the politics of this, and get down to the real science.

Thank you.

MR. BOCK: Thank you. Next will be Peter Brastow, followed by Marnie Dunsmore.

MR. BRASTOW: Thank you very much.

Good evening, everybody. I'm Peter Brastow, and I'm a director of Nature in the City. I also used to work at the National Park Service and the GGNRA for many years.

So, I wanted to thank the Planning Department and the Recreation and Park Department for keeping this critical environmental public process moving forward, and also I want to thank the Recreation and Park Commission for authorizing this process in 2006 and 2007.

I want to make a quick comment on something you said, Sarah.

A lot of people say this is about an EIR on the program. It's an EIR on the plan, not on the program. I often hear people say that. The program's here to stay; it's not going to go anywhere over my dead body. The program has been around for a long time, it's budgeted, and it's wonderful resource for San Franciscans. So, what we're talking about is studying the environmental impact of the plan. I just want to make that clear.

So, I want to focus some of my comments around the science to underscore some of the comments that have been already made. The Significant Natural Areas Management Plan is a scientific document by definition. One of the primary goals is to utilize all the biological data on the natural areas.

THE REPORTER: Could you slow down, please?

Could you slow down, please?

MR. BRASTOW: I've only got 16 seconds.

UNIDENTIFIED SPEAKER: We'll give you time.

MR. BRASTOW: Unfortunately, the process is anything but simple or scientific. Under the guise of desiring science, back in 2000, when the Department created a green-ribbon panel of scientific experts, it

included people who were experts in ecological restoration.

THE REPORTER: Slow down.

MR. BRASTOW: Scientists on that panel explained that the native non-species increased biodiversity because they decreased the number of species. They actually totally homogenized the whole landscape. Then, under the guise of inserting science into the process, we have this ad hoc working group who creates this management framework of MA1's, MA2's and MA3's. Well, in my opinion, this severely curtails the ability of the Natural Areas Program to manage the natural areas. I'll give you one example: Tank Hill, where, by the way, they weren't proposing to remove all the trees. It was two trees they were proposing to remove back in the 1990's.

UNIDENTIFIED SPEAKER: Actually, four trees were taken down. There were two more --

MS. JONES: Could we give the people an opportunity to comment?

MR. BRASTOW: Where was I?

So, Tank Hill, one of the areas identified as MA3, has still mostly non-native trees and some other non-native plants. And if we just sort of say this MA3 is essentially off-limits to any kind of ecological

management activity, other than sitting there, then that's not managing the hill in a conservative biological kind of way to really take care of that place.

So, I urge you strongly to discard the MA1, MA2, MA3 approach to the Natural Areas Management Plan.

And in fact, furthermore, and nobody -- I need to dispel the myth that we want to return Golden Gate Park back to the dunes. We're not going to restore that. But we would like to see what we call a "maximum ecological restoration alternative" for the Natural Areas Plan. That doesn't mean removing every single tree, but that means truly managing other areas of the plan.

Thank you.

MR. BOCK: Okay. Our next speaker is Marnie Dunsmore, followed by Martha Hoffman.

MS. DUNSMORE: I'm Marnie Dunsmore with the California Native Plant Society.

I'd just like to comment on the idea that removing trees will necessarily have a negative impact on global-warming. A lot of the results on global-warming and cutting of trees, if those trees are, in fact, replaced by grassland or another type of ecosystem, then that effect of global-warming is often nil or, in fact,

improved, so we do need to look carefully at that.

And I'd also like to comment on -- I love dogs, I've had dogs all my life, but I am a little bit -- I live near Glen Park, and I do get a little bit upset when -- by the end of the summer, in August and September, especially Glen Park, has so much urine in it that it's hard to go there, and it really detracts from the experience for dog-walkers and human beings to go there.

I do think we need to think about kids when we talk about dogs. Especially when she was small, I can't -- I've lost count of the hundreds of times that dogs have been off-leash and just -- often they're very friendly, and I love dogs and I don't really mind it, but it does scare me to have a dog just come up and rush a kid in the face. It just happened to me last week, actually, in Glen Park. And I have known children that have been attacked by dogs. They are scarred with hundreds of stitches on their face. And if you look at the statistics, it's far greater than you -- you would be shocked at the number of times that happens.

So, a de facto off-leash policy in our natural areas really needs to be looked at carefully.

Thank you.

MR. BOCK: Thank you. Next is Martha Hoffman,

followed by Paul Koski.

MS. HOFFMAN: My thoughts are not too organized. Basically, I'd like to share the comments of three people: Ethan Elias, Morley Singer, and L-Danyielle Yacobucci.

I live near the green -- I forget what it's called. I think it's called the "Interior Greenbelt," Sutro forest area, and so that's one of my main areas of concern. I'm a landscape gardener, and I'm a volunteer with the San Francisco SPCA, and I've worked up in that area on feral cat colony management for about the last six years, and I really don't want to lose that forest.

I think one of the concerns I'd like to put in for your thinking is just animal welfare. And people talk about wildlife, and I don't know what one person -- or they probably don't know what I mean when we talk about wildlife. I have a hunch we may not be talking about the same thing, like what are good animals, what are bad animals, et cetera.

I think the animals need to be protected, and that the plan needs to be very sensitive to that, and I think organizations with expertise about animals, like San Francisco Animal Care and Control and San Francisco SPCA need to be very involved in discussions that relate to any animal issues in the plan. Thanks.

MR. BOCK: Thank you.

Our next and last speaker is Paul Koski.

If you haven't filled out a speaker card and wish to speak, please fill one out and provide it to me. Thank you.

MR. KOSKI: Hi, my name is Paul Koski, and I'm a 30-plus-year resident of San Francisco currently living in the Merced Heights neighborhood, and I occasionally volunteer with the Natural Parks Area site where I live in the City. I've come to enjoy, appreciate and value these areas in the City. And listening to the comments that were made tonight, I think it's important that the Rec & Park and Planning people keep in mind the mission of Natural Parks Program, and that's another project program, which is to preserve, restore, and enhance the remnants of natural areas of the city.

And to compromise -- well, to yield to the wishes of local interests or individuals to the degree that it compromises the Natural Park Program's mission, I think, is a serious thing, so I would encourage you, when you review all of these comments and suggestions, that you keep in mind the mission of the Natural Areas Program to -- to maintain these remnants that are so vital in this very urban environment we live in.

Thank you.

MR. BOCK: I did miss a couple of comment cards, so we have next Nancy Wuerfel, followed by Susan Wheeler.

MS. WUERFEL: Good evening. My name is Nancy Wuerfel.

And I'd like to introduce a topic that hasn't been discussed today. We have not even defined the word "environment." When I looked up CEQA, I saw that there was a definition. I don't have it memorized right now, but I'd like to bring back to the fact that my recollection says that it's what is there now. And if we start looking at the fact that what's there now, this plan is pretty dramatic in changing what we've got.

So, number 1, let's go back to the CEQA law and find out what it intends to protect.

Second of all, I'd like to talk about the 340 acres of trees out of the 1100 acres in the Natural Areas Program. This is extremely important because you'd have to say to yourself, Why do we possibly acquire that many non-native trees and put them in the middle of a Natural Areas Program if indeed natural areas was defined only as remnants?

I read Policy 13. I understand what we're talking about here, but I've always questioned the need to have our forests inside of the Natural Areas Program that did

not consider those trees natural. They're not made out of plastic. For Pete's sakes, they weren't here back at some arbitrary point in time, but they're here now.

So, I think we've got a major issue. If the natural areas does not embrace our forests, then cut them loose. Take them out of the natural areas. Let them be guided by the Urban Forestry Department or a division within Rec & Park; then we'll end up having just a reduction down to a mere remnants, and then we won't have the arguments we've got here today.

But when you look at taking the Natural Areas Program and having the trees reduced so that they can become grassland, that's where this conflict starts with the trees. And I'd like to recommend that Tetra Tech very quickly start adding to the budget, if you need to, and you get a forester out there so we can start looking at erosion impacts.

And we're not just talking about esthetics. We're talking about a lot of very important issues, starting with what I just said, which is why you think that it's important to have the forests under the jurisdiction of people that don't like them.

Thank you.

MR. BOCK: Thank you.

And I understand that Susan Wheeler is not

present. So, if there are any other comment cards that I missed, please bring them up now; otherwise, we'll move forward with concluding our presentation this afternoon -- or this evening.

Okay. I want to thank everyone for coming out. I know it's a weeknight and not the easiest location to get to, but we appreciate your coming out with comments.

You still have two weeks to submit comments. You have address information on your agenda.

Your comment cards will go out.

There's also another meeting Thursday night down in Pacifica, so if you didn't get a chance to say all of your comments this evening, you can appear there as well.

And goodnight.

(Meeting concluded at 8:30 p.m.)

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN FRANCISCO)

I, Katherine A. Cuellar, CSR No. 3164, a Certified Shorthand Reporter in and for the State of California, hereby certify:

That the foregoing proceedings were taken before me at the time and place therein stated and thereafter transcribed into typewriting under my direction; and I hereby certify that the foregoing is a true record to the best of my ability.

KATHERINE A. CUELLAR, CSR No. 3164

DATED: May 12, 2009

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SAN FRANCISCO PLANNING DEPARTMENT

NATURAL AREAS MANAGEMENT PLAN

ENVIRONMENTAL IMPACT REPORT

PUBLIC SCOPING MEETING

PEDRO POINT FIREHOUSE

PACIFICA, CALIFORNIA.

THURSDAY, MAY 14, 2009

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MS. RANGE: We will attempt to start. Welcome to the Natural Areas Management Plan Environmental Impact Report Public Scoping Meeting.

I see most of you have found the refreshments in the back. There's also the restrooms located back over there. As you came in, I hope you picked up an agenda. We have an agenda, and on the back is a map showing the significant natural resource areas, 31 in San Francisco, and then we have Sharp Park.

Also is the notice of preparation of the Environmental Impact Report. This is a one-page notice that we sent out. We also have for your -- for your information an overview of the CEQA process and as well as a written comment form. We encourage you to provide written comments.

We also have a speaker card form. We will be -- we will be letting you give public comments, so please fill out a speaker card and hand it over to the ladies in the back over here, and when we open it up for public comment, we will call you by the speaker cards.

My name's Jessica Range. I'm with the San Francisco Planning Department, and I am the EIR coordinator for this project. With me tonight is Sarah Jones, the supervisor for this project, as well as Lisa Wayne with the Recreation and Parks Department, and Daniel LaForte also with Recreation and Parks Department.

We also have John Bock. Where is he? Right there in the front. He's the consultant working on the Environmental Impact Report.

So the purpose of this meeting tonight is to get public comment on the scope of the environmental analysis to be within the Environmental Impact Report. What we're going to do tonight is we're going to present to you a brief overview of the project, and we'll take questions on the project at that time. And then we'll give an overview of the CEQA process, and we'll give you time to ask private questions on the CEQA process, and then we'll open it up to public comment.

Please note we do -- we would like you to please abide by some ground rules. They're listed over there. Just to be respectful. We do have a court reporter here tonight to record your comments, so please state your name carefully, and it's not optional. Although it does say it is optional, we would like to have your name in the record so that we can respond. And we'd like you to adhere to the time limit and focus the comments on the environmental issue.

Also we would like to welcome Julie Lancelle, the mayor. Thank your for coming.

MS. LANCELLE: Sure. Thank you. Thank you for coming to Pacifica. Thank you very much.

MS. RANGE: And with that, I'll turn it over the Lisa Wayne, who will give you an overview of the project.

MS. WAYNE: Can you all hear me?

FROM THE FLOOR: No.

MS. WAYNE: No. Okay. I think maybe I'll just stand up and project.

My name is Lisa Wayne, and I work for the San Francisco Recreation and Parks Department, and I'm the manager of the Natural Areas Program for the City and County of San Francisco Recreation and Parks Department.

What I'm going do in the next 10-or-so minutes is give you a really brief overview of this Natural Areas Management Plan, which I don't have a copy of it. It's about 800 pages, okay, covers a lot of land, and so bear with me. We're going to go on a real quick ride through the nuts and bolts of the plan. And then after my 10 or 15 minutes, I can answer questions about the plan.

So natural areas are not unusual, I'm sure, for Pacificans, what they look like. For San Francisco, they're remnants of the natural landscape, wetlands and creeks and oak woodlands and sand dunes. They're habitat for rare, unique, and endangered species, as well as habitat for other more common wildlife: butterflies, lizards, salamanders, et cetera. And they also offer obviously important recreational benefits, like trails and views and

stewardship --

FROM THE FLOOR: And golf.

MS. WAYNE: -- as well as shoreline access.

One of the things I'll mention -- just because I think I know the crowd here a little bit -- the Natural Areas Management Plan, as has been defined, is exclusive of the golf course. And I can show you maps afterwards if you're interested. They're in the initial study. So it wouldn't be one of the recreational amenities that would be recognized in the plan, but we can -- I can answer questions about that for sure.

So here are the natural areas of San Francisco, the green areas. There's 32 of them overall, including down here at Sharp Park. There's one that was recently added. There was 31 when we did the plan, but there's one that had been recently added here in the middle of the city called Everson/Digby lots, and they range in size from less than one acre to a few hundred acres.

Here's just some acreage statistics. Overall there's 1105 acres of these natural areas in both San Francisco and Pacifica. So about 237 acres essentially includes the wetlands on the western edge of Sharp Park near the levy, and lots and lots of acreage past the archery range and the rifle range up in the canyon east of Highway 1.

The Natural Areas Program is essentially the management group that is responsible for overseeing these environmentally sensitive areas. It started in 1997. We have a modest staff of seven gardeners, myself, and a volunteer coordinator, and the mission of the program is to preserve, restore, and enhance natural areas through stewardship and volunteerism. And we work with about 13- -- we have about 13,000 volunteer hours every year. We've actually worked with the -- the archers in the last year several times. And once we get through all the permitting, we look forward to actually working with you folks as well on some of this habitat restoration activities.

So the program itself was envisioned as a -- as really a volunteer and community-based program and was essentially kind of sold to the Recreation and Parks Department management in a sense to say, look, if you -- if you staff this with a modest number of people, you can bring lots and lots of volunteers in to manage these areas. And that's -- that is the fact that has turned out to be the case.

Just a real brief overview. The plan itself, as I said, is an 800-page document, a lot of information. Actually, there are many events that happened before the preparation of this plan, so I'll briefly go through that. The general plan for the City of San Francisco has an open

space element that defined the protection of these natural areas and some general objectives around how to manage them.

Our Recreation and Park Commission in 1995 adopted significant Natural Resource Areas Management Plan, which is kind of further flushed out those initial objectives in the policy to 2.13. And then in 1998 we began this process of developing this -- this big plan that is the subject today, that is basically the subject that we're going to talk about today.

So actually this is an old slide. So it's been about now 10 years to develop. The -- in June, 2002, there was a citizen task force draft and was reviewed by an advisory committee, couple of advisory committees. They gave input. Then in 2005, created another draft, which had a six-week comment period. We held three workshops, of which I know that there was Pacificans that came to those as well, and we had 2,700 comments on this plan.

And what came out of that is what we're talking about today, this final draft plan that was published in February of 2006 in our commission. Basically our governing body, our board, adopted this plan as the project to undergo environmental review, which essentially brings us to today. We are initiating this environmental review today.

The management plan goes through a number of goals. There's conservation, restoration, education,

research, stewardship, all the way down to design, aesthetics, and safety. So it covers a broad range of topics and goals. So in the conservation arena, for example, it identifies, you know, the need to control invasive species and restore wildlife habitat, as an example, where to promote environment education with school groups and with universities to conduct research, for example.

So more specifically what the management plan did was we inventoried all these lands, looked at all of their biological resources, so all the plants and animals, what was there, whether they were sensitive or just common species. We looked at the geology, the hydrology, where the water bodies were, for example. And those are the main topic areas. And then I think -- sorry -- trails and sort of social uses.

Then among the kind of objectives that are attempted to achieve in the management plan is to develop recommendations for improvement of wildlife habitat, sensitive species, to prioritize these areas because, of course, it's 1100 acres. It's a lot of land with a modest number of people trying to achieve these -- these objectives.

So this plan helps to prioritize activities, identify impacts to natural resources, guides recreational,

you know, development and encouragement of recreational uses of these lands.

So the plan is organized into essentially six chapters, but Chapter 6 has many, many subchapters. One of each for each one of the 32 -- 31 natural areas. So there's a number of sort of characterization chapters, introductory chapters, that really describe the biology, that describe the soil conditions.

So general recommendations in this Chapter 5, and then site specific recommendations in Chapter 6, and try to -- I can maybe even give you the citation for where you find Sharp Park, if you're interested in that. So in that Section 6 is where the -- you would go if you wanted to see exactly what would be proposed for Sharp Park, within that subchapter.

So as I said, the natural areas, there's 1100 acres of subdivided by priority, basically based on their sensitivity or conservation importance. So the most important areas are characterized as Management Area 1. The least important from the standpoint of conservation are Management Area 3's.

So for example, endangered species habitat here in Sharp Park, for example. So the wetlands of Horse Stable Pond and Laguna Salada on the western edge of the golf course would be a Management Area 1 because, of course, it's

habitat for San Francisco garter snake and the California red-legged frog. Similarly, up in the canyon we have a little bit of grassland habitat that's -- that's habitat for mission blue butterfly, also an endangered species.

Management Area 2 is kind of the middle road. These would be the creek system that runs through the archery range and all the way back into the canyon, as well as some of these nice woodlands and scrub areas in the upper canyons. And for example, Management Area 3, for -- and the purposes for Sharp Park really are the -- the large, dense stands of eucalyptus that are pretty devoid of biological diversity, and we don't have endangered species or rare species associated with them.

So if -- if you are interested in kind of just a snapshot view of a particular natural area and what is recommended, I try to point people to this plan, which is in -- it's the last -- the last map, the last page of each natural areas chapter in the plan, and breaks up the natural areas into these coded red, the gold, and the green, based on those priority areas that what we call management areas or MA 1's, 2's, and 3's. And then down here in the box it has a code so that each one of those boxes corresponds to a place on the map. It will give you a description of what is proposed for that particular area.

So I'm going summarize just a few -- a few of the

many, many recommendations of this plan. So in the category of Trees and Vegetation, the plan identifies the re-introduction of sensitive species for local conservation purposes. So these would be listed species as well as locally significant species. They're reduction in the plant cover, including the -- the invasive blue gum Tasmanian eucalyptus tree, and revegetation or replacement, planting with native plants where the invasive species have been removed.

So in San Francisco the recommendations for tree removal are this -- so these are, again, this is all the -- the Tasmanian blue gum eucalyptus. There would be approximate -- there's approximately 64,000 blue gum eucalyptus in San Francisco. These are, again, approximate numbers. We would be proposing to remove about 5 percent of those, leaving about 60,000 trees.

At Sharp Park in the upper canyons, there's a proposal, much more aggressive proposal on eucalyptus tree removal at about 28 percent. And one of the things I want to say about that is we defined trees in this regard as any tree over 15 feet tall, which for a blue gum eucalyptus can mean a three-year-old tree that's about this big around in diameter. So many of these trees are really, by most accounts, saplings.

Also on this, you know, there's no identified

funding for this kind of scale of restoration at this point in time for -- for the management plan. So the idea here on the tree removal would be a very gradual replacement of those eucalyptus trees over -- over time, like over, like, say, a 20-year period.

So in Animals and Wildlife, improve habitats for sensitive species, some re-introductions. For example, the common Pacific chorus frog, which is dwindling all over the Bay Area, is not a listed species or anything, but it is disappearing in all these natural areas. Improving habitat for local wildlife, protecting nesting sites by not doing vegetation during breeding -- breeding season for birds. So these are a number of recommendations to help support wildlife.

And then in Trails and Access, the plan identifies a total of existing trails of 40 miles of trails, and that is essentially 40 miles of trails within one square mile area land mass. So quite a lot of trails, and many of those -- or at least a quarter of them are identified as social trails. So these are minor trails. They're shortcuts. They tend be, you know, straight up and down slopes, difficult to access. If you have been involved in sort of the Mori Point Trails Forever program, you're probably familiar with what a social trail is. So the idea here would be as these main trails are improved, the social

trails would be removed.

And to view the whole plan, we have the entire plan on line on our website. We'll show this again later down -- later down in the presentation.

And I guess one thing I forgot to mention was that within -- because this is covering such a broad area, it's hard for me to get all the slides of everything for Sharp Park.

So the -- in the category of Wildlife, the recommendations within the Natural Areas Management Plan really deal with trying to improve -- to dredge the sedimented channels within the wetlands to improve the water flow, to solve the flooding problems and also provide, you know, the benefit to the -- particularly the California red-legged frog.

Because one of the situations there is that because the waterways are clogging up with sediment, the cattails are those reeds, those reed-looking plants, are becoming more and more prevalent, and we're losing the open water around -- at Horse Stable Pond and Laguna Salada. And that is -- that is a potential negative effect on the frogs because the frogs need open water breeding sites.

So the plan has a number of recommendations like dredging the channels, creating upland habitat within and around Horse Stable Pond and Laguna Salada, restoration of

some of the ice plant areas with native habitat. Those are the kinds of things that you'll find in the recommendations for the biological restoration of Sharp Park.

Can I answer any questions on the plan? Yes, sir.

FROM THE FLOOR: Talking about the dredging and getting the cattails -- whatever you want to call them out there -- it's taken 10 years to get to this stage. How long do you project when things like that will actually happen?

MS. WAYNE: Well, that's hard to say. The question was how long -- you know, it's taken us 10 years to get to this point, and how long will it take to actually address the cattails.

This process, the environmental process, will take about a year-and-a-half and, you know, because there's so many sensitive resources down there at the lagoon, we have to be very careful about our permitting. We essentially can't touch that ground until we get clearance from the federal and state government that -- that oversees those -- that protects essentially those species. So once we have those things in place, we do have mechanism, we do have heavy equipment, we do have resources within our department to address some of these things.

Can we address them all at once? No, because some of them are going to be bigger than our current capacity -- you know, our current staffing and our current resources.

But if you get to that point, Coastal Conservancy has been interested in that property for a while. I think there will be other resources that we can bring to bear down the road. Sorry. It's --

FROM THE FLOOR: Why can't the pond be dredged and still remain a golf course?

MS. WAYNE: The pond can't be dredged until we go through permitting with the federal --

FROM THE FLOOR: Right. But if that's on the table to do that, and there are advocates to close the golf course because the pond is a natural area, why can't it be dredged and returned back to more of its natural state, and the golf course still be allowed to be there?

MS. WAYNE: And you know, Daniel LaForte will maybe take that comment because he's going to actually talk about the relationship between the current resolution on our board of supervisors and this plan.

But I will say that as it stands now, the project in the Natural Areas Plan presupposes -- it assumes that the golf course will stay. So that's the current recommendation. Now, you know, I can't guarantee that that will stay.

FROM THE FLOOR: Right.

MS. WAYNE: If you have questions about the current activities of our board of supervisor, if you can

hold those questions until after Daniel does his --

FROM THE FLOOR: Okay.

MS. WAYNE: -- but I'll answer any other questions. Might defer some of them back.

FROM THE FLOOR: One question, will a lot of the environmental work you're doing with heavy equipment -- dredging, pulling down trees -- wouldn't it have more of an impact on the environment than leaving the natural habitat the way it is?

MS. WAYNE: Well, that's why we need to do the Environmental Impact Report, to make that assessment.

FROM THE FLOOR: But isn't this the plan?

MS. WAYNE: There is a plan which is subject to and --

FROM THE FLOOR: We have not undergone environmental impact at this time?

MS. WAYNE: Right. That's what we're starting right now. That's why we're here today. So hang on. I think we have some other questions in the back. Yes, sir.

FROM THE FLOOR: What is the -- where is the funding coming from and what is the cost factor?

MS. WAYNE: We don't have a full cost assessment of -- for the whole plan. We have -- currently, I have my staff, which is those nine folks plus our minions of volunteers, and we're funded through our Open Space funding.

FROM THE FLOOR: Is this to going to cost the taxpayer money for your project?

MS. WAYNE: Is it going to cost the taxpayer money for my project?

FROM THE FLOOR: Everything's taxes.

MS. WAYNE: The Natural Areas Program is funded -- it has been funded since the mid 1990's by a -- I think it's a one-quarter of one cent taxation for every hundred dollars assessed value property tax. So -- so property owners in San Francisco pay a very small amount of money to fund the Open Space fund, of which our program is a very, very small --

FROM THE FLOOR: Is that a definite amount or -- what you're proposing now, or is it going to increase later? Are we going to get taxed more for -- do you see increasing of a cost factor?

MS. WAYNE: There's a certain baseline that the Natural Areas Program has funded that's mandated through Prop C, which passed several years ago for voters of San Francisco. So there is a baseline support for this program.

FROM THE FLOOR: Will we have any say-so on it, the taxpayer?

MS. WAYNE: On --

FROM THE FLOOR: On any increase that you're going

to come in with later.

MS. WAYNE: We're not bringing forth any tax increases from this directly. There's no -- I'm not sure -- yeah, if it's going to be an increased taxing, it will be voter approved, yeah.

FROM THE FLOOR: Yeah, I was -- like dredging, how do you protect the species that are there now when going in to dredge?

MS. WAYNE: Well, that's part of what's going to be fleshed out.

FROM THE FLOOR: What was the question?

MS. WAYNE: The question was, if you go in and dredge, how do you protect the species that are there now?

So that's part of what would be detailed in this Environmental Impact Report. So there's -- you know, depends on the species you're talking about, but there's fencing --

FROM THE FLOOR: So if you go in and -- like you say, kind of a map -- if you go in and you take so many frogs and snakes with you during the project, it's just at the other side of that they'll gain by doing that?

MS. WAYNE: Yeah. Yeah.

FROM THE FLOOR: So if you take one on the chin first, and then down the road it has --

MS. WAYNE: That's the only way we would be

allowed to do any of the work, if there's a net benefit to the species.

Yes, sir.

FROM THE FLOOR: Just got couple of questions. One, this study that you have, this is as a result of the over the 100,000-dollar Tetra Tech study --

MS. WAYNE: Yes.

FROM THE FLOOR: -- their recommendations?

MS. WAYNE: So tetra Tech is our current consultant, and I think the planning department can answer this more thoroughly for you. But Tetra Tech is our current consultant, and we had a previous consultant that worked on this plan.

FROM THE FLOOR: And just my follow-up question is, now that that study has been pretty well completed -- it was started, I believe, back in 2007 -- is it your recommendation after having studied that report, looking at all these things that you're going to do, that by your recommendations of dredging the pond and doing some simple things, keeping the golf course intact as an 18-hole golf course, that this will satisfy the needs of protecting the red-legged frog and snake?

MS. WAYNE: Well, you know, that -- that will be evaluated in this Environmental Impact Report.

FROM THE FLOOR: But you wouldn't be going forward

with all these things unless you thought this would be sufficient to --

MS. WAYNE: Yeah.

FROM THE FLOOR: -- accomplish those two things?

MS. WAYNE: We have been trying to work closely with Fish and Wildlife and Fish and Game to -- so that we're on the same page with the regulatory agencies so we're not proposing things that are way out of whack from what they would like to see in terms of protections.

FROM THE FLOOR: But, again, I'm just asking. So If you accomplish these things you set forth today and keep the golf course as basically an 18-hole course, it should satisfy the needs to protect what we're to trying to protect?

MS. JONES: Okay. Uhm, I'll see if I can answer that question. I'm with the planning department, and I'm the supervisor on Environmental Impact Report. The Environmental Impact Report, which is what we're here about today is on the Natural Resources Area Management Plan, which does assume the presence of a golf course.

So the golf course issue was not one that was on the table in the context of that plan. So that -- so this plan is meant to achieve the objectives that Rec and Park set out in terms of managing those areas that exist that are habitat areas. It is not meant to necessarily conclude that

those are the ideal conditions in which to maintain a habitat. That's not the question that's being answered.

FROM THE FLOOR: What this plan is making a recommendation and -- is there a specific recommendation to keep the 18-hole golf course or not? It's a pretty simple question.

MS. JONES: This plan does not recommend one way or another. It assumes that a golf course is there.

MS. WAYNE: Maybe if you can hold that -- if there's any more about the plan itself, Daniel will explain about the relationship to -- the concept that we're looking at as well.

Go ahead.

FROM THE FLOOR: What is the primary driver of the plan?

MS. WAYNE: So the primary driver is that our commission back in 1995 directed our department to come up with more detailed plans for all these natural areas.

FROM THE FLOOR: Why? What objective are you trying to address?

MS. WAYNE: Why do they want us to do a more detailed plan?

FROM THE FLOOR: Right. What --

MS. WAYNE: Well --

FROM THE FLOOR: -- is the end result that we're

driving at?

MS. WAYNE: Well, yeah, it's essentially a conservation document, recreation oriented document. How to manage -- how to -- what's the future look and use of all these 31 natural areas.

FROM THE FLOOR: Okay. But why are we trying to conserve?

MS. WAYNE: Well, from the City of San Francisco we have policies in place. I mean, I can throw a few of them on the slide here. We're required -- we, the city, you know, city citizenry through, you know, there's the general plan to protect these places. There's the sustainability plan from department of the environment. There's a number of plans and policies in place that the City of San Francisco says yes, it's important to protect and preserve and to restore these natural areas. Now come up with a plan for it.

FROM THE FLOOR: There must be an underlying reason for that, and here's what I'm driving at. People -- Supervisor Mirkarimi, that April 30th meeting, mentioned that the driver for these arguments was because he was primarily concerned about the liability that puts San Francisco -- or that San Francisco incurs if it's not in compliance with the Endangered Species Act.

Now, I did my research, and I said okay, what does

the Endangered Species Act ask us to comply with? It has asks us to comply with concerning threatened or endangered species on critical habitat. Okay? So next question: Is Sharp Park -- does it fall under applicable habitat?

MS. WAYNE: Okay.

FROM THE FLOOR: Looking at -- looking at documents from the Department of the Interior, it is not. There are only two units in the San Mateo County --

MS. WAYNE: Yeah.

FROM THE FLOOR: -- that qualify as natural habitat. So why are we going through the effort?

MS. WAYNE: Okay. So just one thing. This planned effort is nearly 10 years old. It way predates any of the recent -- any of the recent meetings or any of the recent resolutions.

FROM THE FLOOR: But there isn't any underlying reason why we're doing it.

MS. WAYNE: And, yes --

FROM THE FLOOR: I still don't get what that is.

MS. WAYNE: Well, I think I tried to explain that to you. Maybe we can have a -- a separate conversation about that afterwards, and I can try to explain more to you --

FROM THE FLOOR: If you tell me you have a policy, you have to tell me why do you have that policy.

MS. WAYNE: Because our decision makers and our planning department and a lot of people have come forward and said these places are valuable, and you need to manage them for their natural resources and their values.

FROM THE FLOOR: But there has to be something that defines its value, and that's what I'm driving at. What is that?

MS. WAYNE: Well, I can show you the -- I can give you references to those policies and those plans and maybe that will help you a little bit more.

FROM THE FLOOR: Yes.

MS. WAYNE: And I think the other thing to just keep in mind is that the Endangered Species Act is one driver here, but the other driver here is that the San Francisco garter snake is a fully protected species by the State of California. So what that means is that we cannot touch, we cannot dredge, we cannot solve any flooding problems, we can't do anything out there in that lagoon until we have a permission from the State. And the State will not grant that permission unless it is in the -- it is in the effort to recover or help that species.

FROM THE FLOOR: I think one more point is that it's a two-pronged criteria. One is that it's a threatened or endangered species, and second that species exists in a critical habitat, and that's my point.

MS. WAYNE: Yeah. Okay. It's -- you're right. It does not -- it's not designated as a critical habitat, but that does not negate what we have to do in terms of -- if we need to do anything on that golf course, we need to do a recovery effort. And I can -- again, I can explain the kind of detail that probably other people's eyes are glaring over -- I would be happy to talk to you about that after.

Any other questions on the plan? I'd like to have Daniel actually talk about --

MR. LAFORTE: Can I just mention one thing on that point. You know, the actions that we're taking in -- related to the Natural Areas Plan, the recommendations of Natural Areas Plan will actually ultimately benefit the golf course too. I mean, it will enable us to manage the golf course better and reduce -- by making improvements to the hydrology and dredging it out will actually reduce the incidences of flooding.

FROM THE FLOOR: Sure.

MR. LAFORTE: So it's a secondary -- a very real secondary benefit here to what we're doing.

Yes?

FROM THE FLOOR: Thank you. Where in the process of looking at these adoptions to the EIR or do -- will it -- will the conversation move around the impact on the immediate neighborhood to the golf course, especially north

of the golf course? The original ancient lake bed of Laguna Salada extends up into the neighborhood along Palmetto Avenue (unintelligible) opened floods and insufficient drainage. It's part of the drain. So we're concerned about at what point are you addressing the impact to the neighborhood in these three scenarios and how the EIR affects it and where when we input those concerns.

MS. WAYNE: So I'll answer that in two ways. So the three scenarios -- that's a good segue, and Daniel's going to give everyone some background, and we'll come back to that.

The other issue that you mentioned is, you know, related to flooding, and that's the kind of -- that's the kind of things that would be evaluated through this environmental impact.

MS. JONES: So when we get to the comment portion later on, that would be a great comment to make or write it down and submit it in writing.

FROM THE FLOOR: It's specifically what methods of preventing flooding to the neighborhood would be utilized in those three scenarios also? Is that part of this discussion?

MS. JONES: That's -- that's -- that's what Daniel is going to talk about. That's not part of this project. So that's what Daniel is going to discuss.

MS. WAYNE: I think I'll turn it over to Daniel, and I can answer more questions about the plan, but maybe this is a good time to have Daniel answer.

FROM THE FLOOR: I did have one more question. It's sort of a two-part question about the plan. That is, when is the lead contamination at the old rifle range going to be dealt with? And two, is the archery range going to be left untouched? Or is that -- that also on the table in terms of something happening to it as part of this --

FROM THE FLOOR: Can you repeat the question?

MS. WAYNE: Yeah, the question was -- if I can paraphrase -- so are there any recommendations for the archery range, and what's going to happen with the lead contamination at the rifle range?

So those -- so the lead contamination is a separate project that the -- that our department is working on, and actually actively working on. I don't know if you know the timeframe.

MR. LAFORTE: Yeah, so -- so our capital division -- Daniel LaForte. I'm a planner with the -- thank you, everyone, for coming out tonight.

My name's Daniel LaForte. I'm with the San Francisco Recreation and Parks Department. And just to comment on that, our capital division has prepared a draft removal action work plan, and we are -- that is going very

well. They are working with various state agencies in the final stages of getting their permits to implement that work plan. And I can get you some more information on when that effort will begin. I believe it's in the near future. So I think that's going very well, but I can get you more information on that.

FROM THE FLOOR: And the work in the archery range?

MS. WAYNE: Yeah, and the archery range. The Natural Areas Plan does cover the lands within and around the archery range. They're -- except, you know, sort of trail improvements and invasive plant removal and restoration, there's no -- there are no other recommendations that would directly affect the archery range.

The pond up there is an important place. As you probably know, salamanders and -- there's other -- other important species that use that area. So we do want to be sensitive on, you know, that area and what happens there. But in terms of -- there's no plans to change that land use in any way.

FROM THE FLOOR: Thank you.

MR. LAFORTE: Excuse me. If there's anyone who is standing, there are seats up front here if you need to find a seat.

Thank you, Lisa, for that presentation.

Again, my name is Daniel LaForte. I'm a planner with the Recreation and Parks Department. And as many of you know, there's been a lot of discussion of late on looking at possible scenarios to the reconfiguration of the Sharp Park golf course. And I'd like to say a few words on that and how it relates to why we're here today on the environmental analysis for the -- the significant Natural Resource Areas Management Plan.

The department was given a mandate by the City and County of San Francisco Board of Supervisors to -- which basically says that they mandated three things: one is to look at possible co-management of the golf course with -- with the GGNRA, and two is to look at possible -- to develop three concept plans.

One -- the one concept plan would look at an 18-hole golf course with maybe slight modifications to the golf course to improve hydrology as Lisa mentioned. And that is -- we are looking at that. That is a project description for the environmental document.

The other two concept plans that we are mandated to develop is, one, to look at a limited golf concept, where possibly a 9-hole golf course. And then the third, the concept plan would be to look at no-golf scenario. There would be no golf there.

And we are undertaking that effort now. We just begun. We look forward to working with the City of Pacifica and GGNRA and other stakeholders on the development of those concept plans. And we should have them developed in the next few months.

I want to make clear that any action related to those -- implementing those concept plans, with the exception of the 18-hole scenario, would require a separate environmental review. They are not going to be covered in this environmental review that we're undertaking currently.

And with that -- so I understand there's a lot of, you know, concern about the future, you know, uses of the golf course, but I wanted to make that clear that that -- that is -- would be a separate a -- separate process, and we look forward to working with the City of Pacifica on that. So thank you.

MS. JONES: Okay. Uhm, now we're going to move on to talking about what we are actually working on, doing here under the environmental review process.

My name is Sarah Jones. I work with the planning department in the major environmental analysis division. Our division of the planning department is charged with doing environmental review under the California Environmental Quality Act for basically all projects that occur on any lands within the jurisdiction of the City and

County of San Francisco. So that is where planning comes into this -- into this effort.

We have a few slides that discuss the California Environmental Quality Act, or CEQA, as it's commonly called, analysis process. So I will go through those with you, and it will also be a little bit of an idea of the documents that we prepared so far for this project.

CEQA is for the purpose of public information. It is required to conduct analysis under CEQA of the potential environmental impacts of any projects, you know, whether it be a new building or whether it even be, you know, some of the actions that are anticipated under the Natural Resource Area Management Plan. And the purpose is to inform the public and decision makers of these potential environmental effects of their projects.

Preparing a CEQA document and certifying that that document is complete does not constitute approval of any project. It is simply a required step that one needs to take in order to make sure that decisions are occurring in an informed way.

We look at a lot of topic areas under our CEQA analysis. These are spelled out by the State law that governs CEQA. There are, as you can see, 18 -- or really 17 different types of topic areas that are looked at, and within each of those topic areas we have several questions

that we need to answer.

I don't know if anybody here has gotten a chance to really review the initial study that we prepared, but you'll see that each of these topic areas is addressed. Each of the questions within these topic areas are discussed, and what we have prepared so far for this project is an initial study. What that is is that we have analyzed each topic area and identified those topics for which there are potentially significant environmental effects where we think there could be substantial adverse effects on the environment.

As you can see, we highlighted the -- and just to -- back to that -- the areas where we do think there might be substantial adverse effects are the ones that we go on to study in the Environmental Impact Report.

In the case of National Resource Area Management Plan, we are going to talk about land uses, land use planning, aesthetics. That's primarily tied to the issues around the tree removal that's proposed. We're looking at cultural and paleontological resources, historic resources, archeological. That's what's covered under that.

Recreation, again, since we're focusing on the content of the plan itself, that's going to look at dog play areas. That's going to look at trails, the recreational activities that occur within the areas now. Biological

resources, obviously, is a big topic here. Hydrology and water quality, where we'll start getting into some of those flooding issues. And then we also look at cumulative impacts of this project in association with related, you know, past, present or reasonably foreseeable future projects. So that is -- that's what we'll cover in the Environmental Impact Report.

One thing to note right now in the process we're in the scoping period for this Environmental Impact Report. Particularly upon reviewing the initial study you feel that there might be a topic area for which there are additional issues to discuss or you see a different conclusion, you know, that's the purpose of this meeting, is to take those comments, and you can also submit them in writing.

So we'll just walk through the process. We actually have some handouts that go through all the steps in the CEQA process and maybe help to explain why it always takes so long. We are right here at the beginning, the notice of preparation, saying we intend to prepare an EIR, and the initial study where we do that first read of all the potential impacts of a project. And today we're having a scoping meeting, which is required for certain projects of regional significance like this one.

After we get through this process and we conduct some more detailed analysis of those topic areas I

mentioned, we will put out our draft Environmental Impact Report. That report is circulated to the public. We have a public hearing before our planning commission. We take all of those comments that we receive on the draft Environmental Impact Report, and we prepare a comments and responses document where we address each of those comments in writing and also make any changes to the text of the EIR that are necessary. At that point we are ready to bring a final Environmental Impact Report to the planning commission to be certified as being adequate and complete and accurate.

Is that the last slide, John?

Oh, of course, this is the -- details a little more how to participate in this current process that we're in right now. We are in the scoping period. You have until May 26 to make your comments. Make them orally tonight, although we have a time limit, but -- so if you have more lengthy comments to make, then please submit them in writing. There's no different weight given to anything that's said versus written. So please feel free to submit anything in writing.

You can actually review the document that we prepared on our website. You can also, as Lisa mentioned, review the actual plan on the website that's maintained by Recreation and Parks.

Here's the address to which you can send your

written comments, and if you want any more information, you can contact Jessica. She's the coordinator for the Environmental Impact Report, and you can also e-mail your comments to her as well. So that's it.

If you have general comments or questions about the CEQA process, I'm happy to answer them now. If you have comments specifically about what you think should be addressed in the context of this EIR, then save them for the actual scoping period. During that time we just take comments. We don't respond to questions. So that's -- that's just a tip.

I see a woman in the back.

FROM THE FLOOR: Thank you, Madam Planner. General question. I'm sorry. I'm still confused. Must be a blond moment. Is flooding going to be addressed in the EIR?

MS. JONES: Any flooding that's resulting from the project would be addressed as an impact in the EIR. The existing condition of flooding, if there's existing flooding, that's part of the existing setting, and it would be described, but it's not an impact of the project.

FROM THE FLOOR: What role --

MS. JONES: I'm sorry. Did that help? Do you want to talk more afterwards so -- okay.

FROM THE FLOOR: It's just really important that I

understand that the issues of flooding, whether it be -- I mean, the existing flooding and how that originated or not, and I don't know that -- how that's going to work, just that flooding is an annual issue out here.

MS. JONES: Sure. Well -- and we would look at -- we would look at anything that resulted from the project that affected that flooding.

FROM THE FLOOR: Okay. And the problem as a result of that flooding extends far beyond defining the golf course.

MS. JONES: Sure. And that's, again, a scoping comment to make.

FROM THE FLOOR: What role does the coastal commission or County of San Mateo play?

MS. JONES: We circulate our environmental review to those agencies, and they have -- one of the purposes of this whole process is to provide information to agencies like that, some of which are decision making agencies, and some of which are interested agencies. We provide them information, and they have the opportunity to comment on what they feel they need to be addressing.

Yes?

FROM THE FLOOR: Ask you, all the things in the planning, one thing I notice is missing and -- when do you do a cost analysis of how to accomplish these things?

MS. JONES: Socioeconomic impacts are impacts under CEQA only to the degree that they result in physical impacts. So one of the areas where we often address those kinds of issues is in land use or in population and housing, although that's not such an issue here, obviously, but socioeconomic impacts in and of themselves and costs are not considered physical environmental effects. That's one thing I didn't make clear earlier on, is that CEQA is looking at the physical environmental impacts of a project.

Yes?

FROM THE FLOOR: You mentioned agencies that might be interested and that you do communicate with. Do you also communicate with the City of Pacifica in terms of the Sharp Park area?

MS. JONES: Yeah, certainly we do that.

Yes?

FROM THE FLOOR: Does the EIR incorporate climate change or global warming?

MS. JONES: Yes, that's one of the -- that's one of the topics we address in all the EIR's -- I'm sorry -- in all the environmental review processes.

FROM THE FLOOR: I wasn't going to speak up, but I just have one question from what Daniel had stated.

MR. LAFORTE: Yes.

FROM THE FLOOR: Daniel, you said that the board

of supervisors -- the direction that had been provided by the board of supervisors was to develop the concept plan in and work with the GGNRA, but I didn't hear -- I know you said that you work with the city of Pacifica, but I thought that ordinance had been approved by the board of supervisors last week said both the GGNRA and the city of Pacifica and/or the County of San Mateo, so --

MR. LAFORTE: Yes.

FROM THE FLOOR: -- I wanted to clarify that.

MR. LAFORTE: I left that out, yes.

FROM THE FLOOR: Okay. Worked very hard for that.

MR. LAFORTE: Yes, that was in the legislations. Thank you for mentioning that. Thank you.

FROM THE FLOOR: No problem. No problem.

MS. JONES: Yes?

FROM THE FLOOR: You said you had something like 31 natural areas that you were looking at. How many of those are CEQA -- are under CEQA that we have to do this kind of review for?

MS. JONES: We -- this environmental review is looking at all of the natural areas. They're all affected by the project. But we do CEQA review for everything in San Francisco. We look at downtown skyscrapers. We look at every -- everything.

FROM THE FLOOR: Of course, what are we looking at

for a timeline, then, for what's going to happen in Sharp Park and, like, McClaren Park? There's so many different areas to work with, some of them are really big and some of them are small. You know, when should we expect the draft EIR?

MS. JONES: That's partially going to depend on what -- what we hear in this scoping process because of issues are raised that take more analysis than we had originally anticipated, and that would affect the timeline, and we are working with the consultant. It's partially -- partially driven by the amount of time that they would take. I don't -- I can't -- I can't say off the top of my head what I expect the schedule to be.

MR. LAFORTE: I can comment on that. We have a draft -- a draft schedule, subject to change, as Sarah noted, but we expect to have a draft Environmental Impact Report in October, 2010.

FROM THE FLOOR: Year-and-a-half?

MS. JONES: Yes.

FROM THE FLOOR: Yeah, then the question I had, you're saying that you're responsible for part of the project you're doing, but then you've been working at this since 1995. There was no flooding in 1995. So the pond's been soaking in and getting worse, and so the lack of action is what's creating the flood. So -- but then you don't have

any responsibility for that as long as you're doing studies?

MS. JONES: We are looking at the effects of the project on the setting as it is now. Our baseline condition is basically what it -- what it is as of April or May, 2009, but we would certainly as part of that discussion of the setting discuss what led to that condition.

FROM THE FLOOR: It was in 1995 they actually were doing some dredging, and they stopped. So -- and there was no flooding at that time. So what I'm saying is that you let the pond soak in long enough, it's going to fill up the whole basin eventually. If you haven't finished the study, then apparently you're not responsible for that (unintelligible).

MS. JONES: That might be either a comment in the context of the scoping as to something that you think we need to address, or I think something maybe to discuss with Recreation and Parks.

FROM THE FLOOR: I have something to say with respect to this point, right. As a geologist, I understand hydrologic patterns, right. That area that you're talking about is a drainage area. It's the lowest point where water will naturally collect. And with water, it brings with it silt, and that's what's settling inside the pond. With all of the -- they've developed areas surrounding that point, water has nowhere to go. But there --

MS. JONES: Okay. I'm not trying to cut you off, but that is -- the comment that you're making right now is exactly the -- when we're done with the general questions about the environmental process, that's something to raise in the -- you know, as soon as we get everyone's questions, this is something to raise once we open the public scoping comments.

FROM THE FLOOR: Okay. What I don't understand is how are you going to say that the influence of the project with respect to water is this, with respect to existing conditions is this. I don't know how you can make that demarcation.

MS. JONES: I think that my understanding is that one of the purposes of the project is to address that -- that existing condition. So it would -- to the degree -- to the degree -- what we are looking at is whether the actions under the project would result in a substantial adverse effect, and that is, in this case, an increase in the flooding. So -- but again, you know, please raise this issue when we get to the next step.

Yes?

FROM THE FLOOR: Is CEQA and the management plans' definition of recreation, does it now include watching a polliwog develop into a frog, watching a snake slither along the fork, watching a piece of grass grow as the native

species? Does that part now -- is that part of the term "recreation?"

MS. JONES: The term recreation in the context of CEQA isn't -- that's not specifically defined. What we look at in terms of recreation in our analysis has to do with whether -- whether we are affecting or removing some recreational resource, whether -- whatever -- you know, whatever -- whatever we may define that to be. And, again, if you -- if you feel that those -- that that passive recreation that you mentioned should be considered within that, then please raise that in the scoping comments.

We also look at whether a project would result in greater use of a recreation area that would -- that would deteriorate -- that would hasten its deterioration.

FROM THE FLOOR: Yeah, maybe I wasn't clear. I was asking what CEQA's definition is.

MS. JONES: CEQA doesn't particularly define recreation in terms of the specific activities that it involves.

FROM THE FLOOR: Okay. Thank you.

MS. JONES: Yes.

FROM THE FLOOR: I think the point was well -- the point there that before 1995, before the reeds were thinned out, there was dredging there. It's really the city's fault that we're in this predicament to begin with right now

because they dragged their feet for the last 15 years towards this. What's happening, if the city would have kept doing what they were doing, we wouldn't be having this problem.

MS. JONES: Okay. And I'm not trying to minimize any of that commentary. I just -- you know, I think that that's -- if you feel that that's something that we should be addressing, then when we open the public scoping comments, please mention that. I'm sorry.

FROM THE FLOOR: Of course, it should be addressing that. You just brought it up here addressing.

MS. JONES: Okay.

MS. WAYNE: Maybe I can just chime in there a little bit. I know there are others in the crowd that have had a lot of history with the Recreation and Parks Department here at Sharp Park, and what happened, you know, within relatively recent -- in the last decade or so is that a lot of regulatory agencies began to look closely at what was happening at Sharp Park and the things that we were doing were in violation of the Endangered Species Act, and so to do dredging, to -- it affects wetlands, and that's permitted by the Corps of Engineers through the Clean Water Act, to do dredging, it potentially harms and kills endangered species.

And in 2005, in fact, our general manager was

served with basically a letter that, you know, was essentially -- what would you say? -- a notice of violation of the Endangered Species Act, and he and our department were basically, you know, threatened with severe fines and/or, you know, imprisonment.

So the protection's out there. I know for many, many years things were done differently, but in recent years more attention has been brought to that place and -- and we received, you know, direct communications from these regulatory agencies that we need to stop what we were doing out there.

FROM THE FLOOR: The point here is that (unintelligible) San Francisco, this created the endangered species, not -- the endangered species wasn't endangered to this extent when they were doing this. It's only become endangered since they've stopped doing that. So it was hampered by the -- going by the bureaucratic regulations really created -- further created the problem.

MS. WAYNE: Well, yeah, undoubtedly, the sedimentation is a real future threat to -- particularly to red-legged frogs, but -- but those species were categorized by the federal and state governments as endangered and threatened many, many decades ago, like, in the seventies, and, you know, since then. So -- so they have -- they were identified as, you know, in periled state long, long ago.

MS. JONES: One thing also to note is that under CEQA, we also are required to look at what's called a no-project alternative, which is a -- what would happen -- what would be the impacts of the project not taking place, or what would the scenario be if the project did not take place. So -- just so you're aware of it, we'll be looking at that as well.

FROM THE FLOOR: Actually, that was the -- seem to be contradictory to what you're proposing. The three scenarios: leaving the park alone, making a 9-hole course, or doing other dredging is actually much more harmful to the environment than leaving it as is.

MS. JONES: Well, as Daniel mentioned, the three scenarios that were -- that were discussed under that legislation, under Supervisor Mirkarimi's legislation, those are not part of the project. They are subject to a separate environmental review project request.

FROM THE FLOOR: One last question. If it all becomes part of the project, where does Sharp Park fit in in priority versus the other park areas of the group? Is that priority number one, or where does that fall in the list?

MS. JONES: That would be a question for Recreation and Parks.

MR. LAFORTE: That's a good question. There are really two paths there. There's the EIR, and then there's

the separate permitting path that we have to go through extensive steps to obtain the necessary permits to clean out and dredge the Laguna Salada, which will -- in the end will help the flooding problems that have occurred out there. And once we receive those permits from the government agencies, we can begin to do that work. It's dependent on our resources, and I can project -- you know, as we develop this process and move through the permitting process, we can have a better understanding of the conditions that we have to abide by that may, for example, escalate the cost associated with that work.

We can't -- as Sarah alluded to, it's very difficult at this time to provide estimates on the cost for a lot of this work, but as we move through the process and learn what we need to do in terms of protection of the species, barriers, relocations, you know, we don't know the full extent of the cost at this time, but we may have a better -- better answer for you as we move along this process.

MS. WAYNE: One more thing that I'll just add to that, you know, as you probably know, the golf course at Sharp Park is, you know, flooded for a good three months of the year, and you know, a lot of that is related to the protection of the red-legged frog that, you know, lays their eggs in Horse Stable Pond. And, you know, what that means

is that it's a very difficult situation for us because, of course, it's -- reduces our revenues.

So, you know, when we do get through all of this permitting, I would think that -- that attempting to solve some of the flow problems, the hydrologic and sedimentation problems are going to be relatively high on the Recreation and Parks Department's radar and priorities because, of course, you know, the flooding is somewhat related to that sedimentation and how the water flow happens. And we don't like the fact that the course closes, you know, for as long as it does over these periods of time.

So of course, our agency is just as, you know, under siege by all the economic conditions, but it's -- it's been something that we have been trying to find a solution to for a long, long time. So I can't guarantee that we would be out there the next day with our backhoes, but it is -- it is a high priority for our parks.

FROM THE FLOOR: Well, that's what I'm saying. Seems to me now that Sharp Park has become an issue, that's becoming priority of this whole project, is now let's do something with Sharp Park versus all the other wetlands, all the other areas that are in San Francisco. Now because Sharp Park has become the focal point, it's now a priority on all the rest of the projects, which I think is ridiculous. Why wouldn't the other projects be taken care

of before Sharp Park became an issue? Why is this now all become Sharp Park's priority?

MS. JONES: Is the question related to that Sharp Park is more of a priority than the other 31 natural areas in San Francisco?

FROM THE FLOOR: That is the perception.

MS. JONES: Oh, I don't think that's necessarily the case. I don't think -- you know, we -- we're trying to accomplish a lot of things on an -- on many different fronts all at once. You know what would be required at Sharp Park is, you know, can happen -- it would need to happen independent of, say, the Natural Areas Program staff because we're not backhoe drivers and, you know, heavy equipment operators. We're doing other priorities in San Francisco.

San Francisco's got a trails bond that is supposed to fund a lot of trails improvements within the city, and so they're is that motivating factor there. So it's really -- you know, tempting to go where the resources are. You know, try to maximize what we can do right now or in the near future.

FROM THE FLOOR: Well --

MS. JONES: I think this permitting for Sharp Park is somewhat more complicated than the permitting that would be required in other areas.

FROM THE FLOOR: When in your timeline do you

consider consequences of health issue and safety issues and compare them with the Environmental Impact Report?

MS. JONES: I guess you're going to have to --

FROM THE FLOOR: I mean, the isolation of any health considerations when you are in a group environment.

MS. JONES: Certainly --

FROM THE FLOOR: And also there's safety issues, those -- when do all those come together?

MS. JONES: Those issues fall under the topic areas that we discussed.

FROM THE FLOOR: We have some blank checklists, don't we?

MS. JONES: If you look at our checklist of all of -- all of the questions that we're answering or that we're trying to answer, a lot of them are related to human health and safety types of issues. So that's -- human health and safety is an issue under CEQA as much as the health and safety of non-human --

FROM THE FLOOR: So what's a reasonable timeline to expect?

MS. JONES: Well, again, as Daniel mentioned, we are anticipating publishing our draft EIR around October. I'm sorry, October of 2010.

MR. LAFORTE: I'm sorry. I misspoke earlier. We are expecting a draft EIR October, 2009.

MS. JONES: Okay. I was thinking that's an awfully long time.

Yes?

FROM THE FLOOR: One of the things I'm wondering is that idea that, say, the process is finished and can't do anything about the dredging in the pond, but we know from several reports that San Francisco's already done that, the silting problem, mainly throughout the north end, which takes all the moss from the highway and roadway and feeds it into the pond. So why instead of worrying about the frog and dredging don't you just take care of getting that water to go somewhere else, get it pumped out.

MS. JONES: That would be a question --

FROM THE FLOOR: Has nothing to do with frogs.

MR. LAFORTE: All of these issues are going to be looked at in the Environmental Impact Report. We're performing, you know, hydrologic studies, sedimentation budgets, imaging maps, a lot of technical studies that will evaluate the flooding issues at Sharp Park.

FROM THE FLOOR: I'm not talking about flooding issues. I'm just talk back sedimentation --

MR. LAFORTE: Run-off sediment.

FROM THE FLOOR: -- sedimentation's a problem. You know where the problem is coming from, the north end of the park where streets and everything are emptying all their

sediment into the pond.

MR. LAFORTE: We'll identify the inputs and -- possibly, and, again, that would be analyzed in the EIR and mitigated for.

I should mention that the Natural Areas Plan -- the recommendations in the Natural Areas Plan call for -- call for dredging and clearing out the Laguna Salada. Once EIR is completed, that will allow us to begin that work. So we are, you know, taking the necessary steps to take action at Laguna Salada.

FROM THE FLOOR: I'm not talking about dredging, just talking stopping the water that's going into the lake.

MS. JONES: That would be something to suggest in the context of your comments on the scope of the EIR, something to look at in our alternatives analysis.

Are these still general CEQA questions, or should we move on to the --

FROM THE FLOOR: My question, I think, is more for Daniel. In terms of the permitting process and the EIR process, are they on parallel tracks, or do you have to finish EIR before you can go asking for your permits?

MR. LAFORTE: They are on parallel tracks. So we are -- our goal is to complete them around the same time.

FROM THE FLOOR: Okay.

MR. LAFORTE: Again, there's a lot of variables

involved in that, but that is how we began this effort, and that is our goal, to have permits in hand around the time of the EIR is certified.

FROM THE FLOOR: Thank you.

MS. JONES: In the back.

FROM THE FLOOR: If GGNRA comes on board here, do their rules -- are they -- are their rules going to render your hard work redundant?

MS. JONES: Uhm, other agencies would rely on the environmental analysis that we are conducting. Uhm, I don't know what you mean exactly by GGNRA coming on board. What exactly you're referring to in terms of --

FROM THE FLOOR: I see them as kind of a predatory group.

MS. JONES: Oh, in terms of whether they take over the -- they would -- they would basically need to, you know, to adopt independently certify the environmental work that we do.

Any more? Oh, hi.

FROM THE FLOOR: Yeah, is Supervisor Mirkarimi aware that you've done all this that work on the natural areas, and if so, why is he asking now to do it again? It's already taken 10 years. And is he intending to use this information in his request for habitat restoration.

MS. WAYNE: Well, I can't speak to the motivations

of the supervisor, but I can tell you that we -- he is aware of this plan. He has been for a long, long time, and we're trying to keep him apprised of our moving forward with this environmental review and its relationship to the cost benefit analysis of these three scenarios.

MS. JONES: Yes?

FROM THE FLOOR: Just again to clarify, so in your estimation, the planning department, when you complete the EIR in October of '09, does that in essence satisfy Objective 1, how to keep Sharp Park golf course with all of the recommendations that you make in order to keep our species? Does that satisfy that first part of this?

MS. JONES: Well, first of all, October of '09 would be the publication of draft EIR, and then there's a comment period, so that's for clarification. That's just the details.

FROM THE FLOOR: All right.

MS. JONES: My understanding is that the policy analysis that's going to be done of the 18-hole, 9-hole, no golf course options is looking at issues that go beyond the scope of our CEQA analysis, and they are looking into some of these socioeconomic issues that may even be covering that. Somebody asked about a few minutes ago. So to that degree, I think that this EIR is not fully going to answer those questions that need to be explored in the context of

that --

FROM THE FLOOR: Just the one. Just the first one now. Not -- because we're not talking about your study of the EIR destroying anything. We're not really talking about -- we're talking about protecting what we have basically, and enhancing it as such, but by keeping it an 18-hole golf course. The other two, which will come later on, that's a different issue. We'll talk about a later.

But right now we're just talking about doing the things that you studied and keeping the 18-hole golf course would satisfy the first objective. What else is going to be studied?

MS. JONES: Well, I really -- you know, our purpose here is not to satisfy any of the objectives having to do with the golf course analysis, so I don't -- that's not something that is in our scope of our environmental analysis on the Natural Areas Program. So that's -- that's a separate process, and, obviously, the information that's gained in this will help inform that, but we are not making any effort to satisfy any of the objectives of that effort.

FROM THE FLOOR: So it's not an integrated effort at all?

MS. JONES: This is a separate project. So we have to look at the overall setting, and we have to look at cumulative factors, but this is its own project.

MR. LAFORTE: As just -- just add a little bit to that. You know, there will be some -- some what comes out of this will be some improvements to the wetlands that will ultimately benefit the species in keeping -- under the scenario of 18-hole golf course. That is part of this effort, yes.

FROM THE FLOOR: Is that more to keep that than to try to get rid of it?

MS. JONES: There's no intent either way under this EIR about the golf course. It's assuming that golf course exists. Yes?

FROM THE FLOOR: Does the CEQA have intention to turn around and make a 9-hole golf course?

MS. JONES: I'm sorry. I need everybody to keep quiet so I can hear.

FROM THE FLOOR: Does the city of San Francisco have an intention to turn around and build 9-hole golf course down the line?

FROM THE FLOOR: Can you repeat the question, please?

MR. LAFORTE: Your question was, so if something changes down the line, how would that affect the golf course?

FROM THE FLOOR: To make it 9-hole instead of 18.

MR. LAFORTE: Yeah, okay. So I should make clear

that, you know, things change, anything can happen. I mean, projects can change, and if that's the case, then we would take the necessary steps to address a change in the project, and we would -- we would look at -- you know, we would need to look at how that affects the environmental review process.

And Sarah, maybe you could address in the event that the project would change, how would you address that.

MS. JONES: Well, it sounds like your question's whether the city intends to change it to a 9-hole golf course, and that's -- you know, I don't believe there is an intent one way or another with regard to the golf course. That's why there's a policy study that's being conducted by the park department.

If a project does change during the course of the environmental review, which is sort of a separate issue -- if a project were to change, we would -- you know, we need to address the impact of the changed projects. You know, we're not going to rely on an out-of-date project description essentially, although we would basically need to talk about whether the changes were covered under the scope of our review. But, again, the number of holes on the golf course is not something that is being driven by this EIR in any way.

FROM THE FLOOR: Because, you know, if they want

to make a 9-hole golf course, it's going to cost them a lot of money. Instead the problem they got to date, it's minor. They cannot address Sharp Park golf course. Very simple, the problem they got today is something only that maybe somebody over there tell them what to do, how to do it, and let them do it, and won't be no more problem. The water they got that come on the golf course, it can be cured. It can be adjusted, and they will have no more problem like they have years and years and years ago. Why all the ones in the last few years that we have these problem.

MS. JONES: Okay.

FROM THE FLOOR: We never had those problems before.

MS. JONES: Okay. It sounds --

FROM THE FLOOR: Why now?

MS. JONES: It sounds like maybe it's time to move on to the scoping comments on the scope of this EIR because people seem to want to talk about that. So let's start, and if anybody has any more questions about CEQA, Jessica and I will be around afterwards.

Let's just go over how we want to run this part of it. Please be respectful. People might say something you don't agree with, but that's -- you know, that's why everybody gets a chance to speak. State your name so that the court reporter can accurately get it, and also we can

keep up with you in the future and get you information as we go along.

Speak clearly. Stick with our time limit. We have a three-minute time limit and we have a very visible clock up there for you to see. And most of all, focus your comments on what you think should be in the scope of this EIR, on the Natural Resource Area Management Plan, not the golf course.

So that is the -- that's the story. And has anybody who wants to speak turned in their speaker cards? Okay. Great. So John will get that going. Thanks a lot.

MR. BOCK: Great. Thank you, Sarah. So as we mentioned, in order to speak tonight we ask you to fill out a card. I've got just under 20 cards filled out already. So if you haven't filled one out and you're interested in speaking, please drop one at the sign-in table.

And we are going to keep it to a three-minute limit. We ran a little bit long in the opening presentations and questions and answers, so we're trying to give everyone an opportunity to speak tonight, so we're going ask you to adhere to that.

I do have one gentleman who was unable to stick around, so he asked me to read his comments into the record. That's Mr. Laurie Frater.

"If anything less than the full 18-hole golf

course is retained, the economic and environmental impact on my family will be great. We'll need to ferry Andrew to HMB or elsewhere to play his golf. Others will be similarly impacted. Please don't throw out the baby with the bath water. Andrew says please don't take away my golf course. Thank you."

So our first public commenter will be Mary Keitelman, followed by Ron Maykel. Mary Keitelman.

MS. KEITELMAN: Thank you. I don't think this is on. Testing. It's not on. Test. Test. Test.

Thank you for having this here in Pacifica. I just want to make a couple of comments and hope that they are addressed. My guess is, from what I've heard, you're already addressing them, regarding the Sharp Park, one of the 31 areas that you're looking at. I live here in Pacifica. My name is Mary Keitelman, and I'm interested in Pacifica aspect of it particularly. Okay.

Number one, chloramine in the water affecting amphibians. If it's there -- and I don't know if it is, and I would like that that be addressed so that there is no chloramine affecting them.

Number two, and I think you're probably doing this already as well, however the property gets looked at, the other properties that are abutting it, such as Mori Point or anything else that's near it, I hope that you will look at

the endangered species that use Sharp Park and how they also use those contiguous lands and think of it as a whole picture. My guess is you probably do.

And let's see, third thing is I hope that the beach will be looked at for the western snowy plover threatened under the Endangered Species Act, black oyster catcher, which I think is just not even of concern. It's just a very -- it's on the edge maybe being threatened. And other birds that use that beach for roosting, as well as, you know, well, breeding.

And then let's see. The last item, on East Sharp Park there's a large population of newts in the pond that drains under the freeway, and it's of concern to me and to a lot of other people that those newts are free of chloramine and able to survive and thrive. There are a lot of other animals there as well, but I think those newts are very vulnerable.

Thank you. That's it.

MR. BOCK: Thank you.

And I apologize if I misstate anyone's name, but Ron Maykel is next, followed by Reiner Binsfeld.

MR. MAYKEL: Yeah. Hi. My name is Ron Maykel. I've lived in Pacifica for many, many years, almost 30 years, as a matter of fact. First I want to thank San Francisco Natural Areas for making the city program

(unintelligible). You guys have a good program going in the city. As a matter of fact, I'd like to see the city council members spend some time in your program. Could use a little bit of education in that area.

I just want to point out -- first, I want to answer some questions about the lagoon, you know, and the flooding. You have two things that took place there. You had where the berm blew out, pushed tons and tons of sand that came in there, and there's like a two- to three-foot wide area where the lake is extremely shallow where the sand came in. This took place back in 1983, I think. So that is a factor that has caused -- contributes to the flooding.

And also the tules and the cattails, these are deciduous plants. You know, they die off and then all of the thatch from these plants creates -- basically assists in the build-up, which creates -- makes the lake become shallower and shallower over years and years. The debris just builds up. And that's a big part of the siltation there. And I think that's one of the bigger -- bigger reasons why that's happening.

The other -- you know, I really want to see this lagoon area protected. I would like to see -- there's a couple of golf holes roaming around. I would like to see those removed. I think that we really need to focus on pulling golf away from that lagoon. And also I'd like to

see some emphasis on the creek. It's a beautiful creek. It's been channelized over the years, and it has been negatively impacted when they developed the golf course. There's a lot of trees that create kind of dead zone: eucalyptus, pine, and cypress. I would like to see you guys look at possibly some fixing up the creek, too, that Sanchez Creek.

At any rate, that's all I have to say. Thank you very much for your time.

MR. BOCK: Thank you for your comments.

Reiner Binsfeld followed by Steve Rush.

MR. BINSFELD: I just like to say I appreciate you guys coming today. And you know, I think we're all for the environment. We all are. And I see no reason why we just can't co-exist down at Sharp Park. There's no reason to get in there, and the lagoon's huge. You know, you can clean it out, and snakes and frogs can do what they do. Just making it environmentally, you know, protected area. Nobody goes in there. Golfers don't go there. Environmentalists, scientists, everybody stay out.

There's no reason why we can't co-exist. As he said, we had a big storm in '83, and those frogs and snakes took a hit, and they still be able to come back to the numbers that they have today on their own.

I'd also to like to address -- you're saying

trails. The park is absent in trails. We have a ton of trails here in Pacifica. I use them all. They're fantastic. I go up old Higgins Road here yesterday, which is our old Highway 1. It's a fantastic walk. I was up for almost two-and-a-half hours, and I barely scratched that whole area.

We also have Sweeney Ridge, which is just vast. It's huge. Of course, Mori's Point, which is fantastic. Rockaway Beach. And also let you know that when the tunnel comes in, that whole area is going to open up into trails.

So come 2012, my God, we're just going to get miles and miles of new trails. So as far as Sharp Park goes, I think it just needs to be dredged, cleaned out, let those frogs and snakes do their thing, allow the golfers to go around it as it has for last 70 years, and I think there's no reason why we just can't co-exist and, you know, make this thing work.

MR. BOCK: Great. Thank you for your comments.

Steve Rush followed by Rob Bakewell.

MR. RUSH: Hello. Thank you. My last name is Rush. I come from a history of Americans. Two of my family members are Declaration of Independence signers, and I'm a history buff. And one of the things about Sharp Park is that Alister MacKenzie designed the course. That has a lot of history involved with it. Goes back to a lot of the

famous golf courses that are currently being used, and I think that should be taken into consideration.

Secondly, I have -- my profession is an inspector, and a lot of what I teach people when I go around inspecting their homes is drainage. Drainage, how to maintain their property, and sometimes the easiest thing -- the most simplest things are the most correct ways to correct a problem, which too much time and effort into something, it can actually cause much more problems.

So I think that the easiest solutions can also be the cheapest: dredge and direct water if you're trying to save a species. Keep the golf course intact, keep the history intact. And do minimal amount of impact to the environment and do the things that it takes minimally, and it won't cost the taxpayer a lot of money doing it.

MR. BOCK: Next is Rob Bakewell, followed by Elizabeth Claycomb.

MR. BAKEWELL: Hi, everybody. Nice to see you, Lisa. A whole lot of stepping here in front of me.

I"m currently the volunteer steward, the volunteer steward for the Oak Woodlands in Golden Gate Park, and I'm involved in Natural Areas Program for several years. And I submitted written comments, but I'd just like to say one thing, which is natural areas, there's a big volunteer component. So in my experience with what goes on in the Oak

Woodlands in Golden Gate Park, there's a big feedback that takes place between the community, school kids, environmentalists, stakeholders of all kinds, and the natural areas staff. So it's not only an adversarial situation. There isn't -- there isn't some big hand coming down and telling us what to do, when to do it, and how to do it. There's a lot of feedback. There's a lot of community participation. So I just want to make that clear.

The Oak Woodlands is somewhat of a different situation than Sharp Park, but you know, we've had -- we have tree issues. We have trail issues. We have dog issues and so on, and so far we've been able to work those out and added a lot of value to Golden Gate Park and really improve the public safety. That's been a big issue in Oak Woodlands, and public safety is improved dramatically.

I spoke to the Richmond District police captain today, and he thanked us for our efforts. So if any one of you want to talk to me about what it's like to participate in the natural areas, you can talk to me after the meeting.

Thank you.

MR. BOCK: Thank you.

Elizabeth Claycomb followed by Daniel Lim.

MS. CLAYCOMB: Good evening, Lisa, Jessica, Sarah, Daniel, John, Mayor Lancelle, Council Member Nyhart, Brayland, Planning Commissioner Clifford and members of the

public. Thank you very much for the opportunity to speak tonight.

The City of Pacifica is pleased that the initial study acknowledges that the City of Pacifica has land use policies and regulations that may be germane to the proposed Natural Areas Management Plan. We respectfully request that the Environmental Impact Report include an analysis of the project's consistency with the Pacifica local coastal band rules and policies, and any pertinent Pacifica land use regulations. We also believe that a local coastal development permit may be required and ask that the EIR include an analysis of that requirement.

In addition, it might be of interest to note that Pacifica is in the process of updating its general plan and local coastal plan, which could alter or modify existing land use policies or result in new policies that could impact the areas covered in the proposed Natural Areas Management Plan.

Thank you very much.

MR. BOCK: Thank you, Elizabeth.

Daniel Lim followed by Dave Diller.

MR. LIM: Thank you for hearing us. My name is Daniel Lim.

Sharp Park golf course was built in the early 1920's, designed by Alister MacKenzie, as you may know. The

areas in dispute are the brackish marsh that floods every January through April. As a matter of fact, the area is still closed today, but the area is open when the frogs hatch and the water recedes. When the sea wall was put in it created a (unintelligible) the marsh. Prior to that was a saltwater lagoon, very similar to some of the beaches along the California coast like San Gregorio Beach, which is one example of salt water kind of lake. It's a good place right now for the frogs and snakes from Mori Point to move up.

The golfers have co-existed for over 70 years with the frogs and the snakes. Why do you insist on fixing something that isn't really broken? I'm sure it can be improved, most definitely. Every year the rains flood the course and many of the holes are flooded, and those holes are closed, and the pots that are usually there removed -- aren't used until frogs hatchery -- has hatched their eggs and moved on.

People say the golfers are predators of the frogs and snakes, but really it's more like the raccoons, 'possums and red tailed hawks. I beg you, please let the Sharp Park continue so we can co-exist with nature.

Thank you.

MR. BOCK: Thank you.

Next we'll have Dave Diller, followed by

David Marshall.

FROM THE FLOOR: Can you hold the mic really close.

MR. DILLER: That's all right. I'll speak loud enough. you'll be able to hear me.

Good evening. Thank you for allowing me to speak to you. One thing that I wished would stop, and that is the use of the word restore and substitute the word preserve. We want to preserve what we have. Every time I hear the word restore, it says to me taking something that we have, getting rid of it, and restoring. We already have something good. Let's just preserve what we have.

The one question that I still have not gotten answered, and I think there still is a lot of confusion, we have one proposal which you are studying -- however you want to phrase it -- it's going to study how to -- I know you don't want to talk about the golf course, but with what's there, how to preserve what's there and then to enhance our red-legged frog and San Francisco garter snake by dredging, by doing some of the things that you were talking about.

There are two other proposals on the table, and what's confusing to me -- and I know to a lot of people -- which of these proposals will take precedence? If you come up with a good way here, which I know you're going to, how to do the things that you're doing, can one of those other

proposals override what you're already going to come up with? That's what we're concerned about because you are doing a very careful study. It's been studied since 2007. We're almost to the conclusion of it, as I understand it. You're going to come up with some great ideas, great ways to preserve what we have, and then we're going to come up with two other possible studies, such as nine holes or close the golf course. Could one of those take priority over what you've already done? And that's what I would like addressed and answered because that's, I think, why most of the people are here.

We want to work in cooperation with you to do the things that you're doing now. But the other alternatives -- you already have a good plan, you don't need to come up with another one. That's what we're getting at.

Already over $400,000, as I understand it, has been spent. I know you don't want to talk about how much these continued studies with Tetra Tech are going to cost, but I suspect it's going to be another 400-, 500-, 600- or whatever it's going come up to. So I just hope that at some point when you finish this study, those can be addressed because we want to know where we go from here.

Thank you.

MR. BOCK: Thanks for your comments.

David Marshall followed by George Ambrosio.

MR. MARSHALL: Hi. My name is David Marshall.

Couple of things. First of all, I heard some people earlier talking about how rains came in 1983 and filled in the pond. It's not true. Indeed, waves did come up, but the problem was that when that happened, the Corps of Engineers built the wall. When they built the wall, they blocked a natural stream that was on the north end of the park.

I have pictures of it from 1941, and the flow is natural all the way down. The Corps of Engineers then changed it so that the drainage went into the Laguna Salada. They then attached all the drainage to the freeway and everything else to that drain. So the Corps of Engineers actually put all that silt in there.

What happens is that that gets full, and it's starts backing up and flooding the streets of Pacifica. Now, it's full in backing up because San Francisco hasn't done anything about it. They haven't either replaced the stream or exited the north end or anything else, which means the city of Pacifica then has to spend money pumping out the water, which doesn't make any sense to me. I don't know why Pacifica doesn't just send San Francisco a bill.

I understand that these studies take a long time, and I -- you know, I think that lot of the work that you're doing is very good. But I think that one of the problems

that I have with this is you have a study -- that pro study or 93 pages -- it says the north end is silting up, and that's what's causing the silt and cattails and things in the pond. And I think they got that from part of your 800 pages of -- 93 pages you got of 800 pages. So we're getting around a thousand pages of absolute no action. Nobody has done anything, and the problem is getting worse and worse.

Now we get people coming out on the golf course going, well, the water level's here. I'm making a mark there. That's where the pond goes to. Pretty soon the pond's going to be all the way down to City Hall. So I think that that's one thing.

The second thing is that there's another issue which is the recycled water. San Francisco PUC is supposed to kick in some money for recycled water, which will help keep the pond in a more consistent level, but as part of this new study, it's my impression that they're trying to just renege on the whole deal. So I think San Francisco's got some serious responsibility for taking care of some of these things and don't have to wait until the end of this report.

Thank you.

MR. BOCK: Thank you for your comments.

Next we have George Ambrosio followed by

Dan Briesach.

MR. AMBROSIO: Thank you. By the way, I'm a 32-year Park and Rec employee. I'm a golfer and an environmentalist. A member of the Loma Prieta chapter of the Sierra Club and the Greenpeace society. If I thought the golf course was detrimental to the frogs and snakes, I would be in the forefront of opposition to the golf course. But I know differently.

Since it was made known that public overflow of water off the course was detrimental to the frogs and the -- the pesticides we're using, this has been stopped over the last two or three years. I'm sure the frogs are increasing. If they're not, it's not because of the golf course. The golf course is not what's harming the frogs. This is a red herring argument. Many golf course goes through environmental sensitive areas. Bodega Bay, Teal Bend in Sacramento, Modern Bay in San Lorenzo and Stonebrae in Hayward, which has been -- just got built over a little over a year ago, which is prime red-legged frog territory. Still built the golf course.

I hear the argument about using this location for children environmental education, but this lagoon has a large area to the south of the course that is easily accessible to the public for this cause. But I see it hardly ever used by the public. There is plenty of open

space area surrounding the golf course and Mori Point, hiking, nature studies, et cetera. Not like the golf course is in the middle of urban San Francisco.

The planning commission -- I wrote this before I came here, but I'm glad you're on the same page. The planning commission should look into thinning the reeds, choking the lagoon, which would give the water more area and prevent overflowing in the golf course. This would protect the flow and keep the course playable during the wet season and enhance revenue actually for the course.

Sharp Park is a -- is an art, is a work of art, designed by one of the most famous golf course architects in the world, Alister MacKenzie, one of only four architects in the Golf Hall of Fame. Would be tragic and criminal to destroy one of San Francisco's finest athletic recreation venues unnecessarily.

Thanks for the three minutes. We usually only get two, and I really appreciate being here.

MR. BOCK: Thanks for your comments.

Dan Briesach followed by Kathleen Manning.

MR. BRIESACH: Good evening, everybody. Thank you, folks for coming down to Pacifica. We appreciate it. We like to be involved in the situation. I like to thank you especially. I know how much hard work you've put in the Natural Areas Plan -- you and probably everybody else, but I

know how long you've worked on it.

I'm glad that the EIR is coming out now, at least there's an effort right now because it ties in with Supervisor Mirkarimi's three-option plan, which I think a lot of the people here thought we were going to discuss tonight. But it works -- it ties in anyway with the Natural Areas Management Plan, and I'm very glad to see, and I want to repeat that I think the most important part of this -- well, I'd like to say that the environmental people that are here tonight and the golf people that are here tonight really need to get together and work to solve our common problems, which I think is painfully evident now, is the lagoon is dysfunctional. And that's where the efforts really need to go. If we can solve the lagoon problems, that in itself will improve the habitat and will improve the golf course, and it will solve some of Pacifica's flooding problems down at that end. So I think that's where the main focus should be. And certainly it fits in here because that certainly would improve the natural area and, you know, improve California natives and all those kinds of things you're working on.

And I'd also like to say that -- one man was saying that the drainage coming in down off the road -- ever since they put in Sharp Park Road, I guess about 1985, the drainage has just been ripping through that golf course and

they're just dumping it in there. I think it is a great idea to look at how to divert some of that water coming off Sharp Park Road. It's just a big spillway right now, and Highway 1 and all that -- and I think that could be done without damaging the creek.

We don't want to just turn the whole thing into an underground pipeline. So the creek is very viable. It's working fine for that watershed that's there, but the drainage coming off the road is really something, and it's causing silt problems and of course flooding.

So I hope that also if you look at -- there's an overflow pipe at Horse Stable Pond that used to function, and now it's silted in, and with the tules and -- the whole thing is dysfunctional. But there is an overflow pipe there. It used to work so that we didn't have to pump. It used to just flow.

Anyway, thanks a lot for coming down. People in Pacifica appreciate being involved. Thank you.

MR. BOCK: Thanks for your comments.

Kathleen Manning followed by Cliff Smethers.

MS. MANNING: Hi, thank you. I'm from the -- Kathleen Manning from the Pacifica Historical Society. And we have a long history in Pacifica of caring for the environment and for protecting and really cherishing the environment. The history the last -- since the city was

founded in '59, we've done tons of things to keep the hills green and to do wonderful things.

Now, the historical society is very proud of the wonderful golf course we have here. Looking at the historical and cultural part of the environment, it is a famous golf course, and we've heard from people all over the world that have said, "Please keep that golf course. Keep the Alister MacKenzie golf course." And we've heard from different societies, and it's been very, very interesting to see the number of people that care about that.

And also I wanted to mention that the clubhouse was done by the Willis Polk firm. So those are some of our reasons that we care about that part of the environment.

Thank you.

MR. BOCK: Great. Our next speaker will be Mitch Monroe followed by Chuck Egiziano. So we'll have Chuck Egiziano.

MR. EGIZIANO: Hi. My name is Chuck Egiziano, and I'm a retiree in Pacifica, and I love the golf course. And if you -- if it disappears, I guess I'd have to leave Pacifica. I want to thank the people trying to preserve the frogs and the snakes on behalf -- excuse me -- on behalf of all the bird life out there because they sure make a feast out of all the little frogs as soon as they start coming out. And the hawks and ravens and seagulls really enjoy

them full life.

I had a question is -- and you said that this is really not the Parks and Recs end of the spectrum, that is Parks and Recs motivated by dollars in this whole scenario in considering changing the golf course, the size of it or limiting it, and the -- I guess eventually we'll get around to that.

And the second question I had is, is there any consideration if the Parks and Rec is not interested in maintaining an 18-hole course in Pacifica, would they consider selling it or doing a long-term lease to the city of Pacifica so we could have some economics in the town of Pacifica? We don't have a lot of money being generated in this little town, so that's basically all I wanted to ask.

MR. BOCK: Thank you.

Our next speaker is Jack Rauch followed by Suzanne Valente. Suzanne is the last speaker card I have. So if anyone else is interested in speaking, please turn in your cards now.

MR. RAUCH: My name is Jack Rauch, and I am a resident of Pacifica and also a San Francisco archer. I want to thank you very much for coming here and explaining this to us today the way this process is going to go. I'm encouraged by the fact that recreation is a focal point for discovery.

I want to remind everybody that the land at Sharp Park was donated to the city -- to San Francisco for recreational purposes by the Murphy family and others, and I think it should continue that way. I look forward to the report.

I'm also encouraged by the fact that you've retained an outside firm to do the study. I'm very much concerned about the pressures put on people by environmental groups, many of whom don't know what they're talking about. I find it quite distressing when I read things in the newspaper that are simply not true. So I welcome Tetra Tech and the studies that you're -- that you're doing. Again, I want to reiterate that this is recreational land, and I think it should continue in that vein.

Thank you very much.

MR. BOCK: Next up will be Suzanne Valente followed by Robine Runneals.

MS. VALENTE: Good evening. There is a widespread perception that the Natural Areas Program is spinning out of control and it has overreached far beyond its goal of preserving the remnants of natural vegetation still left standing at SF park lands, and now engaging in a campaign of restoration ecology in which overwhelmingly human modified or created landscapes are being removed to allow for the recreation of -- re-creation of natural ones, or more

accurately, a small from thereof. The Natural Areas Program has its place, and it needs to be kept in that place. It cannot be allowed to trump the clear preferences of the vast majority of park land users in San Francisco.

That's not my rhetoric. That's the rhetoric of Arthur M. Shapiro, professor of evolution, ecology, and entomology from the center of population biology at U.C. Davis. He -- I think he echos the thoughts of many people in this audience and outside this room, but we just don't have the credentials to say it. But what I can say tonight is that I think that the NAP proposal for Sharp Park as well the other park locations intends to make major changes in the ecosystems, sometimes with no apparent benefit to wildlife and perhaps detriment to important wildlife.

Additionally, the NAP park proposal ignores the serious public safety issues that should be addressed, especially at Sharp Park. And EIR, if it intends to conform to the precautionary principles, which was adopted in 2003 by the City of San Francisco, must cover the public safety issues for humans at every park in detail, as well as provide substantial, reliable, scientific evidence to justify the proposed ecosystem changes.

Closure of the park or the entire golf course to create a natural areas wetlands restoration to benefit the

red-legged frog and San Francisco garter snake is the latest proposal under consideration by SFRPD. This is pointless. U.S. Fish and Wildlife did not designate Sharp Park as a critical habitat for the red-legged frog or SF garter snake. Therefore, by the U.S. Fish and Wildlife's own definition, whatever happens to either species in this area will have no impact upon the ultimate survival or failure of the species. There is no legal imperative for expansion of the habitat to benefit these two species.

Environmental attorneys explained that there is critical habitat and everything else. So Sharp Park has the same requirements as a habitat as your home's driveway does. The NAP report acknowledges that the quality of the habitat at Laguna Salada, Horse Stable Pond, and the adjacent wetlands remains excellent. Make the minor alterations biologists recommend and leave the rest of Sharp Park alone.

The plan for Sharp Park is the worst of any of the SF park system. It is clearly in violation of the mission statement. Uhm, they do not take into consideration public safety, which includes West Nile Virus and the need to control mosquitoes and the recent ruling by the court indicates that they no longer can spray pesticides to control adult mosquitoes. They can only drop larvicide. Clearly we cannot ensure that the public be will be safe if you expand the wetlands.

Thank you.

MR. BOCK: Our next speaker is Rabine Runneals, followed by Mike Pacelli.

MS. RUNNEALS: My name is Robine Runneals from West Shore Park here in Pacifica, and I'd like to thank you for coming down and doing this here in town. A lot of meetings in San Francisco, a lot of people have been attending. So thank you for bringing it here.

And West Sharp Park and that golf course and Palmetto Avenue, that is the center of our city. So this is very important to all of us. Thank you.

Things that I'd like you to please consider in the EIR or CEQA is flooding impact -- flooding impact including out into the neighborhood and proposed methods to prevent flooding in all three of the scenarios.

Mosquito impact. If there is more fresh water -- well, if there's more fresh water, they're going to come, and how that will be controlled.

How would views from the surrounding residences be impacted by the three scenarios, views into the park as well as our views to the beach and the ocean.

Impact of the decrease of golfers visiting West Sharp Park and the area, and the potential economic impact to the city of Pacifica and the impact of a loss of a public golf course serving northern San Mateo County's

recreation needs as well that of San Francisco's. And the impact of the loss of a golf course, which is a historical attraction to city of Pacifica also, and how that would affect and tie into the city of Pacifica's current efforts to take the Palmetto Avenue business district and emphasize upon the historic characteristics of that neighborhood and develop that into Pacifica's historical district, which is a current plan is being developed in Pacifica here.

And all of the historical references that Pacifica is attempting to draw upon for the work done in this neighborhood is all linked to the golf course and everything that the city had in that neighborhood, which is the original downtown, prior to the city's incorporation.

Thank you.

MR. BOCK: Next we'll have Mike Pacelli followed by Mitch Monroe.

MR. PACELLI: Mike Pacelli, Pacifica resident.

I'd like to consider the impacts of the storm drainage system off Sharp Park Road, you know, the golf course area, the possible partnerships with the City of Pacifica on the golf course, the economic impacts of both golf and other recreational uses into the city of Pacifica and consideration of the berm, the conditions of the berm that are there right now.

MR. BOCK: Next we'll have Mitch Monroe followed

by Allan Eisenberg.

MR. MONROE: Hello, my name's Mitch Monroe. I'm here to support off-road cycling in the other areas of Sharp Park, particularly up to the archery range, also up there beyond the archery range where it connects up to -- up beyond the ridge. That used to be a fun trail coming off of there up through the archery range.

One of your -- one of your proposals in your plan -- I can't remember which part -- that says trails would be created in previously inaccessible areas. I think it's important to link that lower area, like, particularly the archery range and also where the shooting range is, that you guys clean that up, up to the upper ridges so that you can access the southern parts of Pacifica.

I also think it's important to keep GGNRA out of Sharp Park because they seem to be taking over all the city open spaces and kind of going over them with a fine tooth comb and sanitizing everything and turning everything into, you know, basically paved fire roads, and it's getting pretty boring out there.

You guys talked about volunteerism, the stewardship was part of this plan, and a group I represent is called SF Urban Riders and we've merged with Craig Dawson Mt. Sutro, and we logged over 500 collected hours -- man hours of volunteerism. And we plan to do a lot more. So if

you guys do end up getting a project up there and want to open up a multi-use trail that's bicycle lane, I think you'll have a lot of manpower to help get that done, and you won't have to pay for labor.

That's all I got. Thanks.

MR. BOCK: Thank you for your comments.

Allan Eisenberg followed by the Steve Sinai.

MR. EISENBERG: Hello. My name's Allan Eisenberg. I live in San Francisco. I belong to the Sharp Park golf club by choice, obviously.

In your presentation you talked about the socioeconomic issues that go to every park and facilities with -- throughout the general population to use. I'd like to point out that Sharp Park is -- is a community golf course. As a community, you can go down there almost any evening and find fellows who want to talk over there, constantly enjoying themselves with their friends, which is something that does not exist at the other two courses that are run by the City of San Francisco, 18-hole courses, which would be Harding and Lincoln.

Also Sharp Park offers the opportunity for high school teams to play golf. They cannot play golf at Harding because it's cost prohibitive. So from the socioeconomic standpoint, I think it is important that it be kept as it is for the general community.

Thank you.

MR. BOCK: Up next is Steve Sinai followed by Ellen Edelson, which is currently the last speaker card that I have. So if you haven't gotten a chance yet, please fill out a card.

MR. SINAI: Hi, everyone.

Two questions or things I'd like to look at. One's already mentioned, which is take a look at how much the golf course contributes to Pacifica's economy versus how much the (unintelligible) how much that contributes to Pacifica's economy.

Second, if you could do some kind of study on populations of San Francisco garter snake, red-legged frog. I'm hearing from the group that wants to shut down the golf course that Sharp Park is basically the only habitat for the two animals. I just can't believe that, but nobody really seems to know. So take a look at throughout San Mateo County and see what the different habitats are and how the dropping of the population of the frog, what the causes might be. Appreciate that.

Thanks.

MR. BOCK: Next up is Ellen Edelson.

MS. EDELSON: Ellen Edelson from San Francisco, and I'm with the (unintelligible). And I hate speaking in front of a group. Makes me nervous.

But I do favor the idea of restoring Sharp Park and restoring the -- I'm too nervous -- but city water corridor as well, and how it connects with other green spaces in the area. I would like to ask we consider the impact of leaving as many trees as you're suggesting leaving, see what that impact would be. That we would -- 95 percent is an awful lot of trees in my view.

I would like to encourage consideration of the trails and the impact that the trails have on hiking, which is increasing in importance by many studies of recreational activities, whereas other activities have gone down on the list. But consider the use of hiking and environmental education that would have on the students -- on the students and other people out there to see the bigger picture, to see where humans fit into the larger frame of things. I think we're very egocentric in our use of the land, and we need to use space for (unintelligible).

MR. BOCK: Thank you. That's our last speaker for the evening. So unless there's anyone else who is interested in speaking, I'll encourage you to take advantage of -- in roughly two weeks between now and the end of the public comment period that's May 26th, you're welcome to turn in any written comments you had tonight, send in a letter. We'll keep this period open until the 26th and use those comments to help frame the environmental analysis we

do in the EIR, which public review we anticipate in the fall of this year.

Thank you, everyone, for coming out, and have a good night.

---oOo---

CERTIFICATE

I, the undersigned, a Certified Shorthand Reporter for the state of California, hereby certify that the foregoing proceedings were reported by me, a disinterested person, and were thereafter transcribed under my direction into typewriting; that the foregoing is a full, complete, and true record of said proceedings.

Executed this 27th day of May, 2009.



_____
LAURA AXELSEN, CSR NO. 6173

Appendix D

Written Scoping Comments

Lydia Cassorla, MD.
1801 14th Ave
San Francisco, CA 94122

May 2, 2009

Bill Wycko
S.f. Planning Dept
Natural Areas Management Plan
1650 Mission St, Suite 400
SF, CA 94103

Dear Mr. Wycko:

I am writing concerning the SNRAMP as it relates to the steep sand covered areas of the Rock Outcropping at 14th Ave between Ortega and Pacheco Sts. I cannot attend the meeting on on May 12. Therefore I take this opportunity to express concern regarding the very unstable nature of these areas. I have no objection to modifying a different flora in this area, however as a long-term resident of the neighborhood I wish to inform you that any significant denuding of areas in preparation for this will likely have a disastrous effect on sand retention.

Also, the City does a very poor job of clearing sand in the roadway below, and this causes a traffic hazard on a narrow stretch of 14th Ave that cannot accommodate crossing traffic as is, despite being a two-way street.

If you wish to change the plants on the steep portions, it should be done very slowly over a number of years, verifying that new plants are in fact being established. Please do not allow areas more than a few feet across to be denuded of existing plants each year

Thank you.

Lydia Cassorla

PLEASE CONFIRM RECEIPT

lydiacassorla.com

SAN FRANCISCO
PUBLIC
GOLF
FAR & SURE
ALLIANCE

220 MONTGOMERY ST., #303
SAN FRANCISCO, CA. 94104
(415) 392-5431, ext. 203
E-MAIL: RICHARD@ERSKINETULLEY.COM

May 11, 2009

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103-2479

Re: Natural Areas Management Plan EIR
"Scoping Meetings," May 12 and 14, 2009
Case No. 2005.1912E
Sharp Park Golf Course

Dear Mr. Wycko,

On behalf of the San Francisco Public Golf Alliance (the "Golf Alliance"), and in response to the Planning Department's Notice of Preparation of an Environmental Impact Report, dated April 22, 2009, I submit the following comments and questions relating to Sharp Park, and in particular to the Sharp Park Golf Course.

Some, but not all of my questions will relate to an Ordinance, adopted by the San Francisco Board of Supervisors on May 5, 2009 (the "Ordinance"), amending Article 3 of the San Francisco Park Code by adding Section 3.20, to read as follows:

> Sec. 3.20 SHARP PARK. (a) No later than July 31, 2009, the Recreation and Park Department shall develop a plan, schedule and budget for restoring the habitat for the California red-legged from (rana draytonii) and the San Francisco garter snake (Thamnophis sirtalis tetrataenia) in conformance with the Endangered Species Act, 16 U.S.C. 1531, et seq., and all other regulatory requirements; and

for transferring Sharp Park to, or developing a joint management agreement with the Golden Gate National Recreation Area, and the City of Pacifica and/or the County of San Mateo, in accordance with the deed granting Sharp Park to the City and County of San Francisco and San Francisco Administrative Code Section 23.41. The Department shall base such restoration plans on the best scientific information available, and shall include alternatives that (1) retain or redesign the golf course and (2) eliminate the golf course.
(b) No later than August 31, 2009, the Department shall provide to the Clerk of the Board of Supervisors a report detailing the steps taken, and the progress made, to achieve the goals set forth in subsection (a), above."

QUESTIONS

1. Question Relating to the Ordinance and Possible Alternative Use Plans For the Sharp Park Golf Course.

1.1. To the extent that the Ordinance, adopted by the San Francisco Board of Supervisors on May 5, 2009, would result in a "plan" to "eliminate the golf course" at Sharp Park, will the Tetra-Tech Environmental Impact Report that was publicly noticed by the Planning Department's April 22, 2009 Notice of Preparation afford the environmental impact review required by CEQA?

1.2. Will any "plan" to "eliminate the golf course" that the Recreation and Park Department comes up with be subject to an EIR under CEQA? If so, when will such environmental review occur?

1.3. To the extent that the Ordinance, adopted by the San Francisco Board of Supervisors on May 5, 2009, would result in a "plan" to "redesign... the golf course" at Sharp Park, will the Tetra-Tech Environmental Impact Report that was publicly noticed by the Planning Department's April 22, 2009

Notice of Preparation afford the environmental impact review required by CEQA?

1.4. Will any "plan" to "redesign... the golf course" that the Recreation and Park Department comes up with be subject to an EIR under CEQA? If so, when will this occur?

1.5. Which governmental entity or entities have permit-granting authority for any change of use at the Sharp Park Golf Course: City of San Francisco, City of Pacifica, County of San Mateo, California Coastal Zone Commission, Army Corps of Engineers, California Fish and Game, U.S. Department of the Interior, and/or other entities? For each governmental entity with permit-granting authority over the property, please state which permits are within which entity's authority.

2. Questions Relating to golf course irrigation and its effects on the ponds and associated wetlands.

2.1. To what extent are Laguna Salada and Horse Stable Pond, and their associated wetlands, created and/or recharged and/or enhanced by irrigation at the Sharp Park Golf Course?

2.2. Over the past five (5) years, what have been the amounts of irrigation water (measured in gallons) used each month by the Golf Course?

2.3. How much of the Golf Course irrigation water, measured in gallons, and measured month-by-month over the past five (5) years, enters the ponds and their associated wetlands?

2.4. What would be the effect on the habitat of the California Red-legged Frog at Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands, of complete cessation of irrigation at the Golf Course? Does the effect differ as between low-rainfall months and high-rainfall months, and

if so, what are the effects in the different months?

2.5. What would be the effect on the habitat of the California Red-legged Frog at Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands, of reduction of irrigation at the Golf Course? Would the effect differ as between low-rainfall months and high-rainfall months, and if so, what would be the effects in the different months?

2.6. What would be the effect on the habitat of the San Francisco Garter Snake at Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands, of complete cessation of irrigation at the Golf Course? Would the effect differ as between low-rainfall months and high-rainfall months, and if so, what would be the effects in the different months?

2.7. What would be the effect on the habitat of the San Francisco Garter Snake at Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands, of reduction of irrigation at the Golf Course? Would the effect differ as between low-rainfall months and high-rainfall months, and if so, what would be the effects in the different months?

2.8. What would be the effect of complete cessation of irrigation at the Golf Course on the salinity of the water in Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands?

2.9. What would be the effect of reduction of irrigation at the Golf Course on the salinity of the water in Laguna Salada, and/or Horse Stable Pond, and/or their associated wetlands? Would the effect differ as between low-rainfall months and high-rainfall months, and if so, what would be the effects in the different months?

3. Questions relating to the Seawall.

3.1. Does the groundwater generated by irrigation at the Golf Course have any effect on the hydrostatic pressures affecting the seawall? If so, what is that effect? And if so, what would be the effects on the strength and/or integrity of the seawall of (a) complete cessation of irrigation at the Golf Course, or alternately (b) reduction in the amount of irrigation at the golf course? Would these effects differ as between low-rainfall months and high-rainfall months, and if so, what would be the effects in the different months?

3.2. Is the habitat for the California Red-legged Frog in and around Laguna Salada and/or Horse Stable Pond and/or their related wetlands affected by the continued existence of the seawall? If so, how?

3.3. What is the current structural condition of the seawall? What is its useful life expectancy? At what point will it need to be repaired or replaced in order to protect the current freshwater habitat of the California Red-legged Frog in and around Laguna Salada and/or Horse Stable Pond and/or their related wetlands?

4. Questions Relating to Potential Flooding, Disease, and Other Effects Of Alternative Uses at the Golf Course.

4.1. Would the creation of new freshwater ponds in place of existing fairway areas at the Golf Course result in increased flood-endangerment to residents of the neighborhoods north and/or south of the Golf Course, in the event of storm surges that overtop the seawall, as has happened in the past?

4.2. Would replacement of golf fairways at Sharp Park west of Highway 1 by newly-created freshwater ponds and wetlands result in increased breeding areas for mosquitoes? If so, what measures would

be necessary to protect residential neighbors north and south of the Golf Course from West Nile Virus?

4.3. As of May, 2009, what aerial spraying for mosquito larva and adult mosquito control is permitted by law, and what aerial spraying for mosquito larva and adult mosquito control is actually performed at Sharp Park; describe generally the seasons and times of this spraying. Are other measures besides aerial spraying used for mosquito and mosquito larva control at Sharp Park, and if so, please describe them. What is the effect of such mosquito and mosquito larva control on the red-legged frog population at Laguna Salada and Horse Stable Pond? What is the effect of such mosquito and mosquito larva control on residential neighbors of the Sharp Park Golf Course?

4.4. Would closure of the Golf Course, and regrading of some or all of the fairways and greens to the west of Highway 1 to create new freshwater ponds and wetlands (as has been proposed by some advocates of "habitat restoration"), disturb the current habitat for the California Red-legged Frog and/or San Francisco Garter Snake at Laguna Salada, and/or Horse Shoe Pond, and/or their currently-existing associated wetlands? Would such work require "take permits" from California Fish & Game and/or the U.S. Fish & Wildlife Service? What are the prospects that these entities would grant any such "take permits" that may be required.

4.5. Without the groundwater generated by irrigation at the Golf Course, what would be the source of water for the proposed newly-created freshwater ponds and wetlands at Sharp Park west of Highway 1?

5. Question Relating to Recycled Water Project.

5.1. It is our understanding that San Francisco has near-term future plans to replace its current freshwater irrigation of the Golf Course with

recycled water to be purchased by the City from the City of Pacifica's Calera Creek Water Recycling Plant. In the event the Golf Course were to be closed or reduced in size pursuant Recreation and Park Department plans pursuant to the Ordinance, would the City of San Francisco follow-through on its plans to purchase the recycled water? Would San Francisco have anyplace else to use that amount of recycled water in the Pacifica area? Would recycled water from the Calera Creek Water Recycling Plant be used as the water source for expanded freshwater ponds and wetlands to enhance habitat for the Red-legged Frog and San Francisco Garter Snake under an alternate-use plan for Sharp Park developed by the City of San Francisco? If not recycled water, then what would be the water source for expanded freshwater ponds at Sharp Park, in the event the golf course irrigation were to be discontinued or reduced?

6. Comment and Question Relating to Effects On Cultural and Recreational Resources.

6.1. The Initial Study of Significant Natural Resource Areas Management Plan, at page 71, states the EIR will not discuss impacts on significant architectural resources. It is the position of the San Francisco Public Golf Alliance that Sharp Park Golf Course is a significant historic architectural resource because of its age (opened in 1932), and the fact that it is one of the very few municipal golf courses designed by the preeminent golf architect Alister Mackenzie, whose adopted home was the San Francisco Bay Area. This golf course gives public course golfers the opportunity to experience and appreciate landscape architectural genius at a reasonable price in a beautiful natural setting. The golf course is accessible as well, visually, to neighbors and strollers. Moreover, there are ways to increase the public access to the golf course, by boardwalks and/or viewing platforms, that would further increase public access to the site without interfering with either the golf or the protected

species habitat. The Mackenzie heritage of this classic golf course is a point that should be addressed in the EIR.

6.2. The Sharp Park Golf Course provides public recreation and healthful outdoor exercise to over 50,000 paying customers annually, youth sports opportunities to high school team golfers, and other public recreational benefits. What would be the effect of loss of this recreational facility on its current users? How far would current users have to drive to find comparably-priced, comparable-quality golf recreational opportunities? For what percentage of current Sharp Park Golf Course users would closure of the golf course mean the end of their ability to play golf?

Thank you for your attention to these matters.

Very truly yours,

Richard Harris
San Francisco Public Golf Alliance

cc: City of Pacifica Mayor Julie Lancell
California Department of Fish and Game
U.S. Fish and Wildlife Service
Sierra Club, Loma Prieta Chapter
Committee for Green Foothills
Dawn Kamalanathan, Rec & Park Department
Sharp Park Golf Club, Dave Diller, President
San Francisco Golf Task Force
Supervisor Sean Elsbernd
Supervisor Ross Mirkarimi

CALIFORNIA NATIVE PLANT SOCIETY
Yerba Buena Chapter
338 Ortega Street, San Francisco, California 94122

To San Francisco Planning Department: Planning Case No. 2005.1912E

I spoke at the Scoping Meeting at the San Francisco County Fair Building on May 12, but I don't speak well at public meetings and wasn't able to articulate my thoughts. I ask that these written comments supersede my verbal remarks.

The City's Natural Areas Program (NAP) is responsible for 31 natural areas, but many of those areas have been severely compromised by conflicting uses. The City has made political compromises in some areas, such as Bernal Heights, and do not enforce laws in any of the 31 areas. Nevertheless, the EIR should weigh the values of restoring the areas for maximum biodiversity enhancement, and the effects of this enhancement on citizens of the city, who have little chance to be exposed to our biological riches. This review should look at the whole issue of off-leash in our natural lands. Currently 90% of dog-play-areas are on natural lands, a shocking state of affairs. Regardless of the City's ability to enforce laws, all our natural areas—ie, the remnants of the original landscape--should be evaluated for their natural assets.

For prioritization purposes the NAP divided its lands into management areas: MA-1, -2, -3. All three categories have the potential to be restored to diverse richness. One Commissioner has proposed divorcing MA-3 areas from the NAP and charge another entity with their management. This makes no sense at all. These lands are interwoven with MA-1 and MA-2 areas in a jigsaw-puzzle pattern and separating MA-3s would create administrative confusion. There is nothing to argue in favor of doing this and everything to be said against it. Fragmenting the natural lands only adds to the burdens of this already overburdened, insufficiently funded, program.

Tree plantations, such as on Mt Davidson, Glen Canyon, Lake Merced, Pine Lake, Sharp Park, Dorothy Erskine Park,and Bayview Hill have proliferated well beyond their original plantings and have had severe negative impacts on the City's biodiversity and biological health. Plan proposals for thinning are politically-motivated and absurdly low and should be reconsidered. The term "weed" as used by those engaged in ecological restoration, does not distinguish between plant life form: It can apply to a tiny annual plant as well as to trees and anything in between. Certain trees—in this case primarily the Tasmanian blue gum, *Eucalyptus globulus*—have aggressively spread beyond the original plantings and have had devastating impacts on our natural heritage. Those impacts should be analyzed, and the analysis should include the possibility of removing all of the weed trees.

There are a surfeit of trails, some of which should be closed. New trails should not be built where native plants exist, for the reason that soil disturbance is very

damaging. When soil is disturbed weeds move in to pre-empt the space, and it becomes forever after a weed patch.

Sharp Park golf course should be analyzed to ensure that the plans are scientifically-based and that they ultimately select the alternative that will ensure that the San Francisco garter snake and California red-legged frog recover. The golf alternatives should include analysis of the environmental impacts of no golf, golf, and a modified golf course.

Jake Sigg, Chair
Conservation Committee
415-731-3028

N.B. Your Public Notice states that "The SNRAMP ***proscribes*** both general management activities that apply to all Natural Areas and management activities specific to each Natural Area."

I have interpreted this as a typo for *prescribes*, and my remarks are based on that.

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

What are ENV. IMPACTS OF:
- Leaving 95% of INVASIVE trees in Natural areas?
- ~~[illegible]~~ - 90% of off-Leash dog areas in Natural areas?
- Cutting new trails through Sensitive Natural areas?

Management Plan has already been heavily COMPROMISED

What are ENV. IMPACTS OF a NO Management Plan alternative?

Name: Greg Gaar

Organization (if any): Nature in the City

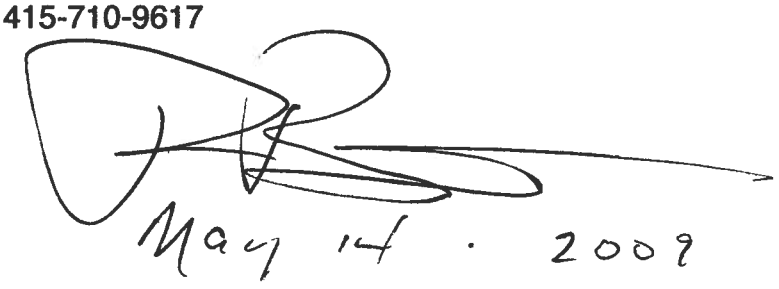
Address: 440 Hazelwood SF 94127

E-mail Address: dunetanksy@yahoo.com

Re: Natural Areas SFRPD - Planning for Restoration Comments for Meeting Thurs May 14, 2209

My comments will focus with reference to my experience in Oak Woodlands - GG Park Natural Area.
I suggest that EIR of NAP management Plan take seriously the boots on the ground experience of local habitat restoration volunteers.
The removal of trees and dog issue seem to be big deals in the agenda.
My view is that Oak Woodlands are about 3 % of GG P and represent a fraction of what remains of original coast scrub/Oak Woodland habitat that predates the Park.
Our experience with tree canopy (blue gum eucs' and monterey pine/cypress and) and varieties of invasive tree species indicates that Natural Areas mandate to protect these remnant habitats trumps the often misguided attempts to " protect " trees.
In fact , in the Oak Woodlands, as far as I know , very few if any of the large canopy trees have been cut (altho they are very problematic in some place and should be thinned) , BUT a lot of the invasive ' monocultural ' shrubs and trees have been cut to enable healthy growth of original natural habitat and in fact we plant native shrubs and trees to restore aesthetic and habitat balance.
We also have cut the invasive monoculture to reduce the danger of fire (we have had fires in the OW caused by vagrant campers) and also to clear overgrown areas that provide cover for illegal camping and trash accumulation. The overlapping GG P jurisdiction (RPD - GG P management is not always on board due bureaucratic squabbling) has had a mixed record in coping with this issue.
This indicates to me that Natural Areas must have the clear authority to regulate the core of the natural area AND adjacent ' supporting ' zones, i.e. MA-1 , MA-2 , MA-3.
Therefore, I think that this ' tri - level ' natural area designation could be a recipe for undermining the mandate of Natural Areas to regulate, restore and steward these places based on science, factual evidence and, really, common sense.
In regard to dogs - as of now everyone is free to use such restored places as Oak Woodlands Coon Hollow - but if it becomes obvious that dogs digging, pooping and peeing in this place force out everybody else then Natural Areas and the majority community must have the right to require limits to dog play.
It doesn't rain for 5 months and eventually (even if dog doo is picked up) the place begins to smell like a dog toilet.
Overall, the Natural Areas mandate to restore and steward the tiny remnants of our ' original' natural habitats in this regional urban environment require some sacrifice on the part of narrow interests that don't put natural habitat front and center.
I think it is quite obvious that we continue to lose planetary biodiversity and our hands are not clean on this score - we must do better.

ROB BAKEWELL
Volunteer Steward for SFRPD Natural Areas Program
Oak Woodlands - GG Park
415-710-9617



Concerns for Sharp Park Golf Course. May 14, 2009

To whom it may concern,

I'd like to address what I feel should be the alternatives for your scoping efforts.

I think the no project alternative should be followed by two or three alternatives with various degrees of mitigation, ESHA restoration and educational panels along existing trails retaining all 18 holes of the Sharp Park golf course in some form or fashion.

There are currently plenty of access trails that can support educational displays leading up to and including Mori Point that make moot the need to reclaim large area's of the golf course to facilitate this worthy need.

The alternatives should have and include restoration/repair elements to safe guard against egg sacks being laid in temporary wetlands that are known to dry before tadpoles can develop into adults. The seasonal ponds should be mitigated to alleviate this unfortunate natural behavior if deemed necessary.

I think the golf course can be mitigated, retaining all 18 holes in some form and that restoration(s), as yet to be identified and agreed to by agencies such as the US Fish and Wildlife Service and the California Coastal Commission will insure the existing ESHA(s) will be best able to support listed species.

In closing I see no need to have an alternative with less than 18 holes, that has trustee agency approved mitigations and some sort of educational element such as properly placed panels along existing trails. Thank you for your attention to this matter.

Yours,

Todd M. Bray

Todd M. Bray
468 Donaldson
Pacifica CA 94044
650 355 6788

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

Please take into account biking trail in the archery range and other hilly areas. Single track and bike impacts in that area. We need more public and legal bike trails.
Also - the land is in Pacifica - not SF give it back BNOGGNRA

Name: Adam LABarge

Organization (if any): Pacifica Freeride

Address:

E-mail Address: hi-word@hotmail.com

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

The Endangered Species Act identifies 'critical habitat' of 'threatened or endangered species' as the focus of requiring compliance to conservation efforts. The Dept of the Interior, Fish & Wildlife Service lists the criteria for determining what is 'critical habitat' and what is excluded. From this set of criteria the DOI identifies 2 units of critical habitat zones w/in San Mateo Co: approx 37,000 acres in the Cahill Ridge area south of Pacifica & another similar sized acreage in Pescadero. None of these units include SP. In fact, characteristics of Sharp Park, such as its relatively small size with respect to acreage, its location w/in a developed urban area, qualifying it to be excluded from being a 'critical habitat'.

→ flip

Name: Juanita Mercado

Organization (if any): SPGC

Address: _____

E-mail Address: juanitamercado@earthlink.net

In his opening statements in the Apr 30 meeting, Supervisor Mirkarimi stated that the driver for introducing the ordinance to restore Sharp Park is to protect SF from the liability it incurs by not protecting the threatened or endangered species. Given that Sharp Park is not listed as a critical habitat for the threatened or endangered species, what would be the basis of a liability concern with respect to compliance to ESA conservation requirements?

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

- PLEASE CONSIDER TRAIL MASTER PLAN SUBMITTED BY SF URBAN RIDERS WHEN PLANNING TRAIL CLOSURES AND THE BUILDING OF NEW TRAILS.
- PLEASE MAKE NEW TRAILS OPEN TO BIKES
- PLEASE CONSIDER MOTOR CYCLES SEPARATE FROM BICYCLES
- CONSIDER A BICYCLE SPECIFIC PARK IN THE ARCHERY RANGE AND SHOOTING RANGE AREA OF SHARP PARK.

Name: MITCH MONROE

Organization (if any): SF URBAN RIDERS

Address: 565 TALBOT AVE 94044

E-mail Address: MITCH@SFDIRTCAB.COM

COMMENTS UPON THE SCOPE OF THE EIR FOR SFRPD'S NAP
(as submitted by Dr. Suzanne Valente, a resident of Pacifica; May 14, 2009)

The NAP proposal for Sharp Park as well as the other park locations intends to make major changes in the ecosystems with no apparent benefit to wildlife, and perhaps detriment to important wildlife. Additionally, the NAP parks proposals ignore the serious public safety issues that should be addressed, especially at Sharp Park. An EIR, if it intends to conform with the Precautionary Principle (adopted in 2003 by the City of San Francisco) *must* cover the public safety issues for humans at every park in detail, as well as provide substantial verifiable scientific evidence to justify the proposed ecosystem changes.

Closure of part or the entire golf course to create a "Natural Areas wetland restoration" to benefit the red-legged frog and San Francisco garter snake is the latest proposal under consideration by SFRPD. This is pointless. **US Fish and Wildlife did NOT designate Sharp Park as critical habitat for the red-legged frog or SF Garter snake; therefore by the USFWS' own definition, whatever happens to either species in this area will have no impact upon the ultimate survival or failure of either species. There is NO legal imperative for expansion of the habitat to benefit these two species.** Environmental attorneys explain that there is "critical habitat" and everything else, so Sharp Park has the same requirements as a "habitat" as your home's driveway does. The NAP report acknowledges that the quality of habitat at Laguna Salada, Horse Stable Pond and the adjacent wetlands remains excellent--make the minor alterations biologists recommend and leave the rest of Sharp Park alone.

This plan for Sharp Park is the worst of any in the SF Parks System. It is clearly in violation of the Mission Statement for SFRPD which follows:

"*The San Francisco Recreation and Park Department's Mission is to provide enriching recreational activities, maintain beautiful parks and preserve the environment for the well-being of our diverse community.*"

Further, the plan for Sharp Park intentionally disregards the performance standards established in the SFRPD's own Operational Plan. The Operational Plan states *"the Department shall consider, among other matters, the following issues: Public safety, which shall include the reduction of environmental and other hazards, safe equipment operations and safe pesticide use"*. Public safety should always be a first priority, and this proposal ignores public safety in three circumstances.

1) VECTOR-BORNE DISEASES

Experts say "Biohazards are the greatest threat to humankind", and among them are the diseases mosquitoes carry and pass on to the victims of their bite. The mosquito has caused more human suffering than any other organism known to mankind. One million people die from mosquito-borne diseases every year, and about half of the world's population is at risk. World history is replete with reports of the life threatening diseases transmitted by mosquitoes including West Nile Virus, Eastern Equine Encephalitis, Malaria and Dengue.

The Centers for Disease Control (CDC) cites West Nile virus as the biggest mosquito-borne threat facing Americans, just a few years after being detected in the United States. The Centers for Disease Control reports West Nile virus is spread by infected mosquitoes, and can cause serious, life-altering and even fatal disease. In 2008, CDC records show California reported a total of 445 serious West Nile cases, 15 of which resulted in deaths. California reports fully a third of all West Nile virus cases and deaths reported in the entirety of the United States. On August 15, 2005, San Francisco health officials confirmed the City's first human case of West Nile virus.

The threat of mosquito breeding in the wetlands at Sharp Park which support the red-legged frog and San Francisco garter snake is currently severe enough to warrant treatment by helicopters with larvicide, as well as

spraying with pesticides on the ground every three weeks during the mosquito "season". California Health and Safety Code mandates San Francisco pay for this mosquito control. On January 7 of this year, a court ruling effectively bans the San Mateo County Mosquito Abatement District and 45 other mosquito abatement districts in the state of California from spraying pesticides to kill adult mosquitoes. Therefore, if any mosquito larvae survive the larvicide treatment (which they have in past years with no exception) SMCMAD is helpless to protect the public from any diseases they may carry, including West Nile virus. **There is no dispute expanding the wetlands will create a situation where mosquito breeding is clearly impossible to reliably control.** Changing pesticide regulations as well as the genetic evolution of pesticide-resistant species of mosquitoes are but two reasons that this is the case.

In fact, San Francisco Recreation and Park Department acknowledges the mosquito problem in their "***System Wide Management Actions and Practices***" document pertaining to significant natural areas. Section 5, page 22 of that document states:

"*First detected in the United States in 1999, West Nile virus (WNV) is a mosquito-borne disease that is common in Africa, west Asia and the Middle East. In 2004, there were a total of 829 WNV human infections, from 23 counties in California. West Nile virus activity has been detected in all counties, but there have been no cases reported from San Francisco (DHS 2005). Although it can be fatal to birds (and even humans), most of the people infected with WNV do not exhibit any symptoms. The San Francisco Health Department currently participates in the statewide IPM program targeting WNV. In Natural Areas, two types of BMPs [Best Management Practices] are recommended:*

1. Staff should be provided education regarding the most effective way to avoid contracting WNV, which is to not get bitten by mosquitoes. Clothing such as long pants, long-sleeved shirts, and application of a mosquito repellent may all be helpful in this regard. Volunteers and site stewards working with the program should also be informed.

2. Some Natural Areas contain small water features such as abandoned tires and other refuse that holds water. These features could provide breeding habitat for mosquitoes. At times it may be feasible to remove the water from these areas or to treat the features with BT (Bacillus thuringiensis israeliensis), a safe and ready to use biocontrol treatment for mosquitoes. In other cases, removal of water cannot occur without damaging a sensitive resource."

The NAP plans for Sharp Park include cutting down 15,000 mature eucalyptus trees on the east side of Highway One in Sharp Park. Additionally, destruction of eucalyptus saplings and seedlings (these are by common definition trees) in areas designated by NAP shall be in total. NAP officials do not believe they need to be accountable to the public for the number of seedlings or saplings they remove.

These trees are targeted merely because they are defined by NAP as non-native, yet they provide habitat for 20 species of special status birds. The eucalyptus are to be cut down to create more scrub habitat. Scrub habitat exists on the hillsides all around Sharp Park! It is in abundance on Milagra and Sweeney Ridges, where it is protected and enhanced by the GGNRA (National Park Service). Why would you jeopardize the only habitat in the area for these special status birds? Also, the pattern and velocity of the winds in this area will be altered by the destruction of 15,000 mature trees as well as all others. This may well negatively affect the conditions in the remaining tree stands for those same birds should they attempt to relocate due to their displacement due to NAP. Additionally, the City of Pacifica has the ability to block this ideologically driven destruction of the ecosystem by virtue of the City of Pacifica's anti-logging ordinance and the citizens of Pacifica intend to demand their City officials hold the SFRPD to the terms of this ordinance.

CITY OF PACIFICA TREE ORDINANCES AND PERMITS

Logging Operations in Pacifica
Logging operations within the City of Pacifica are defined as any removal, destruction or harvesting of 20 or more trees within one year from any parcel or contiguous parcel in the same ownership. In reference to logging regulations, a tree is defined as any tree six inches in diameter as measured 12 inches from the ground. City of Pacifica Ordinance No. 636-C.S. prohibits logging operation unless one of the following conditions is met:

* (a)Said operations are in conjunction with a city permit(s) requiring planning commission and/or city council approval, at which time said operations shall be evaluated and approved or denied at a duly noticed public hearing by the commission and /or council, concurrently with the other permit(s).
* (b) Said operations are necessary immediately for the safety of life or property, as determined by the director of public works or his/her designee.
* (c) Said operations occur on city-owned property and are necessary immediately to maintain public health and safety.

Refer to Ordinance No. 673-c.s. for more information concerning logging operations within the City of Pacifica.

The NAP proposal for the east side of Highway One is not without its biological hazards to humans, wildlife and our pets. Excerpts from San Francisco's "Natural Areas Program" (NAP) state:
"Issue: Important elements within natural habitats for the survival of small mammals as well as reptiles and amphibians include underbrush, fallen logs…debris such as lumber, brush piles…piles of abandoned lumber may be aesthetically unpleasing but provide important refuge habitat for many species…
Recommendation: The natural or biodegradable (branches trees and logs) elements shall be preserved during vegetation management activities or replaced with brush piles."

The Western Treehole Mosquito is the primary vector of Dog and Cat Heartworm in California. The Western Treehole Mosquito is so named because its immature stages frequently develop in rot holes of tree stumps such as oaks, laurels, eucalyptus, sycamores, etc. Unfortunately, because NAP cuts down 15,000 mature eucalyptus trees and fails to remove their stumps, they have created an ideal breeding ground for the Treehole Mosquito, as well as additional breeding grounds for the aforementioned mosquitoes which carry West Nile virus.

Many dogs and cats show the first visible indications of heartworm infection only after the disease has progressed to the point where treatment is no longer feasible and death becomes imminent.

Unfortunately, there's more. Locally, urban residents are noting for the first time ticks which can transmit Lyme and other diseases upon their own person, even if they have not been outside of their immediate neighborhood. They have also noted a dramatic increase in the number of the same ticks found on their dogs and cats as compared to previous years.

"The District was contacted from residents of Belmont (near Water Dog Lake) and Pacifica with concerns about ticks in their neighborhoods. In Pacifica, questing ticks can be found in the open spaces between homes. In Belmont, western black-legged ticks were found inside a home adjoining the open space around Water Dog Lake, presumably brought in by the family cat. These instances illustrate the need to watch out for ticks even if one does not engage in outdoor activities at this time of year."
(Excerpted from SMCMAD Entomology Report, January, 2007)

A study conducted at the Institute of Ecosystem Studies in New York and published in 2006, concludes that the risk of Lyme disease is correlated positively with the prevalence of small mammal hosts and the abundance of

their food supply, not the number of deer or fluctuations in climate. The small mammal hosts carry the ticks into residential neighborhoods when they search for food and/or shelter.

CDC recommends the use of landscaping techniques to create a tick-safe zone around homes, parks, and recreational areas:

- Removal leaf litter, brushpiles and woodpiles.
- Clear tall grasses and brush.
- Place wood chips or gravel between lawns and wooded areas to restrict migration to recreational areas.

The environmental features the CDC instructs you to remove to protect you, your family and your community from ticks are precisely the environmental features these Park managers are proposing to enhance habitat for small mammals and to satisfy their obsession with the removal of non-native plants and trees.

The CDC reports that Lyme disease is the most common vectorborne disease in the United States. Since Lyme disease became nationally notifiable in 1991, the annual number of reported cases has more than doubled.

2) EROSION

The safety concern posed by erosion on the portion of Sharp Park east of Highway One is acknowledged in the NAP proposal as being serious, but is specifically designated as a problem that will be addressed as a last priority "when capital funds are made available". This is absolutely unacceptable. The erosion problems should be addressed immediately, before funds are spent on habitat creation. Further, the removal of 15,000 mature eucalyptus trees as outlined in this proposal could certainly make the erosion problem worse.

3) TOXIC LEAD IN THE SOIL

The serious safety concern posed by toxic lead in the soil (way in excess of environmental screening levels) east of Highway One has been ignored for many years, and is briefly mentioned in this report. No time table has been set for cleanup and the promise to complete cleanup has been made and broken many times before. Prior communications with the Health Department of San Mateo County have cited the cost of the cleanup as being an impediment to its undertaking.

The impact of the lead upon the wildlife in that area is another concern. The perimeter fencing around the toxic lead area is not an impediment to the entry of many small forms of wildlife which are subsequently harmed by the toxic effects of the lead.
The possibility of the lead leaching into the groundwater, the stream in the canyon and flowing to Laguna Salada wetlands across the freeway would result in the contamination of the very sites this plan spends huge amounts of money to restore. Erosion and lead contamination present clear and present dangers to the human and wildlife population living adjacent to and frequenting that area. The failure to implement NAP at Sharp Park would minimize the risk of vector-borne diseases, and the money intended for NAP would be best utilized to address the public safety issues; the erosion and the toxic lead soil and water contamination.

This EIR should not ignore the opinions of experts who do not agree with the implementation of NAP as it is currently proposed. Take for example, the following letter from an ecologist and Professor from UC Davis, Arthur M. Shapiro:

UNIVERSITY OF CALIFORNIA, DAVIS

Division of Biological Sciences
Section of Evolution and Ecology
Fax (530) 752-1449

7 May 2002

The Hon. Gavin Newsom
Chairman, Neighborhood Services Committee
San Francisco County Broad of Supervisors
City Hall, 1 Carlton B. Goodlett Place
San Francisco, CA 94102

Dear Supervisor Newsom:

Re: Natural Areas Program (Rec. & Parks)

Because of both personal friendship and professional contacts in The City, I have been following the controversy over native plants and natural areas management and the removal of exotic tree species from public lands in San Francisco. I am a professional ecologist and have been teaching at U.C. Davis for over 30 years. During that time I have trained many professional environmental scientists and consultants. My former students are scattered over a variety of government agencies at several levels, firms in the private sector, and colleges and universities form Massachusetts to Texas to Florida, as well as California. I began teaching a course on the community concept in ecology at UCD in 1972, which has always contained a section on introduced, exotic and naturalized species in community context, with examples drawn form California - long before it became fashionable. I was on the phthises committee of James Carlton, the foremost US authority on weedy marine invertebrates. I have led California Native Plant Society and Sierra Club field trips in the Sierra Nevada and Central Valley for many years and do frequent presentation on butterfly gardening. I am telling you all this to try to establish credibility, because what I am about to say will be controversial - to say the least.

There is a widespread perception that the Natural Areas Program is spinning out of control: that it has overreached far beyond its goal of preserving the remnants of natural vegetation still extant in SF parklands and is now engaged in a compaign of restoration ecology in which overwhelmingly human-modified or - created landscapes are being removed to allow for the recreation of natural ones, or - more accurately - a simulacrum thereof.

The management of public open space necessarily involves a variety of tradeoffs. In a spatially highly constrained area like San Francisco, public open space is precious, and many members of the public are very strongly committed to its well - being. My emeritus colleague Seymour Gold at Davis, as well as other researchers, long ago demonstrate that urban open-spaces users have distinct psychological needs and preferences in landscapes - and that mature trees in specific spatial configurations tend to dominate those preferences. The anthropogenic landscapes we associate with SF parklands are in fact very close to the ideal. It is not surprising that they are so loved by their users.

As a teacher of conservation biology, I know it is important. I also know that it can be carried to extremes. In an urban setting - and San Francisco is such a setting! - it has its place, but it cannot be the dominant value in open-space management. It has to be integrated into a broader context that will be not only politically palatable but in fact pleasing to the public. With a graduate student, I have recently conducted and published a study showing that regulatory styles perceived as arbitrary and authoritarian can and have pushed groups of people normally friendly to environmentalism and conservation - in our study, butterfly collectors - into anti-government positions within the so-called "Wise Use" movement. I see the same process at work in San

Francisco, where a highly educated, sophisticated, politically liberal urban population is being needlessly turned against what it perceives as "environmentalism" run amok. Sierra Club members and butterfly gardeners are beginning to talk like the ranchers I interact with in Siskiyou and Lassen Counties.

The Natural Areas Program has its place, and it needs to be kept in that place. It cannot be allowed to trump the clear preferences of the vast majority of parkland users in San Francisco. The hatred of "exotic" trees, some of which are California natives anyway, is not only ideological but sometimes verges on the pathological, and has strong overtones of xenophobia and racism (look at the anti-"exotic" rhetoric yourself!). Senile, decadent, hazardous trees are numerous and pose a public-safety and fire problem that needs to be addressed. Healthy trees in pleasing, integrated landscapes are another story. "Native" nature can be preserved and augmented without damaging the peace of mind of San Franciscans. And should be.

Sincerely,

Arthur M. Shapiro
Professor of Evolution, Ecology and Entomology
Center for Population Biology, UC Davis

Further, the deed transferring Sharp Park to San Francisco will be voided should any part of the golf course be destroyed to create wetlands habitat. The documents that transferred the land to San Francisco control state: "This grant is made upon and subject to and in consideration of the express condition that the premises hereinabove described and hereby conveyed shall be used by said City and County of San Francisco only for a public park, or public playground, to be known as the 'Sharp Park', without right to sell or dispose of the same or any part thereof for private use, or any use other than as a public park, or public playground".

Some may claim that converting Sharp Park into wildlife habitat fulfills the "public park" requirement. But the rule of law demands that the interpretation of the words in a contract be guided by the intent of the parties to the contract at the time the contract was signed. It is pretty clear what a public playground was, but what did they mean by a "public park" in 1917 when the deed was transferred? Consider the 11th Edition of the Encyclopaedia Brittanica (published 1911) in which the term PARK is defined as follows:

> **PARK** (Fr. *part;* Ital. parco; Sp. *parque;* O.Eng. *pearroc;* connected with Ger. *pferch,* fold, and *pfarrei,* district, translating med. Lat. *parochia,* parish), a word ordinarily used in two senses: (a) an enclosed tract of ground, consisting of grass-land, planted with trees and shrubs, and surrounding a large country house; ' (*b*) a similar space in or near a town, laid out ornamentally, and used by the public as an "open space" for health or recreation.

It is clear that the parties to this contract would have approved of a golf course, but NOT a wetlands habitat for the express purpose of supporting frogs and snakes.

If you go to the City of San Francisco Real Estate Department and review the correspondence leading up to the transfer of the property, it is clear that the imposition of this "public park" restriction was not a whim. On the contrary, it was an adamant demand without which the property owner refused to transfer the property.

It is clear that any Court reviewing these documents would find the proposed property change to be in violation of the transfer documents and therefore Sharp Park would revert to the State of California (as specified in the deed), who would be bound by the same restrictions. Should the State fail to meet these restrictions, the property would revert to the heirs or legal representatives of the original grantor, Samuel G. Murphey. This issue should be addressed seriously as a part of this EIR as legal challenges to any decision to remove all or a portion of the golf course will be promulgated and likely be successful.

350 O'Shaughnessy Boulevard • San Francisco, California 94127
Telephone: (415) 281-0892

Miraloma Park Improvement Club

May 16, 2009

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CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
Natural Area Management Plan
1650 Mission St
San Francisco, CA 94103

Re: Initial Study, Significant Natural Resource Areas Plan: Mount Davidson Park

Dear Mr. Wycko,

While the Miraloma Park Improvement Club supports the creation of a natural area plan (NAP) for Mt. Davidson to help preserve the natural area on the east side of the park, we are concerned about the environmental impact of the planned tree removal and trail closure in the historic forest area. We therefore support the finding of the initial study that the proposed project may have a significant potential negative impact on Mt. Davidson Park, which is an important example of a major period of California history, and may have environmental effects that would cause substantial adverse effects on human beings. We ask that a full environmental impact report be completed and that it address the following potential impacts:

1. Clearing of the trees to the great extent proposed in the NAP would significantly reduce the quality of human experience of this unique forest and viewpoint atop San Francisco's highest hill by: (1) eliminating a buffer from substantial noise pollution from the 280 freeway, BART, and Portola Drive; (2) altering the wind and fog pattern in the park and adjoining neighborhoods, because the trees provide protection from the prevailing westerly wind and fog; (3) promoting the growth of poison oak along trails, which fills in the areas where the trees are cut down and makes the trails unsafe for public use; and (4) promoting erosion and landslides onto trails and adjoining homes, environmental damage that is prevented by the existing trees.

2. The substantial cost of removing and replacing the trees would divert limited Recreation and Parks Department resources for providing basic maintenance of Mt. Davidson Park, including litter and graffiti removal, trail maintenance, and signage. Diversion of these funds would degrade the public's experience of the park.

3. Removal of as many trees as proposed in the NAP would significantly impair the current habitat for birds and animals provided by the forest.

Additionally, we believe that the NAP should also be assessed for the appropriateness of its proposals with respect to the status of both the Park and the Mt. Davidson Cross as important historical entities. The park and monument are important examples of a major period of CA history, as the historic trees were planted on Mt. Davidson over a century ago by Mayor Adolph Sutro to celebrate the nation's first Arbor Day. Naturalist poet, Joaquin Miller, inspired the planting of the trees. The forested hill was named for George Davidson at the request of the Sierra Club. The park's creation was a three-year community effort in 1929 in order to protect the trees as a scenic resource for enjoyment by the public. If not for this historic effort to protect the trees from destruction to make way for housing, there would not be a natural area left undeveloped on the east side of Mt. Davidson. Therefore, the NAP should record and document the existing resources in preparation for listing on the California Register of Historical Resources. Furthermore, any historical trails created and enhanced as Works Progress Administration projects during the Great Depression proposed for closure by the NAP should be maintained and should remain open to the public.

Mitigation measures for any approved NAP tree removal and trail closure should include documentation of all trees removed or fallen from storm in the park; advanced public notice of any further tree removal; removal of any downed trees to maintain the aesthetic quality of the forest and park; quarterly removal of all poison oak within 10 feet of trails; and maintenance and protection of WPA trails and retaining walls. Any activity for implementation of the NAP should not restrict public use of the park or access to the historic area or viewpoints for more than 30 days at a time.

Thank you for your attention to this matter.

Dan Liberthson, Corresponding Secretary

c: Supervisor Elsbernd

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PLANNING DEPARTMENT

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

I AM A GOLFER AND A ENVIRONMENTALIST (A SIERRA CLUB + WILDERNESS SOCIETY MEMBER), IF I THOUGHT THE GOLF COURSE WAS HARMING THE FROGS AND SNAKES I WOULD BE AT THE FOREFRONT of OPPOSITION TO THE GOLF COURSE. BUT I KNOW DIFFERENTLY.

SINCE IT WAS MADE KNOWN THAT PUMPING-OVERFLOWING-WATER OFF THE GOLF COURSE WAS DETRIMENTAL TO THE FROGS AND THAT PRACTICE AS WELL AS PESTICIDE USE ENDED A FEW YEARS BACK, I'M SURE THE FROG NUMBERS HAVE INCREASED. IF THEY HAVEN'T I'M SURE ITS NOT BECAUSE of THE GOLF COURSE. THE GOLF COURSE IS NOT HARMING THE FROGS. THIS IS A RED HERRING ARGUMENT

MANY GOLF COURSES GO THROUGH ENVIRONMENT SENSITIVE AREAS. BODEGA BAY, TEALBEND (SACRAMENTO) MONARCH BAY (SAN LEANDRO) AND STONEBRAE (HAYWARD)(WHICH JUST OPENED IN PRIME RED LEGGED FROG HABITAT, ARE JUST A FEW of MANY SUCH COURSES THAT COME TO MIND.

I HEARD THE ARGUMENT ABOUT USING THE GOLF COURSE AREA BY THE LAGOON FOR CHILDREN'S ENVIRONMENT EDUCATION AND OPEN SPACE, BUT THIS LAGOON EXTENDS BEYOND THE SOUTHERN BOUNDARY of THE GOLF COURSE THAT IS EASILY ACCESSABLE TO THE PUBLIC FOR THIS CAUSE, BUT I HARDLY EVER SEEN IT USED FOR THESE ACTIVITIES.

THERE IS PLENTY of OPEN SPACE AREA SURROUNDING THE GOLF COURSE AND MOREY'S POINT FOR HIKING, BIKING, NATURE STUDY ETC IT'S NOT LIKE THE GOLF COURSE IS IN THE MIDDLE of DOWNTOWN SAN FRANCISCO.

(OVER)

Name: GEORGE AMBROSIO

Organization (if any): SAN FRANCISCO JUNIOR GOLF (32 YEAR RECREATION & PARK EMPLOYEE RETIRED)

Address: 2491 WHITMAN WAY, SAN BRUNO 94066

E-mail Address: _____

THERE IS NO REASON TO ALTER OR DESTROY THIS GREAT RECREATION FACILITY. THE PLANNING COMMISSION SHOULD LOOK INTO THINNING THE REEDS CHOKING THE LAGOON WHICH WILL GIVE MORE ROOM FOR THE WATER IN THE LAGOON. THIS WOULD PREVENT OVERFLOW ON THE GOLF COURSE WHICH WILL HELP THE FROG AND THE GOLF COURSE. MAKING IT MORE PLAYABLE DURING THE WET SEASON AND ATTRACTING MORE GOLFERS AND IMPROVING REVENUE.

SHARP PARK GC IS A WORK OF ART CREATED BY ONE OF MOST FAMOUS GOLF COURSE ARCHITECTS. MR. ALISTER MACKENZIE, ONE OF ONLY FOUR GOLF ARCHITECTS ENSHRINED IN THE GOLF HALL OF FAME.

SHARP PARK IS AND SHOULD BE ONE OF SAN FRANCISCO'S GREAT ASSETS.

IT WOULD BE TRAGIC AND CRIMINAL TO ALTER OR DESTROY ONE OF SAN FRANCISCO'S FINEST ATHLETIC RECREATIONAL VENUES UNNECESSARILY.

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MAY 19 2009

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

It is my understanding that prior to the seawall being built Laguna Salada Pond & Hose Stable Pond were flooded with seawater an untriendly habitat for both the frog & the snake. Then came the mother of all floods, the corp of engineers (Army) and the seawall with no drainage allowed for both creeks at the north end & south end of L.S. hence todays problem. Formerly both creeks emptied directly to the ocean now the water collects and creates the flooding & habitat for frogs & snakes.

The city has no $ to fix this problem. Since the Army Corps of E created the problem they should be made to rectify the situation. Since the creeks are the problem the north creek should be made to empty into the ocean. The south creek (Sanchez crk) should be redirected to the N end of Mori Point and used to help crow frogs & snakes (Diversity Group has a half a dozen ponds on site and I'm sure would welcome the freshwater.

Name: Frankie E Franck

Organization (if any): Preserve Sharp Park 18 Hole Golf Course

Address: 1064 PK Pacifica Ave, Pacifica CA 94044

E-mail Address: ffranck@earthlink.net

Thank You

SNRAMP – NOP

Dayton Crites
<dayton@sfurbanriders .org>
Sent by:
daytoncrites@gmail.com

05/20/2009 02:31 PM

To Jessica.Range@sfgov.org
cc
bcc
Subject Consider off-road bicycle use in SF's open space EIR.

Ms. Jessica Range,

I am writing you to address the EIR that will analyze various needs and uses of San Francisco natural areas. I feel that too often, the needs of recreational trail users are overlooked, especially those of mountain bike users.

I urge the government of San Francisco to consider the development of multi-use trails, and bicycle skills parks to be considered as sustainable uses of our open spaces and parks. I work closely with SF Urban Riders, a non-profit committed to working with the city to provide these resources to her citizens.

Off road cycling is a fast growing sport that already enjoys a diverse and large following in the bay area. Besides its healthy benefits to the community and users, Mountain bikers are a largely untapped resource of volunteer labor and stewardship for our public lands, as has been demonstrated in the successful partnership between sfurbanriders and mt. sutro stewards in creating San Francisco's first true multi-use trail system.

Lastly, Mountain Biking has been shown to be of equal or less detriment to trail systems than hiking, and less damaging than equestrian use. Resources that back this claim can be found here.

Please let me know you have any questions, and thank you for your time.

Sincerely,

Dayton Crites
sfurbanriders.org

CITY of PACIFICA
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Scenic Pacifica

CITY HALL
170 Santa Maria Avenue • Pacifica, California 94044-2506
www.ci.pacifica.ca.us

MAYOR
Julie Lancelle

MAYOR PRO TEM
Sue Digre

COUNCIL
Peter DeJarnatt
Mary Ann Nihart
James M. Vreeland, Jr.

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CITY MANAGER'S OFFICE
TEL (650) 738-7301
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CITY ATTORNEY
TEL (650) 738-7409
FAX (650) 359-8947

CITY CLERK
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May 22, 2009

Mr. Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Notice of Preparation of an Environmental Impact Report dated April 22, 2009 Project Title: Natural Areas Management Plan (aka Natural Resources Areas Management Plan)

Dear Mr. Wycko:

Thank you for providing this initial study and Notice of Preparation ("NOP") and for conducting a scoping meeting in our community. We appreciate the acknowledgement that since the Sharp Park property is located within the boundaries of the City of Pacifica, we are naturally very attentive to any changes or alterations proposed for this site. Upon reviewing the NOP, we noted several items related to our Land Use regulations that were not included in the NOP and that should be acknowledged in the EIR documents.

This letter serves as the response of the City of Pacifica ("Pacifica"), a Responsible Agency as defined in California Public Resources Code Section 21080.4(a) and 14 California Code of Regulations Section 15082(b), to the above referenced Notice of Preparation ("NOP").

The NOP does not identify discretionary approvals required by Pacifica for the Natural Area identified as "Sharp Park", which is located in the jurisdiction of the City of Pacifica. The City and County of San Francisco ("San Francisco") must comply with the California Coastal Act. Pacifica has a certified Local Coastal Program ("LCP") pursuant to which Pacifica enforces Coastal Act regulations in the Coastal Zone within Pacifica's boundaries. That portion of Sharp Park west of Highway One is within the Coastal Zone, and is identified in the LCP. Thus, for projects affecting west Sharp Park such as this, San Francisco needs to obtain a Coastal Development Permit ("CDP") and comply with it. Please include the CDP in the list of discretionary approvals required to be analyzed in the EIR and throughout the discussion in the document.

Further, the proposed project is subject to Pacifica's Logging Operations Ordinances, Ordinance Numbers 636 C.S. and 673 C.S. Any tree removal, destruction or harvesting of twenty or more trees within one year is prohibited unless in conjunction with a Pacifica permit (such as the CDP) or unless the Pacifica Public Works Director makes specific findings regarding the tree removal operations. Again, please include these regulations in the environmental discussion.

In addition, Topic 14, "Hydrology and Water Quality", subsections (a), (c), (d), (e) and (h) reference the need for the EIR to study the proposed project's impacts on drainage patterns and flood hazards within the Sharp Park area. Pacifica concurs that the EIR must study those potential impacts, and emphasizes the need to study the risk of flooding not only within Sharp Park itself, but whether the proposed project will result in flooding of the adjacent residential areas, and, if so, propose appropriate mitigation. In addition, the EIR should address the effect that removing 54,000 trees will have on erosion and drainage patterns.

Pacifica reserves its rights to comment in greater detail on the contents of the initial study until the City has the opportunity to review a full draft EIR.

We appreciate your attention to these matters.

Sincerely,

Julie Lancelle
Mayor

Cc: City Council
City Manager
City Attorney
City Planner

May 21st, 2009

Bill Wycko, Environmental Review Officer
SF Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear Mr. Wycko,

Thank you so much for the enlightening Public Scoping meeting last May 14th. I very much appreciated being presented with Lisa Wayne's Management Plan and with the CEQA objectives.

My family frequently uses Glen Canyon Park and Bernal Hill for walking and enjoying the outdoors as well as introducing our daughter to the wildflowers, plants, rocks, birds and bugs that can still be found in these exceptional areas. We also enjoy exploring Billy Goat Hill, Tank Hill, Duncan-Castro and McLaren Park.

I have reviewed the SNRA Management Plan. I was encouraged to see that in the MA-1 and MA-2 areas described in the Management Plan, there will be a comprehensive effort to attempt to restore natural areas to their original state.

I would like to suggest that the MA-3 areas be treated in a manner similar to the MA-2 areas. I understand that it is imperative to move quickly to preserve the native plants and geology in the MA-1 and MA-2 areas. The MA classifications are obviously meant to prioritize this. However, in order to create a congruent landscape in the long run, the MA-3 areas should be managed congruently with the other areas.

Replant MA-3 Areas with Bay Area Native Oak Savannah Trees

As the SNRA Management Plan now stands, there is no plan to gradually replace the eucalyptus groves with native trees such as coast live oak:

Recommendation GR-15b: In order to maintain the forest as it ages, it is necessary to maintain a stocking rate that will perpetuate the urban forest and promote forest health. Over time, it will be necessary to grow a new age class of trees, which will eventually replace the existing mature canopy. This will be accomplished through natural and artificial regeneration methods. Natural regeneration refers to the seedlings and saplings that establish naturally. Blue gum eucalyptus is likely to be the primary species that regenerates naturally although the other invasive species also regenerate. Artificial regeneration refers to the planting of trees by people for management purposes. California native trees that offer the greatest value to wildlife such as Monterey cypress, Monterey pine and Douglas fir (*Pseudotsuga menziesii*) will be used. Tree planting can take advantage of openings in the urban forest canopy that are created either naturally or from other management activities.

I would ask that the decision to include Eucalyptus, Monterey Pine and Monterey Cypress in the reforestation of these GR-15b areas be reconsidered. These trees discourage the growth of an understory in the forest. Coast Live Oak savannah, so prevalent in the savannah areas of Yerba Buena Island and Palo Alto, obviously were also prevalent in San Francisco. It would be a shame not to feature these beautiful, drought tolerant, fire resistant trees and grasses in replanting efforts.

Carbon Sequestration

A concern for maximizing carbon sequestration in order not to further contribute to climate change has been expressed. I share this concern.

I would like to mention that it is increasingly apparent that deeply rooted grasslands sequester carbon permanently underground while rapidly growing trees such as eucalyptus sequester carbon temporarily and not as efficiently as native bunch grasses.

I would ask that the CEQA look carefully at this. The 2008 Hohhot World Temperate Grasslands Declaration, sponsored by the World Conservation Union, a United Nations affiliate, states:

"Considering that temperate indigenous grasslands provide critical ecological goods and services essential for life on earth as a source of food, fibre, human livelihoods and well being, cultural and biological diversity, the recharge of aquifers and the sequestration of carbon, particularly in the face of global climate change . . . we the participants of the Hohhot World Temperate Grasslands Conservation Initiative Workshop from five continents and 14 countries, declare that temperate indigenous grasslands are critically endangered and urgent action is required to protect and maintain the services they provide to sustain human life. We call upon all sectors of society to collaborate towards this goal."

The United States is a signatory of this declaration. According to the signatories of this declaration, the relative sequestration of eucalyptus forest versus native grassland is not well understood. However, it is becoming increasingly clear that native grasslands play a key role not only in carbon sequestration, but in the preservation of the world's biodiversity. It seems that the indigenous grasslands of San Francisco are critically endangered as are most of the world's grasslands.

Maintain Management of MA-3 areas in NAP

I would also ask that the MA-3 areas be managed, along with the MA-2 and MA-2 areas, in the Natural Areas Program. This will allow for management economies in the use of labor and forestry resources. The suggestion that the MA-3 areas be managed by the Bureau of Urban Forestry would be disastrous for the overall goal of the Natural Areas program.

If there is any doubt that the Bureau of Urban Forests is terribly under resourced, I would ask CEQA and the Bureau of Urban Planning to consider this example: The Bureau of

Urban Forests repeatedly claims that they do not have the funds to fix a College Avenue city sidewalk in their jurisdiction which poses a tripping and liability hazard to the city.

Again, a partitioning of the management of MA-3 areas would be disastrous for the overall goal of restoring esthetic and biological continuity to the city's natural areas.

Work toward Walkability in and between the City's Natural Areas

I was encouraged to see that the Management Plan included a vision of trail building. There are many beautiful trails in the city. Some of these are in the process of being rebuilt. I was lucky enough to be on a trail building crew in Glen Park last year.

I would suggest that an overall plan be made for the Natural Area trails. The plan should extend beyond the boundaries of the natural areas, interconnect natural areas where possible, and connect natural areas to public transit. An attempt should be made to map trails or walking routes that exist through open spaces, city parks and urban areas. They should incorporate the city's neglected stairways. Such a plan might take many years to execute, but it would mean that there are not wasted efforts with trails built to nowhere.

Some examples of potential trails that I can think of are to connect Glen Canyon Park to Twin Peaks or Glen Canyon Park with Walter Haas Park and Billy Goat Hill.

Reconsider the Impact of Off Leash Dogs

As the parent of a small child and as a life long owner of dogs, I have spent quite a while considering how the city's dog policy works in practice, rather than theory.

First, I would suggest that San Francisco does not have the rain that most North American cities have. In fact, it is a highly populated area in a near dessert. Virtually all of the rain the city gets is in the winter. The rest of the year, the city has no rain. By August, I find myself avoiding going to areas such as Bernal Hill and Glen Canyon Park because of the dog urine and general dirtiness of these areas. It is always a great relief to get the first rain.

I have also observed that most dogs are not walked on leash, even in leash areas such as Glen Park. I try to be considerate toward dogs and their owners on this matter. However, I find myself carefully assessing the breed and disposition of dogs as to their risk to my child. Many people are not as comfortable or knowledgeable with dogs. I know many people who avoid natural areas for this reason, especially parents of young children. This does represent a lost opportunity for children. They are less likely to be taken into natural areas due to the ubiquitous presence of off leash dogs.

Research does indicate that children are more likely to be bitten by a dog than an adult. Children are often at eye level to a dog. Many dog attacks are unprovoked and can result from something as simple as the dog misinterpreting eye contact or an outstretched hand.

In dog play areas, such as the road on Bernal Hill, I have found that I am increasingly uncomfortable going there. There almost always seems to be a dog fight or a dog rushing me in the legs. Many dogs are walked by dog walkers with multiple dogs and these dogs are thus poorly under control.

Again, if the intent is to allow people to experience natural areas, the current behavior of dogs and their owners is limiting this experience. The policy of allowing dogs, who are almost never on leash, access to natural areas should be reassessed. Dog Play areas should be reexamined in light of the lack of control of dogs and the environmental impact. The need to allow children to experience natural areas should be considered, not just the needs of dogs and dog owners.

I thank the Planning Department for the opportunity to express my appreciation for this planning process as we work toward a management plan of the natural areas in our beautiful city.

Most sincerely,

Marnie Dunsmore
118 College Avenue
San Francisco, California
94112

May 21, 2009

Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

RECEIVED
MAY 21 2009
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

RE: Comments on Notice of Preparation of an EIR for
The Natural Areas Management Plan (SNRAMP)
Case Number 2005-1912E

Dear Mr. Wycko:

Enclosed are our comments on the notice of preparation of an EIR for the Natural Areas Management Plan (SNRAMP). We are a team of park advocates with a vision of the Natural Areas Program (NAP) that acknowledges the co-existence of recreation and urban natural areas, which is guided by science, that embraces a diverse biophilia, and that ensures the public's safety in our parks. Our combined experience to achieve these objectives includes:

2002 SF Recreation and Park Department, Green Ribbon Task Force for NAP plans
2002 – present CC of San Francisco, Parks, Recreation, Open Space Advisory Committee
2003 - 04 SF Department of Environment, Task Force for Quail Recovery Plan
2003 SF Board of Supervisors, NAP Citizen Advisory Committee
2004-05 SF Recreation and Park Department, members of negotiation team to revise NAP plans and plan public process in preparation for approval of plan in 2006
2007-08 SF Mayor's Open Space Task Force

The Natural Areas Program enjoys the passionate support of many citizens, as well as equally passionate citizens who question some of the strategies and methods of the program. A comprehensive Environmental Impact Report (EIR) represents an opportunity to resolve some of the controversies that the program has generated in the past 10 years of its operation. Our comments are intended to help those who prepare the EIR to answer the many questions that have been raised about the management plan. In answering those questions, we believe it will be necessary to conduct independent studies of the potential impacts on recreation, the loss of thousands of trees, exposure to hazards such as herbicides, fire, erosion and other concerns that originate with past experience with native plant restorations in the area. Since the Initial Study has not conducted such studies or taken into consideration present conditions in the natural areas, the EIR must do so now.

You have been assigned an important task, to put to rest years of concern and disappointing experiences with the Natural Areas Program. We urge you to take this task as seriously as the public does. This is the final opportunity to do so, as we have no desire to resort to legal means (as provided by CEQA) of achieving the necessary assurance of the public's safety and enjoyment in our parks.

Sincerely,
Karin Hu
Mary McAllister
Nancy Wuerfel

Comment on the Notice of Preparation of an EIR for
The Natural Areas Management Plan (SNRAMP)
Case Number 2005.1912E
May 21, 2009

The Initial Study of the environmental impacts of SNRAMP is inadequate in many respects:

- It dismisses as "insignificant" environmental impacts that have been experienced in the natural areas in the past and that caused considerable damage as well as public concern.
- It makes sweeping statements, dismissing environmental and safety issues without providing any evidence to support these dismissals
- It demonstrates that the author has either not read SNRAMP or has not understood important portions of it
- It demonstrates that the author has ignored basic scientific principles needed to analyze potential impacts, such as carbon sequestration and release
- It demonstrates that the author has not visited the natural areas and is unaware of the 10-year history of environmental and safety problems and public concern since the Natural Areas Program began to operate

The Initial Study (IS) proposes further study and analysis by an EIR of only a few environmental issues for which there "is not sufficient information available at the time on the potentially effected resources or site conditions" (IS page 61). The following comments request that the proposed EIR be expanded to include several environmental issues for which the Initial Study is inadequate, inaccurate, or is inconsistent with the reality of past actions of the Natural Areas Program both in the present and in the past 10 years of its existence.

E.1 Land Use and Land Use Planning
E.9 Recreation

A. Changes in land use by the Natural Areas Program

"There would be no change in land uses and no impact under the project..." (IS page 59)

SNRAMP changes land use by restricting access to the natural areas:

- "Public use in all Natural Areas, unless otherwise specified, should encourage on-trail use...park signs should...include 'Please Stay on Trails...If off-trail use continues...permanent fencing shall be considered..." (SNRAMP, Recommendation GR-11, page 5-14)
- "Recreation goals: To provide opportunities for passive recreational uses (e.g., hiking, nature observation) compatible with conservation and restoration goals." (SNRAMP, Management Approach, page 2-2)
- "Some MA-1 areas may require installation of elevated boardwalks or permanent fences." (SNRAMP, page 1-5)
- 10.3 miles of 40 miles of trails within the natural areas will be closed (SNRAMP, Table 3-6)

The Recreation and Park Department has recently restricted bicycles to paved roads. There are few paved paths within the natural areas, which effectively bans bicycles from the natural areas. Plans to improve trails within the natural areas will not include paving.



Recently installed sign at the Overlook Parking lot on Mansell Street in McLaren Park

On November 19, 2008, the following comment was posted to the Natural Areas blog: "San Francisco's Significant Natural Resource Areas are now being assaulted by a new menace: mountain bikes...One thing needs to be perfectly clear: **Rec & Park Department policy prohibits bicycles in the parks except on PAVED surfaces...**The RPD should place signage at all entrances to all parks clearly prohibiting bike riding in any Significant Natural Resource Area." (sfnaturalareas.org)

"Of the San Francisco Natural Areas, trails would increase at Edgehill Mountain and Interior Greenbelt." (IS, page 58)

On April 27, 2009, the Natural Areas Program installed this sign at the only entrance to the Interior Greenbelt, one of the natural areas: **"No Public Access"**



The site-specific plan for the Interior Greenbelt does not indicate any trail closures in that natural area. In fact, the plan indicates the expansion of the existing trail (SNRAMP, page 6.23-2). Yet, the reality is that the Natural Areas Program is apparently closing this natural area to the public.

Both of these new signs in the natural areas cite Park Code 3.02 as the authority for these access restrictions. Park Code 3.02 provides: "Signs To Be Obeyed. No person shall willfully disobey the notices, prohibitions or directions on any sign posted by the Recreation and Park Commission of the Recreation and Park Department." In other words, the Natural Areas Program apparently gives itself the right to put ANY prohibition on a sign and the public is obligated to observe their prohibition.

When there is a conflict between the plans as stated in SNRAMP and the reality of what is happening in the natural areas, the latter should trump the former in the EIR evaluation. The EIR must acknowledge what has actually happened and presently exists in the natural areas.

None of these restrictions on recreational access are mentioned in E.9 Recreational element of the IS. These are omissions that must be corrected by the full EIR of the Recreational element.

B. Everson/Digby Lots should not be included in this EIR

The Initial Study announces the existence of a new natural area: "A portion of the Everson/Digby Lots park was recently determined to be a Natural Area" (IS, page 46). The Initial Study provides no information about this new natural area or what is planned for its future. Neither the Natural Areas Program website (sfnap.org) nor the Recreation and Park Department website (sfgov.org) acknowledge the existence of this new natural area, let alone provide any information about it. The Initial Study does not inform the reader if the Recreation and Park Commission has approved the designation of this natural area. Nor do we know if the visitors to and neighbors of this park are aware of this designation.

SNRAMP was subjected to a lengthy public process, including public meetings and hearings by the Commission that eventually resulted in its approval. Everson/Digby Lots have not been through this process and are therefore not ready for an EIR until this process is complete. A management plan must be written for this new natural area. After the public has considered this proposal and if the Commission approves it, it will be ready for environmental impact review.

C. Changes in land use resulting from existence/reintroduction of legally protected species

One of the objectives of the SNRAMP is the protection, enhancement, and reintroduction of sensitive species of plants and animals: "Augmenting existing populations and (re)establishing or (re)introducing additional populations where they once occurred (or were likely to have occurred) will help to ensure their continued survival in the City" (SNRAMP, page 5-3). Management actions in the MA-1 and MA-2 areas include "reintroduction of sensitive species" (SNRAMP, page 1-5). MA-1 and MA-2 areas are 623.0 acres (58%) of all natural areas. The definition of "sensitive species" includes federal and state legally protected species (SNRAMP, Table 3-6).

Consistent with that mission, the Natural Areas Program and its volunteers have successfully lobbied the Board of Supervisors to develop Sharp Park as habitat for legally protected species to be managed by the GGNRA: "This Thursday, April 30, [2009]...you'll have the opportunity to tell the Board of Supervisors to stop wasting our tax dollars operating the money-losing Sharp Park golf course. The Government Audit and Oversight Committee will consider legislation 'to develop a plan, schedule and budget for restoring Sharp Park habitat for the California red-legged frog and the San Francisco garter snake in conformance with the requirements of the Endangered Species Act, and transferring Sharp Park to, or developing a joint management agree with, the Golden Gate National Recreation Area and

making environmental findings.'" (sfnaturalareas.org) On May 5, 2009, the San Francisco Board of Supervisors unanimously approved this proposal verbatim as an "ordinance amending San Francisco Park Code Article 3 by adding Section 3.20..."

There are legally protected species in many other natural areas (SNRAMP Table 3-5), which could lead to similar changes in land use. For example, access restrictions will be required at Lake Merced to protect the Western Pond Turtle (WPT): "Recommendation LM-6c: To prevent native turtles from being disturbed during breeding season, restrict public access to the waters and shoreline of East lake between April 1 and August 31. It may be possible to achieve these access restrictions through signage. If not, temporary barriers that would prevent boat access to East Lakes could be installed." (SNRAMP, Lake Merced, page 6.1-17)

In Oregon, where the WPT is an endangered species, the recovery plan for the WPT requires restrictions on all human access—recreational and agricultural—within 500 feet of the water to protect the potential nesting range of the turtle. The recovery plan also requires that the entire potential nesting range be unshaded in order to maintain the optimal temperature for the turtle's eggs. This would require removal of all trees—native and non-native—within 500 feet of the perimeter of the East Lake and North Lakes, where the turtles have been found.

The Natural Areas Program is presently reintroducing the Mission Blue Butterfly to Twin Peaks (Oakland Tribune, 5/1/09). The Mission Blue Butterfly is a federal endangered species. The Xerxes Society lists as one of the management actions required to preserve populations of the Mission Blue, "protection from excessive recreational use." It also suggests that suppression of fire may have reduced habitat quality and negatively affected the historic population. In other words, the reintroduction of the Mission Blue on Twin Peaks has the potential to reduce recreational access and require periodic prescribed burns. The Endangered Species Act legally obligates management actions required to maintain a legally protected species, whether it has been reintroduced artificially or occurs naturally.

In addition to access restrictions defined by SNRAMP, the Natural Areas Program has identified new restrictions on recreational uses needed to protect natural areas and their resident wildlife. Therefore, the Initial Study is inaccurate to claim that the Natural Areas Program will not change land use. SNRAMP has the potential to eliminate all forms of recreation other than walking on a designated path as it implements its goals "To maintain viable populations of all special-status species" and "To maintain and enhance native plant and animal communities." (SNRAMP, Management Approach, page 2-1) The proposal to "transfer" or develop "joint management of" Sharp Park with the GGNRA, indicates the potential for ownership of natural areas to change in the pursuit of restoration goals. These changes in land use must be acknowledged and evaluated in the EIR. Recreational access restriction not identified by the Initial Study, must also be evaluated by the EIR.

E.2 Aesthetics

Most trees designated for removal will NOT be replaced with native trees

"Generally, trees removed would be replaced with native tree species at a roughly 1:1 replacement ratio, although not necessarily at the same location. In some locations, trees would be replaced by native scrub or grassland species." (IS page 63)

SNRAMP contains no such commitment to replace all trees designated for removal with native trees in the same location or any other location. In most cases, SNRAMP says specifically that the trees

designated for removal will **not** be replaced by trees, but rather with grassland and dune scrub. All designated tree removals are in MA-1 and MA-2 areas (see Attachment A).

- "The long-term goal of urban forest management in MA-1 and MA-2 areas is to slowly convert those areas to native scrub, and grassland habitats or oak woodlands." (SNRAMP, Forestry Statement, page F-1)
- "The goal in most of the MA-1 and MA-2 stands at Sharp Park is the same as for the Natural Areas within San Francisco: eventual conversion of invasive forest into grasslands and scrub." (SNRAMP, Forestry Statement, page F-6)
- Most site-specific recommendations regarding tree removal say specifically that the trees will be replaced by scrub or grassland (SNRAMP, Forestry Statement, pages F-8-F-11):
    - Lake Merced: "These openings will remain as the forests in these areas are gradually converted to low-growing coastal scrub."
    - Mt. Davidson: "...tree removal will result in the conversion of some areas of forest to scrub and grasslands."
    - Glen Canyon: "...gradually converted into scrub habitat..."
    - Bayview Park: "Tree removal will focus on the existing edge of forests to preserve existing scrub and grassland."
    - McLaren: "Grasslands will increase in magnitude and the area...will support...diverse coastal scrub."
    - Interior Greenbelt: "...these areas will be converted to coastal scrub..."
    - Dorothy Erskine: "...scrub will fill in where trees have been removed."

Only the site-specific Forestry Statement for Corona Heights predicts long-term conversion to oak woodland. And, "Within MA-1 and MA-2, these sites [of tree removals] would then be replanted with native shrub and grassland species. Within MA-3, urban forest species would be planted or encouraged (see Section 5, GR-15)" (SNRAMP, Forestry Statement, page F-3)

These long-term goals for the conversion of the urban forest to scrub and grassland are consistent with the natural history of San Francisco: "Prior to the colonization and the stabilization of dunes and introduction of invasive species, trees were not a dominant feature of the San Francisco peninsula. It is likely that scrubby coast live oaks grew on north-facing slopes in moist drainages and that buckeyes, bays, and oaks lined creek channels that flowed to the bay or ocean. However, much of the area probably resembled the coastal scrub habitats of San Bruno Mountain or the grassland-scrub mosaics of the Marin Headlands. Management of MA-1 and MA-2 is focused on the gradual conversion of these areas into native scrub and grassland habitats. This is the long-term goal." (SNRAMP, Forestry Statement, page F-1)

As one might expect, given the treeless nature of the native landscape, most native plants are not adapted to shade, as there was little shade in native San Francisco. For that reason, attempts to restore the native landscape would not be served by planting native trees. Trees create shade whether they are native or non-native. A related issue also predicts that native trees will not be a conspicuous feature in the restored natural areas: "In many Natural Areas, trees capture moisture from the coastal fog. The moisture drips onto the ground creating artificially wetter than normal conditions which favor invasive weed species." (SNRAMP, Forestry Statement, page F-1)

Because most of the natural areas are rock outcrops and sand hills that were treeless prior to the arrival of Europeans, there is little acreage within the natural areas that is capable of supporting trees that are native to San Francisco: "Two native forest series...comprise approximately 17 acres, 2 percent of total vegetation [in the natural areas]" (SNRAMP, Setting, page 3-11). Obviously, it would not be

physically possible to plant 18,500 native trees in the small areas in which they would be able to survive.

The Natural Areas Program has also demonstrated in the past that it cannot successfully replace with native trees those non-native trees that it has already removed. Nearly 10 years ago, the Natural Areas Program removed approximately 12 of the 24 non-native trees on the top of Tank Hill. The neighbors of Tank Hill were angry about their removal. The Natural Areas Program planted native trees in an attempt to satisfy the angry neighbors. These native trees did not survive, as one might expect given the windy, rocky conditions on Tank Hill to which native trees are not adapted. Alders were also planted to replace the healthy non-natives removed from the western end of Pine Lake. The Alders did not survive one year.

The Initial Study is mistaken that any commitment has been made to replace all removed trees with native trees. Nor would such a commitment be advisable, given that planting native trees in most of the natural areas would not be successful because they are adapted to sheltered areas that are not representative of the natural areas. If they were planted, they would be unlikely to survive.

Therefore, the EIR must evaluate the impact of proposed tree removal, based on the accurate premise that most will NOT be replaced.

E.7 Air Quality

A. Trees designated for removal have NOT been selected because they are not healthy

"Trees would be removed to promote forest health and would focus on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees whose growth is suppressed by overcrowding." (IS page 87)

This statement is also inaccurate. A generous interpretation of this misstatement of fact is that the author of the Initial Study has confused General Recommendation GR-15 with the site-specific plans for tree removals in MA-1 and MA-2 areas. General Recommendation GR-15 says, "To promote forest health, removal of trees shall focus on the removal of dead or dying trees, trees with disease or insect infestation, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding." (SNRAMP, General Recommendations, Page 5-19) However, General Recommendation GR-15 applies **only** to non-native trees in MA-3 areas: "Urban forest stands that contain significant native plant understory and are planned for native plant and animal habitat restoration are classified as MA-1 or MA-2 and are **not considered here**. Recommendations for MA-1 and MA-2 areas are described in individual chapters in Section 6 and Appendix F [Forestry Statement] describes the species to be removed, removal methodology...and other tree removal impacts." (SNRAMP, General Recommendations, page 5-18).

Recall that all tree removals designated by SNRAMP are within MA-1 and MA-2 areas. Recommendations for their removal described within Section 6 and the Forestry Statement do **not** state that recommendations for their removal were based on their health or lack there of. Rather they were selected for removal if their removal would enhance or expand an adjacent native plant habitat. There is no basis upon which the Initial Study may assume that the non-native trees designated for removal are anything but healthy. Some may not be healthy, but that is not why they were selected for removal.

Removal of non-native trees within MA-3 areas are not specifically identified or quantified by SNRAMP. If they are removed, they would be incremental to the 18,500 trees that have been designated for removal. However, SNRAMP states clearly that management of MA-3 areas is a low

priority. Given the limitations on NAP resources, it is unlikely that any trees will be removed in MA-3 areas unless they fall down, as they do frequently.

B. SNRAMP implementation will NOT increase carbon sequestration or decrease global warming

"Although old large trees are good at storing carbon, they are not as effective as young trees at taking up carbon. Replacing dead, dying and diseased trees that have limited capability to sequester carbon with young saplings that have long-term carbon sequestration capabilities would result in a net GHG benefit." (IS page 87)

The author of the Initial Study does not provide a complete reference for this claim. A name is provided in parenthesis, but the complete citation does not appear in the list of references, so the reader is unable to verify its accuracy.

The USDA's "Urban Forest Effects Model" includes an assessment of San Francisco's urban forest. It reports that, "The amount of carbon annually sequestered is increased with healthier trees and larger diameter trees" (UFORE, page 8). In other words, a study by the US government specifically written for the City of San Francisco refutes the claim that young saplings have greater capabilities to sequester carbon than larger trees. Recall that the trees designated for removal by SNRAMP are not necessarily unhealthy. Clearly saplings are smaller than the mature trees over 15 feet tall that have been designated for removal.

Furthermore, the release of carbon stored in the 18,500 trees that would be removed would certainly swamp whatever benefit there may be in replacing some of the trees. Trees release their stored carbon as they decay. SNRAMP states that the trees would be left in place to slowly decay if they provide habitat or chipped, composted and used throughout the parks. In other words, all of the removed trees will release their sequestered carbon over time, as they decay in San Francisco's parks.

Finally, the Initial Study announces (page 11) that prescribed burns will occur in the natural areas and that the SNRAMP will be "updated to reflect this change." Fires release the stored carbon of the burned plants into the atmosphere as well as releasing particulate matter into the air. This is yet another source of increased carbon release and increased air pollution that may result from implementation of SNRAMP. Because of the accumulative effect of all the sources of carbon release predicted by the SNRAMP, the effect of prescribed burns on carbon release and air pollution must be considered by the EIR. Consideration of prescribed burns by a separate and later environmental review (as the Initial Study announces its intentions on page 11) is not acceptable.

"Although the net effect on carbon sequestration capacity is unknown for the proposed replacement of mature eucalyptus with native saplings, replacing dying trees with healthy trees typically enhances the carbon sequestration process...As such tree replacement is expected to result in a net increase in the amount of carbon sequestered within the Natural Areas" (IS page 88)

Even if it were true that only dying trees were being removed or that they would be replaced—and as noted above, neither is true—this statement is inaccurate. Carbon sequestration by trees and plants is directly proportional to their size (UFORE, Appendix III). Therefore, a small sapling is incapable of sequestering as much carbon as a large tree, whether it is healthy or not.

Furthermore, even if this statement were true, it does not take into account that within the MA-1 and MA-2 areas, the SNRAMP proposes to remove all seedlings and saplings (defined by SNRAMP as trees less than 15 feet tall) of non-native trees in order to convert these areas over time to scrub and

grassland (SNRAMP, Forestry Statement, page F-4). The removal of these seedlings and saplings are not quantified by SNRAMP because they are not defined by SNRAMP as trees (SNRAMP, Forestry Statement, page F-2). Therefore, their removal is incremental to the designated removal of 18,500 trees over 15 feet tall. In other words, countless small, young trees will be removed, reducing carbon sequestration in the natural areas further than can be quantified because their numbers are unknown.

Finally, the Initial Study assumes that all native trees—both those that presently exist and those that are planted in the future—will survive and continue to sequester carbon. The author of the Initial Study does not consider the potential for the death of many native trees if Sudden Oak Death continues to spread. It kills many species of tree that are native to San Francisco. It presently exists in Golden Gate Park. It is spreading throughout coastal California. The Nature Conservancy recently reported that more than one million trees have been killed by SOD in California.

"...grassland above 50 degrees latitude reflects more sun than forest canopies, thereby keeping temperatures lower by an average of .8 degree Celsius...grassland and scrub habitat could act as a significant carbon sink." (IS page 88)

Once again, the author of the Initial Study does not provide a complete citation for this claim, so the reader is unable to verify its accuracy. However, this reader is familiar with this claim, which will enable a response.

Ken Caldeira of Stanford University is one of the proponents of the so-called "reflected light" argument that forests might actually increase global warming by absorbing light. Caldeira's argument is based on the comparison between dark forests and the reflected light of snow in northern latitudes. The contrast between forest and snow is much greater than the contrast between forest and grass and scrub. It is clearly a stretch of the concept to apply it to the local climate where there is no snow.

Caldeira also makes it clear in his New York Times oped of January 2007 that he is not advocating for the destruction of forests: "Clear-cutting mountains to slow climate change is, of course, nuts...preserving and restoring forests is a valuable activity, regardless of its impact on climate—we need more trees, not fewer."

The Initial Study makes an illogical connection between increased temperature on the forest floor resulting from the absorption of light and the ability of the forest to sequester carbon. There is no such connection. Increased temperature on the forest floor does not reduce the carbon sequestering abilities of the forest that are a by-product of photosynthesis.

The USDA's "Urban Forest Effects Model" for the city of San Francisco also reports that the "tree cover" is less than 12% of the city's land. Yet, "Trees remove about 19 percent more air pollution than shrubs in San Francisco" (UFORE, page 7). This finding refutes the claim that converting many acres of trees into grassland will benefit air quality in San Francisco.

Furthermore, even if this argument can be applied to the local situation, it assumes that the native plant populations will survive in the long-term. The author of the Initial Study does not acknowledge that the ranges of native plant populations are changing in response to global warming: "Two-thirds of California's unique plants, some 2,300 species that grow nowhere else in the world, could be wiped out across much of their current geographic ranges by the end of the century because of rising temperatures and changing rainfall patterns according to a new study...California oaks could disappear from Central California in favor of cooler weather in the Klamath Mountains..." (Los Angeles Times, June 25, 2008)

Other researchers find that invasive weeds are frequently better adapted to conditions that are altered by man. For example, CO2 levels are higher in urban settings and promote the growth of invasive weeds that thrive in higher concentrations of CO2. Fire suppression is another means of promoting weed growth at the expense of native plan populations. "New research...suggests that invasive species, at least in some instances, aren't so much the causes of environmental degradation as eco-opportunists taking advantage of disturbed habitats." ("Can Weeds Help Solve the Climate Crisis," New York Times, June 29, 2008) In other words, simply removing invasive species does not necessarily enable the survival of native plants if they are no longer adapted to the conditions that have been altered by man.

These studies would explain the singular lack of success of the "restorations" of the Natural Areas Program for the past 10 years. Many natural areas have been planted repeatedly, only to fail repeatedly. It may not be possible to reestablish native plant populations in an urban setting that has been significantly altered by hundreds of years of human habitation.

If non-native plants and trees are removed from 25% of all park acreage in San Francisco (the size of the natural areas in SF) and it proves impossible to successfully grow native plants in those locations, there will clearly be no carbon sequestration benefit from these efforts.

Since the Initial Study has made mistaken assumptions in evaluating the impact of proposed tree removal and has not considered the question of whether or not a "restored" landscape will survive, the EIR must now fully analyze these issues. Since the author of the Initial Study has demonstrated a stunning lack of scientific knowledge regarding carbon sequestration, air quality, and global warning, a consultant with the necessary expertise must conduct the EIR.

E.8 Wind and Shadow

Tree removal HAS altered wind conditions in the natural areas resulting in windthrow hazard

"...removals within the Natural Areas are planned to take individuals or very small groups of trees within existing forest and scrub habitats to avoid altering the wind conditions. As such tree removal would not include wind-toughened edge trees and would not result in increased wind hazards or expose trees within a stand to high winds. Therefore, the potential wind hazard of windthrow that would result form the project is expected to be less than significant. (IS page 90)

It is patently false that tree removals "are planned to take individuals or very small groups of trees within existing forest and scrub habitats to avoid altering the wind conditions." Here are a few examples of the large number of trees that will be removed from small areas (SNRAMP, Forestry Statement, Appendix F-14-F-17):

- Mt. Davidson: 1,000 trees will be removed from MA-1c (3.5 acres)
- Glen Canyon: 100 trees will be removed from MA-2e (.6 acres)
- Sharp Park: 1,476 trees will be removed from MA-2j (5.6 acres)
- Corona Heights: 10 trees will be removed from MA2C (less than .01 acre)
- Bayview Park: 140 trees will be removed from MA-1d (.02 acres)
- McLaren Park: 600 trees will be removed from MA-2b (9.9 acres)
- Interior Greenbelt: 100 trees will be removed from MA-2a (1 acre)

Tree removal on this scale cannot be done piecemeal, taking only a few individual trees on separate occasions. The game of "pick-up-sticks" is a good metaphor to understand the problem. Felling one

tree will impact those in close proximity. Whether intended or not, neighboring trees are likely to be felled by the falling tree.

Removing that individual tree will not be possible unless its neighbors are also removed. One can't pick up that felled tree when other standing trees surround it. Felled trees must be dragged out. As a qualified arborist said, when expressing his opinion of the proposed selective method of tree removal, "I don't have tweezers to pick these trees out of the forest."

Leaving the felled trees on the ground until they are all destroyed is not an option because the restoration objective is to plant the bared ground with native plants, which can't be accomplished if the ground is covered with dead trees.

Even if it were true that only "very small groups of trees" will be removed, it does not follow that "tree removal would not include wind-toughened edge trees" nor that removals "would not result in increased wind hazards or expose trees…to high winds." In fact, most of the tree removals will occur on the edge of the existing forest, which is consistent with the stated goal of the removals to expand the adjacent native scrub and grassland (SNRAMP, Forestry Statement, pages F-8-F-11):

- Mt. Davidson: "Additional removals will occur…on the eastern edge of the forest."
- Bayview Park: "Tree removal will focus on the existing edge of forests…"
- McLaren Park: "…removal will occur along forest edges…"
- Interior Greenbelt: "Tree removal will focus on the eastern border and the western tip of this Natural Area…"

In addition to these narrative descriptions of the location of tree removals, SNRAMP contains detailed maps of the natural areas in Section 6 that indicate the location of the tree removals. These maps reveal the vulnerability of the remaining trees as a consequence of some of the tree removals.

We will use Lake Merced only as an example, although identical logic could be applied to many other natural areas in which large tree removals are planned. Over 100 trees will be removed from the eastern shore of the South Lake. The Harding Park Golf Course is adjacent to this shore, to the east of the lake. The wind blows from the west. The golf course is presently sheltered from the wind by the trees that will be destroyed on the eastern shore of the lake. There is an old population of huge Cypress trees on the golf course that are nearing the end of their life span of about 100 years. These trees will be exposed to wind from which they were previously sheltered. Massive tree failure could result. One hopes it will not occur during a PGA TOUR golf tournament when there are thousands of spectators on the course.

The City of San Francisco has contracted with PGA TOUR, Inc, "for certain golf tournaments at Harding Park over the 15 year period beginning 1/1/05." The contract requires strict course maintenance standards be met as an obligation to hold any tournaments at this facility. The EIR should indicate that the PGA TOUR has been informed of the tree removal adjacent to the golf course and that the management actions in SNRAMP will not violate the terms of the contract between PGA TOUR and the City.



The eastern shore of the South Lake at Lake Merced. The western edge of Harding Golf Course.

San Franciscans have had a preview of the tree failure that could be precipitated by the removal of thousands of trees in the natural areas. Pine Lake and Stern Grove Parks are contiguous parks that essentially form one park of approximately 70 acres. It has been undergoing extensive capital improvement, beginning in 2000. There is a natural area at the western end of the park, including and surrounding Pine Lake. The wind enters this park from the western end. The entire park is a narrow, upwardly slopping canyon that funnels and accelerates the wind as it travels from the western to the eastern end of the park.

In 2003, in connection with the capital project, a survey of all trees in Pine Lake/Stern Grove was conducted by a certified arborist, resulting in a Tree Management Plan identifying hundreds of hazardous trees recommended for removal.

In early 2004 approximately 20 healthy non-native trees were removed from the western end of the park to accommodate the expansion of a native plant garden that requires full sun. This removal was documented and acknowledged by RPD at an RPD Commission hearing on 5/5/2004. A few Alders were planted to replace the trees that were removed. The Alders did not survive.

The concert meadow renovation in Stern Grove was the first phase of the capital project. In connection with that project, many trees were removed to accommodate that renovation. Some had been identified by the arborist's report as hazardous. Most had not. Funding was not sufficient to remove all of the 363 hazardous trees in Stern Grove recommended for immediate "priority removal" in 2003. Most hazardous trees in Stern Grove were left in place while many healthy trees were removed to accommodate renovation of the concert meadow.

Pine Lake was the second phase of the project. In 2007 hundreds of trees—of which most were considered hazardous--were removed during the Pine Lake Project. Recall that Pine Lake is west of Stern Grove, the windward side of Stern Grove. The removal of hundreds of trees from Pine Lake exposed Stern Grove to wind from which it had previously been sheltered. Recall that hundreds of the trees remaining in Stern Grove had been deemed hazardous in 2003. Shortly after removal of hundreds of trees in Pine Lake Park trees began to fail throughout the park at an alarming rate.

On April 14, 2008, a park visitor to Stern Grove was killed by a Redwood branch about 20 feet long that fell on her and her car, destroying her car (SF Examiner, 4/30/08). The Tree Management Report of 2003 had specifically identified this branch as potentially hazardous. The Redwood tree had been topped in the past, creating an unsupported "horizontal branch with poor taper and weight" (Tree Management Report). The branch extended over a heavily used parking lot, in which the park visitor was killed. Her family has sued the City of San Francisco for the negligence that caused her death because the dangerous branch had been identified 5 years earlier and hundreds of trees to its windward side had been removed, making the branch even more vulnerable to failure (SF Examiner, 9/24/08).

About two weeks earlier, an equally large branch fell onto the road that leads to the same parking lot. Park visitors were trapped in the parking lot. They called RPD, using their cell phones, but no one came to their rescue. They finally freed themselves by dragging the branch out of the road, using a rope and a truck of one of the visitors. These visitors notified RPD of this incident and recorded the incident in a weblog created for park visitors. This was the wake-up call that could have prevented the death on April 14, 2008.

Since then there have been approximately seven major tree failures in Pine Lake/Stern Grove.





Two of the tree failures in Stern Grove/Pine Lake in the past year.

SNRAMP mentions the removal of hazardous trees at Pine Lake, noting that these removals have not been quantified by SNRAMP (Forestry Statement, page F-2). The author of the Initial Study was therefore alerted to this opportunity to evaluate the potential for dangerous windthrow subsequent to large tree removals. The Initial Study makes no mention of Pine Lake tree removals, nor the consequences of those removals.

Given this experience with large tree removals in natural areas, the conclusion of the Initial Study that, "*Therefore, the potential wind hazard of windthrow that would result form the project is expected to be less than significant*" is irresponsible and potentially tragic. There is no basis upon which the Initial Study can dismiss the potential for significant tree failure in this cavalier manner.

SNRAMP makes similar efforts to dismiss the potential for windthrow in the Forestry Statement (page F-11-F-13). It states repeatedly, "potential windthrow hazard to people is minimal because there are no residential areas near the stands where tree removals will occur." In other words, SNRAMP's sole concern is for property, not for the people visiting the parks. Some of these parks are heavily used by people. The golf course at Lake Merced and the concert meadow in Stern Grove both have thousands of people in them during special events.

Of all the many issues in this Initial Study, this refusal to consider the seriousness of tree failure and consequent danger to the public is perhaps the most egregious. After a park visitor paid with her life for this failure to mitigate the consequences of massive tree removal, RPD appears to have learned nothing from this needless loss. The EIR must evaluate the potential for windthrow resulting from the removal of 18,500 trees. This evaluation must be done by a qualified consultant with expertise in forestry management.

E.10 Utilities and Service Systems

Native plant restoration WILL require new irrigation and water use

"Reinstating native species and replacing trees would require irrigation until they become established. However, irrigation needs would be met by existing water supply capacity and would not require new or expanded water supply resources. Therefore, impacts on water supply would be less than significant. (IS page 94)

Natural areas have been established in previously undeveloped portions of the park. It is simply not true that these areas were irrigated prior to being planted with native vegetation. The naturalized, non-native vegetation does not require irrigation. Any irrigation in natural areas is new and incremental.

An adequate Initial Study would evaluate how much water over what period of time will be required to irrigate native plants and trees until they are established. It is typical of this Initial Study that no attempt is made to evaluate that need. It merely dismisses potential impacts on water supply as "less than significant" and eliminates this question from further study in the subsequent Environmental Impact Report, as it does with virtually every controversial issue. The EIR must now include the analysis of additional water use not provided by the Initial Study.

E.12 Biological Resources

A, Impact on wildlife of herbicide use by Natural Areas Program must be evaluated

"...certain actions could disturb these (wildlife) *species..." (ID page 109)*

The potential for management actions of the Natural Areas Program to impact wildlife is one of the few controversial issues that the Initial Study proposes to study further in the Environmental Impact Report. The impact of herbicide use in the natural areas on wildlife must be considered in that EIR. Herbicide use by the Natural Areas Program is not even mentioned by the Initial Study.

SNRAMP reports its use of "chemical control" as one of its "management methods:" "chemical control, which involves the use of herbicides to suppress wildland weeds" and "...herbicides are used to control invasive weeds in Natural Areas." (SNRAMP, Integrated Pest Management, page 4-4). However, it downplays the significance of that usage: "on a per-acre basis pesticide usage in the Natural Areas is significantly less than usage rates in other park maintenance programs." (page 4-5)

This apologia is ineffective for two reasons:

- The natural areas are, by definition, undeveloped areas of the park. Clearly developed areas of the park, such as lawns and landscaped areas, make greater demands for pest and weed control. Any herbicide use in previously undeveloped areas of the park is new to these areas, which prior to the establishment of the Natural Areas Program, were left untended.
- The removal of thousands of eucalyptus trees will require application of herbicides such as Garlon and Round-Up to prevent resprouting of the trees: "Tree stumps of some exotic species may be treated (hand painted or sprayed) with herbicide to prevent re-growth." (SNRAMP, Forestry Statement, page F-4) This will substantially increase the use of herbicides by the Natural Areas Program as the SNRAMP is implemented.

The affect of many herbicides (including the active ingredients in Garlon and Round-up) on declining amphibian populations is well known and documented in the literature (e.g., Tyrone Hayes, UC Berkeley). In fact, the Center for Biological Diversity sued the US Department of Fish and Wildlife regarding the use of these chemicals in the proximity of populations of the legally protected, endangered red-legged frog ("EPA to limit use of 66 pesticides," SF Chronicle, 10/20/06). In response, Fish and Wildlife has prohibited their use within a certain distance of these animals. Based on research, these chemicals are equally likely to be harmful to other amphibians such as salamanders and newts that are ubiquitous in the natural areas.

The Environmental Impact Review must evaluate the impact on wildlife of herbicide use in the natural areas on wildlife.

B. The potential impact of West Nile Virus must be evaluated

The planned expansion of wetlands at Sharp Park to support the red-legged frog may increase the mosquito population, and the potential for West Nile Virus (WNV). This raises several questions that should be addressed by the EIR. Will spraying of pesticides to control the mosquito population be prohibited to protect the red-legged frog population? If so, is there potential for an increased mosquito population to spread WNV to birds and humans? These questions should be analyzed and evaluated by the EIR.

C. Do tree removals at Sharp Park violate the Pacifica logging ordinance?

"...Significant Trees Ordinance of San Mateo County and Ordinance 636-CS, which limits logging within Pacifica and applies to tree removal at Sharp Park. Management actions would not conflict with these or other applicable ordinances. (IS page 109)

The meaning of this statement is not clear. The first sentence seems to say that the Pacifica ordinance that limits logging, applies to the removal of 15,000 trees designated by SNRAMP. The second sentence seems to say "management actions" (that is, the removal of 15,000 trees at Sharp Park) do **not** violate this ordinance. This is an unsubstantiated claim that requires explanation. The ordinance requires permits for removing more than 20 trees per year. At that rate the removal of 15,000 trees would take 750 years. Has a permit been obtained, as required by this ordinance, to remove more than 20 trees per year? The reader deserves some explanation for how the requirements of this ordinance have been satisfied, IF they have been satisfied.

D. Conflict with the General Plan

"Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? No Impact" (IS, page 87)

Tree removals designated in SNRAMP are in conflict with Policy 2.9 of the General Plan to "maintain and expand the urban forest." As we have noted earlier, 18,500 trees will be removed in the natural areas. Most will not be replaced. Most are presumed to be healthy, mature trees. In addition, countless trees less than 15 feet tall will also be destroyed to prevent the regeneration of the urban forest. The EIR must acknowledge this conflict.

E.13. Geology and Soils

Potential for further erosion problems requires further study

"The overall scale of the proposed project is relatively small, and while these activities may result in some increased erosion and loss of topsoil in the Natural Areas, these impacts are generally considered less than significant...This topic will not be discussed in the Environmental Impact Review." (IS page 112)

Once again, the Initial Study dismisses a serious, controversial issue with a cavalier wave of its invisible hand. The removal of non-native plants has caused erosion in many natural areas, and the increased removal of non-native trees and vegetation prescribed by SNRAMP is likely to exacerbate the situation.

Many of the natural areas are on sandy hills that are surrounded by residential housing. As these residential neighborhoods were developed, the sand was stabilized with non-native vegetation, such as ice plant. When the Natural Areas Program began removing the ice plant from these sandy hills, the destabilized sand inundated the surrounding neighborhoods.

On July 26, 2006, Jeff Eng, President of the Golden Gate Heights Neighborhood Association testified to the Recreation and Park Commission regarding the adoption of SNRAMP (Attachment B). One of the concerns he expressed on behalf of his association was, "That the NAP continue to protect the remnants of native vegetation without damaging surrounding private properties, for example, causing erosion and resulting blowing sand."

NAP has repeatedly denied that the removal of ice plant has destabilized sand in Golden Gate Heights. I have heard them claim in public hearings that ice plant is actually less capable of stabilizing sand than the plants that are native to the sand dunes. However, the reality of the experience of the neighbors of natural areas in Golden Gate Heights contradicts this claim. An adequate Initial Study would evaluate this concern and respond to it in a meaningful way, rather than merely wave it away, as it attempts to do.

There are also several natural areas that have experienced serious erosion in the past, although I will focus only on Lake Merced in my comments. During a heavy rain year (2004), the eastern and southern shores of the Impound Lake (one of the lakes of Lake Merced) collapsed, undermining paved trails and roads. This is just one of several areas on the shore of all four lakes of which Lake Merced is composed that have collapsed into the lake in the past.



East shore of Impound Lake at Lake Merced

The planned removal of all trees on the steep, sandy eastern shore of South Lake has the potential to precipitate a massive collapse of that shore. The trees on that shore now help to stabilize the shore. The roots of trees are responsible for holding soil in place, particularly on steep slopes. As the roots decay slowly over time, their ability to hold the soil in place slowly declines. Certified Arborist, Ray Moritz, explained the process in the context of a question about the clear-cutting of bay laurels on a steep slope: "If the stumps have been killed with an herbicide, the root matrix, and its contribution to soil cohesion will only persist for approximately five years, generally diminishing over that period. So, in that case, you have only a short time to get another soil binder established." (Ray Moritz, SF

Chronicle, 7/5/08) In a personal email communication he confirmed that the same considerations apply to eucalyptus.

Recall that the eastern shore of South Lake is the western boundary of the Harding golf course. The collapse of that shore has the potential to undermine the western side of the golf course.

The removal of 18,500 non-native trees from the natural areas has the potential to cause significant erosion in many natural areas. SNRAMP proposes the use of "wood mulch, fiber rolls, and silt fences to minimize erosion." These strategies have not been successful in preventing erosion in the past. An adequate Initial Study would either analyze this potential or recommend that it be included in the Environmental Impact Review. It does neither. The EIR must now study past erosion sites in the natural areas and evaluate the SNRAMP for its potential to cause further erosion in the future.

E.14 Hydrology and Water Quality

Potential for drainage problems requires further study

There are no activities included in the proposed project which would significantly alter the existing drainage pattern of the sites, or substantially increase runoff such that flooding occurs." (IS page 122)

It seems very unlikely that 15,000 trees can be removed from a steep canyon wall in Sharp Park without "significantly altering the existing drainage pattern." Water and sediment will drain down from this canyon into the water features on the western side of Sharp Park, where endangered species make their home.

The eucalyptus tree is notorious for its ability to absorb water. It was used early in the development of Australian agriculture to drain swamps and wetlands. Ray Moritz, Certified Arborist, says of the eucalyptus and the role it plays in erosion and drainage, "Trees, particularly Eucalyptus trees, reduce erosion in several ways. Eucalypts not only help hold the soil in place with their roots, sheltering canopies and deep ground litter, they are tremendous water pumpers. So much so that they were used throughout the world to dry out wet areas for malaria control, and got one of their mid-1800's nicknames, "the fever tree." [If Eucalypts are removed] the replacement plants [must be] well-established within five years." (private communication)

The removal of 18,500 non-native trees from the natural areas has the potential to significantly change drainage patterns in many natural areas because many are steep hills and canyons. An adequate Initial Study would either analyze this potential or recommend that it be included in the Environmental Impact Review. It does neither. The EIR must evaluate the impact of tree removals on existing drainage patterns in ALL natural areas. .

E.15 Hazards and Hazardous Materials

"Management of the Natural Areas would include removing trees, including those that are diseased and dying, thereby reducing easily combustible fuel loads. Also implementing recommendation GR-13a should reduce the presence of vegetation with high fire hazard ratings, such as dense and aging French broom and eucalyptus." (IS, page 129)

As previously noted in this comment, the 18,500 trees that have been designated for removal are not necessarily "diseased and dying." They have been selected for removal insofar as they enhance and expand native plant populations.

Secondly, the restored landscape of native grassland and dune scrub is not less flammable than the non-native that will be removed. Here are comparison data from the Hills Emergency Forum, which is a group of East Bay agencies and organizations such as UC, EBRPD, and EBMUD.

Flame lengths: the distance from the average flame tip to the middle of the burning zone at the base of the fire.

Type of Vegetation	Flame Length
Grassland	12 to 38 feet
Brush and Scrub	14 to 69 feet
Hardwoods forest (e.g., Oak)	1 to 34 feet
Monterey pine forest	2 to 7 feet
Eucalyptus forest	6 to 21 feet

Whether a plant or tree is native or non-native has nothing to do with how easily it ignites or how readily it will be burn. Here are a few quotes from experts about the flammability of grasslands and scrub:

> "The more critical concern for this vegetation type [grassland] is the rate at which grassland fires can spread and the ease of ignition. This is one of the most dangerous types of fires for fire fighter safety due to its rapid frontal speed." (Management Recommendations of Hills Emergency Forum)
>
> "Shrublands with their enhanced fuel loads produce more intense fires that are more difficult to suppress and result in somewhat larger fires." ("Fire History of the San Francisco East Bay Region and Implications for Landscape Patterns" (John E. Keeley, USGS)

It is a popular myth that eucalyptus is more flammable than other trees and native landscapes. Here are a few quotes from experts about that myth:

> "...many trees are highly fireproof, like redwoods and eucalypts..." (The Tree: A Natural History of What Trees Are, Colin Trudge)
>
> "Fire fuels (those with a diameter of ¼ inch or less) and not tree trunks are what contribute to the intensity of wildfire...the university [UC] has not reduced but compounded its wildfire danger problem in the UC hill area by replacing groves of eucalyptus trees with grassland." (Evaluation of Fire Management Plan for UC hill area by Alexander Kerr)

SNRAMP also acknowledges the important role that fire plays in the native landscape: "...fires may help native species germinate..." (SNRAMP, page 5-4). For this reason (and also to help control non-native vegetation) SNRAMP includes fires as a possible management action in Recommendation GR-3b (page 5-4).

The Initial Study announces the intention to use prescribed fires to manage the natural areas: "SNRAMP no longer is proposing prescribed burning would not occur. The SNRAMP will be updated to reflect this change." (IS, page 11) However, the Initial Study has not considered the potential hazard of employing fire as a management tool: "Should the SFRPD determine prescribed burning to be a desirable, feasible method for managing native grasslands, a separate environmental review would be required to comply with CEQA..." In other words, this Initial Study does not include the potential environmental impacts of prescribed burns.

Restoration efforts on San Bruno Mountain provide a test case for the use of prescribed burns to support restoration efforts. San Bruno Mountain has been undergoing extensive restoration efforts for many years. The focus of those efforts has been to increase the population of the Mission Blue Butterfly. As noted earlier in this comment, the San Francisco Natural Areas Program is reintroducing the Mission Blue to Twin Peaks. In 2003, a prescribed burn on San Bruno Mountain raged out of control, nearly destroying the adjacent residential neighborhoods:

> "The fire was lit Tuesday morning by the California Department of Forestry to burn off dry vegetation and restore natural habitat in San Bruno Mountain State Park...The blaze, fed by 25 mph afternoon winds, spread rapidly out of control, jumping across Guadalupe Canyon Parkway and moving southeast toward a couple of hundred homes along the mountain's eastern approach. At one point, it crossed a steep ravine and threatened the Mission Blue Drive neighborhood, where firefighters stopped the flames just spitting distance from some homes and condominiums under construction...state firefighters called for mutual aid and received dozens of reinforcements from fire departments, including Daly City, San Bruno, Brisbane, Burlingame and South San Francisco...The fire was supposed to be contained within three to five acres in the Wax Myrtle Ravine area, but it spread to about 50 acres before it was contained...said CDF Capt. Claire Frank." (San Francisco Chronicle, July 9, 2003)

In other words, the track record for the use of prescribed burns to support restoration efforts indicates that they can burn out of control. Therefore, fire hazards and the use of prescribed burns must be analyzed by this EIR. It cannot be delayed to a later date because it is inextricably related to other issues, such as air pollution and increased carbon release, contribution to global warming.

In Conclusion

The Initial Study has failed to meet the most minimal standards of CEQA. All environmental issues should be included in the Environmental Impact Review, including those not identified by the Initial Study.

There are many important environmental issues that are not mentioned in the Initial Study that must be acknowledged and analyzed:

- The increased use of herbicides required to prevent resprouting of vegetation and trees that are removed and the potential impact of that use on wildlife
- The prohibition against bicycles on unpaved trails in the natural areas
- The intention to close the golf course at Sharp Park to benefit endangered species and the potential for similar closures in other natural areas in San Francisco
- The fact that scientists have recently determined that the ranges of native plants have moved and will continue to move in response to climate change. The Environmental Impact Review must answer these questions to the public's satisfaction: "Is it still possible to sustain in San Francisco the same plants that were native to this area over 200 years ago?" and "Have the changes in air, soil and other conditions in San Francisco changed to the extent that they no longer support the plants that were native to this area over 200 years ago?"
- The EIR must acknowledge the existence of Sudden Oak Death and assess its potential to kill native trees in the natural areas.
- The EIR must acknowledge plans for prescribed burns and evaluate their impact on carbon release, air pollution, and fire hazards.

ATTACHMENT A

Tree Removals Designated by SNRAMP(over 15 feet tall)

Park	MA-1	MA-2	Total	
San Francisco				
Lake Merced	29	105	134	some trees already girdled
Mt. Davidson	1200	400	1600	about 50 trees already girdled
Glen Canyon	20	100	120	25 trees already destroyed
Grandview		5	5	
Rock Outcrop			0	
GG Hts			0	
Hawk Hill			0	
Brooks			0	
Pine Lake			0	many trees already destroyed
Twin Peaks		3	3	
Billy Goat			0	
Buena Vista		10	10	
Corona Hts	1	14	15	
Duncan-Castro			0	
Kite Hill			0	
Tank Hill			0	about 12 trees already destroyed
GG Park	32	50	82	
15th Ave Steps			0	
Bayview	355	156	511	hundreds of trees already destroyed or girdled
India Basin			0	
McLaren	135	670	805	
Palou Phelps		2	2	
Balboa			0	
Interior Greenbelt		140	140	
Erskine	5	9	14	
Edgehill			0	
Fairmont			0	
Total	1777	1664	3441	
Percent	51.64%	48.36%		
Pacifica				
Sharp Park	50	14950	15000	

Attachment B

Special Hearing on Management Plan for Natural Areas Program

Recreation and Park CommissionWednesday, July 26, 2006

8:30 am

Room 416, City Hall

The Recreation and Park Commission will decide on Wednesday, July 26, whether to accept the Management Plan drafted by the Natural Areas Program (NAP). NAP originated out of concerns about protecting remnants of plants and wildlife that were native to the San Francisco peninsula and whose numbers were dwindling. The program, however, expanded to take as a main mission the re-creation of what San Francisco looked like before "white men" came and altered the landscape by planting non-native plants. In our neighborhood, the San Francisco that existed several hundred years ago was a windy, largely treeless areas with dunes of drifting sand, with areas of "dune scrub."

NAP claims nearly one-third of all city-managed parklands as "natural areas," although the tern "native areas" is really more accurate. NAP park areas are currently quite "natural," filled with plants and trees, most of which are not native to the San Francisco peninsula. NAP wants to remove many non-native trees and plants (and animals) from these areas, and replace them with dune scrub vegetation (in our neighborhood).

NAP has claimed all of Grandview Park, the Rock Outcrop (14th and Ortega), and Hawk Hill (hillside above Hoover Middle School). They have claimed an area along the western end of Golden Gate Heights Park (above 14th Ave). The Management Plan calls for areas of "scattered, open sand" in all four parks within or adjacent to the Golden Gate Heights neighborhood. NAP plans to remove all iceplant and other non-natives that had been planted on the steep slopes of these parks to stabilize the sand and keep it from drifting and blowing. Even with the iceplant, drifting sand frequently blocks 14th Ave near the Rock Outcrop, clogs sewers, and impacts neighboring property. Property owners adjacent to these parks have told us of hard-fought battles over the years to find the right mix of plants to keep the sand in place, and of their concerns that NAP plans to remove those non-native plants could destabilize the hills, with the potential for damage to their property.

The Management Plan also calls for the removal of 3,400 healthy, non-native trees in San Francisco city parks (and an additional 15,000 trees in Sharp Park in Pacifica). The total number of trees slated for destruction is actually higher because the Management Plan defines a tree as being over 15 feet tall, and therefore doesn't include any young trees that will be removed. These trees were planted, in many cases, to provide needed windbreaks and help stabilize areas, and their loss will increase erosion and wind problems in the parks and in the surrounding neighborhoods.

The Golden Gate Heights Neighborhood Association has asked the Recreation and Park Commission to revise the NAP Management Plan to better reflect the needs of San Francisco neighborhoods. Note that the GGNHA is not calling for the end of the NAP program. We just want changes to accommodate the following concerns:

1) That the NAP continue to protect the remnants of native vegetation without damaging surrounding private properties, for example, causing erosion and the resulting blowing sand, and

2) That the proposed plans for the natural areas in San Francisco be revised so that the urban forest is maintained and increased and is not sacrificed to facilitate the introduction of native plants, and

3) That the Recreation and Park Department be responsible for developing the natural areas in a manner that is consistent with the health and safety, as well as the recreational and aesthetic preferences, of the citizens of San Francisco, and

4) That the cost of implementing a management plan for the natural areas not be at the expense of other responsibilities of the Recreation and Park Department to provide recreational programs and clean, well-maintained facilities and parks for the people of San Francisco.

GGHNA encourages all of its members to let the Recreation and Park Commission know what you think about the Management Plan for the Natural Areas Program (to see the plan, go to: http://www.parks.sfgov.org/site/recpark_index.asp?id=1896).

If possible, try to attend the Wednesday meeting and tell them of your concerns about the program's impact on our neighborhood.

Or write the Commission at:

Rec and Park Commisssion President **Gloria Bonilla** at: gloria.bonilla@sfgov.org
Commission Vice-President **Lawrence Martin** at: lawrence.martin@sfgov.org
The Natural Areas Program Manager, **Lisa Wayne** at: Lisa.Wayne@sfgov.org

or send snail mail to the
Recreation and Park Commission
501 Stanyan Street, San Francisco, CA 94117.

Thank you,

Jeff Eng

President, Golden Gate Heights Neighborhood Association

NANCY WUERFEL, 2516 23RD AVENUE, SAN FRANCISCO, CA 94116

RECEIVED
MAY 21 2009
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

May 21, 2009

TO: Mr. Bill Wycko

FROM: Nancy Wuerfel

RE: Notice of Preparation of an Environmental Impact Report
Natural Areas Management Plan, Case # 2005.1912E

The project that is the subject of this Initial study is not in compliance with the approved resolutions from the Recreation and Park Commission (Commission).

1. The following resolutions have not been recognized or implemented in the Natural Areas Management Plan:

At the Special Meeting of the Recreation and Park Commission held on July 26 and continued on August 21, 2006, the Commission unanimously voted to approve Resolution Number 0608-012 as follows:

RESOLVED, That this Commission does approve the Natural Resources Management Plan as amended as the proposed project to be considered under the California Environmental Quality Act (CEQA).

Prior to the vote on Resolution Number 0608-012 two amendments were passed by the Commission to the Natural Resources Management Plan. Those amendments were:

- ***The MA3 areas shall be maintained by parks and squares and urban forestry Departments and may be reforested with native or non-native species. Weed and brush removal and erosion control in MA3 areas shall be undertaken in accordance with the Natural Areas Plan.***

- ***That where appropriate in the plan that feral cat relocation shall be implemented only upon a determination by the Commission that other methods of population reduction failed to adequately reduce cat populations in natural areas.***

The Commission also voted unanimously to approve Resolution Number 0608-013 as follows:

RESOLVED, That this Commission does approve the Request for Proposals for consultant services to perform the necessary environmental analyses pursuant to the

California Environmental Quality Act on the Final Draft Significant Natural Resources Areas Management Plan as amended by Resolution Number 0608-012.

The staff have not done due diligence to determine that the project, submitted for environmental review, was the project approved by the Commission that includes the amendments as noted above. This violates the CEQA requirement for the project to comply with the San Francisco City Charter. Sections 4.102 and 4.113, of the Charter authorize the Recreation and Park Commission to approve plans and set policies for the Recreation and Park Department.

In your cover letter, you referred to the Commission's approval in 1995 of the original management plan, but you do not mention the Commission action that brought this project to the attention of your department for CEQA review. All resolutions by the Commission referable to this project should be cited, complied with, and included as reference documents.

The amended project requires changes in the draft Management Plan of 2006 that have not been made or evaluated by the consultants, since the amendments were never acknowledged. Before the scoping for the EIR is completed, the Management Plan itself must be amended according the Commission's resolution.

The following issues must be acknowledged in the revised Management Plan and any environmental impacts evaluated in the EIR:

- that the MA 1, MA 2, and MA 3 zones are an integral part of the project
- that the maintenance of the MA 3 zone, 43% of the natural areas, is not the responsibility of the Natural Areas Program
- that GR 15 governs the activities in the MA- 3 zone
- that GR-7 referencing feral cat control must now include the Commission's amendment.

2. The following resolution has not been referenced in the Initial Study.

At the Regular Meeting of the Recreation and Park Commission on October 4, 2007, the Commission unanimously voted to approve Resolution Number 0710-011

RESOLVED, That this Commission: 1) accepts the recommendation of staff and the general manager and does approve the award of a professional contract in the amount of $800,000 to Tetra Tech for the environmental analysis in support of the Draft Significant Natural Resource Areas Management Plan and to satisfy the requirements of CEQA guidelines, NEPA, and City, State and Federal regulations and 2) requests the a full EIR be conducted for the Natural Areas Plan and all 31 Natural Areas sites be analyzed.

From reading the Initial Study, it is not clear to me that "all 31 natural areas sites" were analyzed as specified. There has been no quantification of the environmental effects to be experienced at each of the 31 natural areas sites as a result of the implementation of the

Management Plan. There is no evaluation of the cumulative effects on each natural area site of the proposed project. I believe it is incumbent on the Planning Department to ensure the Commission's request is complied with.

3. The Initial Study failed to discuss, in Sections C.1 and C.2 of the report, the CEQA requirement concerning "approvals and permits from City departments other than the Planning Dept..." . Specifically, the Administrative Code CHAPTER 63: LIMITATIONS ON WATER USE FOR LANDSCAPING IN NEW DEVELOPMENTS AND LANDSCAPING RENOVATIONS was not acknowledged or discussed.

Chapter 63 requires a report, plan and approval from the SFPUC for "landscaping renovation" defined as "renovations of landscaping larger than 1,000 square feet involving the installation of a new irrigation water meter to serve landscaping that has not been served by the San Francisco Water Department in the previous five years." Page 94 of the Initial Study states "Reintroducing native species and replacing trees would require irrigation until they become established." The authors claim the irrigation needs would be met by existing water supply capacity, but do not state what that capacity amount is, or quantify the amount of water needed for implementing the Management Plan, or the define the square footage of land to be irrigated. They also seem unaware that SFPUC in now required by law to charge city departments for water that once was free, which requires meters in the parks, which requires permission from the SFPUC to install the new meters.

4. The Initial Study failed to acknowledge that the Recreation and Park Commission, so far, has only approved of the project with amendments to have an environmental review under CEQA. The Commission did not give its approval of the project to be implemented as presented in the Natural Areas Management Plan. It has reserved this decision until after the completion of the CEQA review, at which time the Commission will decide if there will be further amendments to the project and what, if any, mitigations it requires to be done. This final authority must be acknowledged.

In conclusion, the Initial Study failed to include the rulings of the Recreation and Park Commission to amend the project and to direct the analysis of all 31 natural areas, and it does not recognize the Commission's authority to render the final approval of the project. The project description must be modified to reflect the authorized amendments. Compliance with Chapter 63 must be discussed. The oversights enumerated above must be corrected, and the scope of the Environmental Impact Report sufficient to address these issues.

Cc: Recreation and Park Commission
Jared Blumenfeld, Interim General Manager, Recreation and Park Department

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LOMA PRIETA CHAPTER
San Mateo • Santa Clara • San Benito Counties

RECEIVED
MAY 27 2009
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

San Francisco Planning Department
Attn. Mr. Bill Wyko, Environmental Review Officer
1650 Mission St.
San Francisco, CA 94103

May 24, 2009

Re: Natural Areas Management Plan EIR
Pacifica Scoping Meeting for Sharp Park Golf Course
Case No. 2005.1912 E

Dear Mr. Wycko:

The Sierra Club's Loma Prieta Chapter encompasses the Counties of San Benito, Santa Clara and San Mateo - and the Chapter's Coastal Issues Committee has particular focus on issues involving the Coastal Zone as defined in the California Coastal Act. The Sharp Park Golf Course is situated within the City of Pacifica within San Mateo County and, additionally, within Pacifica's Coastal Zone Local Coastal Program, certified by the California Coastal Commission. The Coastal Issues Committee supports San Francisco Planning Department's recognition of Pacifica in its role as the permitting authority for any work requiring a Coastal Development Permit at Sharp Park, and that that be duly considered as part of the EIR process.

Previously, the Loma Prieta Executive Committee passed a resolution that states in pertinent part:

"THEREFORE LET IT BE RESOLVED that the Sierra Club urges the City and County of San Francisco and the San Francisco Recreation and Parks Department to fully consider habitat protection and enhancement measures within Sharp Park Golf Course that could increase and stabilize California Red-legged Frog and San Francisco Garter Snake populations."

Given the extraordinary jurisdictional issues attendant to Sharp Park, we support this particular public recreation property being evaluated by the City of San Francisco in an entirely separate manner, and not in the aggregate of the City's other golf courses and public lands that lie within San Francisco's borders and land use authority. We look forward to reviewing the completed Draft EIR analysis after the input of all of the other oversight agencies is gathered.

Thank you for providing this opportunity for comment.

Sincerely,

Merrill Bobele

Merrill Bobele
Sierra Club Loma Prieta Coastal Issues Committee



The San Francisco Tree Council

May 25, 2009

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Re: Expand the scope of the EIR on the Natural Areas Management Plan

Dear Mr. Wycko,

Please expand the scope of the EIR to include a proper scientific study of virtues of Eucalyptus forest as described in today SF Chronicle, by Mr. Peter Ehrlich, the foremost knowledgeable expert on Eucalyptus.

"Peter Ehrlich, the head of forestry for the Presidio Trust, which manages the interior 80 percent of the park for the Golden Gate National Recreation Area. Mr. Ehrlich came to the Presidio in 2000 after serving as the forester for Golden Gate Park.

*"Without **eucalyptus** I don't think they could have stopped the winds or the moving sands in the Presidio," Ehrlich said. "The sea foam green canopies seen as one approaches the Presidio from Marin County are a significant part of the cultural landscape of San Francisco."*

Blue gum eucalyptus trees were unique in that they would actually grow in the sandy soil and withstand the fierce winds blowing off the Pacific. They were used to establish Golden Gate Park, and in 1886, the Army began planting them on the ridges of the Presidio.

Eucalyptus trees also are very effective wind breaks, Ehrlich said. Studies have shown that they slow the wind down at least 30 percent in the Presidio.

Presidio branches out with eucalyptus swap
http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/05/25/MNU717JSAI.DTL
Peter Fimrite, Chronicle Staff Writer
Monday, May 25, 2009

Sincerely,

Carolyn Blair, Executive Director
San Francisco Tree Council
Member SF Urban Forest Council
2310 Powell Street, Suite 305
San Francisco, CA 94133
sftreecouncil@dslextreme.com
415-982-8793

Working Together To Preserve & Protect Our Community Urban Forest,
For Nourishment for the Soul, Consolation for the Heart
And Inspiration for the Mind

Tom Borden
<tom@intrinsicdevices.com>

05/26/2009 04:17 PM

To jessica.range@sfgov.org, bill.wycko@sfgov.org, dawn.kamalanathan@sfgov.org, lisa.wayne@sfgov.org

cc

bcc

Subject Please include off-road cycling in the NAP Recreational Trail EIR

Attention SFRPD, NAP, SF Planning Dept. and other parties involved in the Recreational Trails process:

I am a cyclist and member of SFBC and SF Urban Riders. I would like to urge you to include off-road bicycling in the scope of the Natural Areas Plan EIR. There are already lots of recreational cyclists riding in our parks and many more who would welcome the opportunity to ride on officially sanctioned trails. It is safer and more pleasurable to ride on trails in a natural setting, than on the streets where cars are an ever present danger.

I would like to see through-trails in the parks to allow cyclists to transit the city off-street as much as possible. Systems of loop riding trails should be implemented in some of the larger parks. Also, I would like to see at least one bicycle skills park built in the city. This would be an area of concentrated technical features analogous to a skateboard park, but made of wood, earth and rock. These things could be built cheaply and sustainably, largely with volunteer effort.

SF Urban Riders is a cyclist group working to promote off-road cycling venues within San Francisco. We are here to represent the interests of off-road cyclists, provide input to the city, volunteer labor, provide technical support, whatever it takes to get legitimate places to ride in the city.

Sincerely,

Tom Borden

CENTER *for* BIOLOGICAL DIVERSITY

Sent via e-mail on May 26, 2009 to bill.wycko@sfplanning.org

May 26, 2009

Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Scoping comments on Natural Areas Management Plan

These are the comments of the Center for Biological Diversity on the Significant Natural Resource Areas Management Plan regarding lands managed as "natural areas" by the San Francisco Recreation and Park Department - specifically those lands at Sharp Park in Pacifica.

The environmental review for the management of the natural areas must include an alternative that provides full ecological restoration of Sharp Park. The City of San Francisco should select full ecological restoration of Sharp Park as the preferred alternative for the management plan, to comply with the Endangered Species Act, manage Sharp Park consistently with the goals of the Natural Areas Program, provide suitable habitat for listed species at the site, and avoid legal liability to San Francisco for illegal "take" of listed species.

The full ecological restoration alternative should:

Eliminate the golf course holes at Sharp Park that are incompatible with maximizing suitable habitat for listed and sensitive species at Sharp Park, specifically the San Francisco garter snake, California red-legged frog, western pond turtle, San Francisco forktail damselfly, and salt marsh common yellowthroat;

eliminate all lawn mowing activities that have the potential to cause take of the San Francisco garter snake or the California red-legged frog, or to adversely modify habitat for these species;

restrict the use of all pesticides, including fungicides, herbicides, and rodenticides, known or suspected to adversely affect the California red-legged frog or the San Francisco garter snake, and include adequate buffer areas to prevent runoff of these pesticides into all aquatic habitats;

Jeff Miller, Conservation Advocate • 351 California St., Suite 600 • San Francisco, CA 94104
Phone: 415-436-9682 x303 • Fax: 415-436-9683 • jmiller@biologicaldiversity.org

cease all use of inorganic fertilizers, and implement a nitrogen and phosphorous monitoring program to discover the extent of nitrogen and phosphorous pollution in Sharp Park water bodies;

cease existing animal burrow management policies and allow development of gopher holes and other burrows within suitable habitat as refugia for the California red-legged frog and San Francisco garter snake;

restrict or cease all water pumping at Horse Stable Pond, at a minimum ceasing all pumping activities between September 1 through May 31, and screening the pump adequately to prevent entrainment of any and all life stages of California red-legged frogs and other wildlife;

create basking and hibernating/estivating habitat for the snake, frog and western pond turtle within Laguna Salada, Horse Stable Pond, and Arrowhead Lake;

control invasive species in Laguna Salada, Horse Stable Pond, and Arrowhead Lake such as invasive fish and bullfrogs, using non-toxic control methods;

install unobtrusive fencing along the length of the sea wall, on its eastern slope, to keep recreational users from entering protected areas;

post interpretive signs around Sharp Park regarding the important habitat areas at Sharp Park and the importance of the San Francisco garter snake and the California red-legged frog; and

remove invasive exotic plants and lawn and replant the park and Sanchez Creek with appropriate native species.

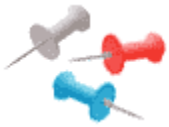
The priority for management of Sharp Park should be to restore the park to its natural state as a coastal wetland, and provide more diverse recreational opportunities for the public at the site. The full ecological restoration alternative should prioritize endangered species protection and recovery, natural flood control, outdoor recreation, and sustainable land use.

Sincerely,



Jeff Miller
Conservation Advocate
Center for Biological Diversity

Jeff Miller, Conservation Advocate • 351 California St., Suite 600 • San Francisco, CA 94104
Phone: 415-436-9682 x303 • Fax: 415-436-9683 • jmiller@biologicaldiversity.org



Bill Wycko/CTYPLN/SFGOV
05/27/2009 09:30 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Mountain Bicycle Recreation to be considered in NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/27/2009 09:33 AM -----



Dayton Crites <dayton@sfurbanriders.org>
Sent by: daytoncrites@gmail.com

05/26/2009 11:24 PM

To
cc
Subject Mountain Bicycle Recreation to be considered in NAP EIR

To those it may concern,

My name is Dayton Crites, and I am one of many San Francisco citizens who values and treasures our open spaces, and does so by recreating through them on a mountain bike. I urge you to add consideration of multi-use trails and bicycle skills areas to the Natural Areas Program Environmental Impact Review.

I volunteer my time as a board member of SF Urban Riders, and as such, work with SF Urban Riders to create healthy off road cycling opportunities for all San Francisco residents. Please do not ignore this significant segment of the park users and stewards by excluding multi use trails and bicycle skills areas from the scope of the NAP EIR.

Off Road cycling is a fast-growing, healthy, and environmentally friendly recreational activity that appeals to a wide demographic. Not to mention the fiscal sense in building trails to enhance the value of our natural areas. Square foot by square foot, trails are perhaps the least expensive land value improvement that can be made due to minimal materials and maintenance costs.

There exist many federal funding sources that favor the inclusion of bicycle trails within natural areas. As a non-profit 501-c3, SF Urban Riders seeks to partner with SFRPD through identifying and procuring funding, as well as mobilizing a volunteer workforce to assist in the construction of trail systems and or bicycle parks.

To gain a sense of our vision for San Francisco's park lands, and why multi-use trails and bicycle parks offer such a wise investment for the City, please visit our website and download our proposal. Pardon the spelling error in the html link. I assure you the spelling is better in the proposal.
http://sfurbanriders.org/wordpress/lead-story/unlease-the-proposal/

Sincerely,

Dayton Crites
SF Urban Riders
415.734.7243

Donjacour family <donjaco@sbcglobal.net>
05/26/2009 11:48 PM

To jessica.range@sfgov.org
cc
bcc
Subject NAP environmental impact

Dear Ms. Range,

I just heard about the Natural Areas Program's plan to remove the current vegetation, especially Himalayan blackberry, from large areas of our city parks. As a wildlife rehabilitator and a native plant restoration volunteer, I would like to know more about this project. I understand that the proposal will be heard by the Rec and Park planning commission only. I have serious reservations about the impact that this project will have, both on the resident animals, especially mammals, and on the budget. It seems that in tough financial times Rec and Park's priorities should be on more immediate things than tearing up large swaths of animal habitat. I am very much a proponent of native plant restoration and volunteer weekly with GGNRA, but this project is misplaced and seems on a hasty path to approval. As a taxpayer I'd like to see my money spent for higher priority projects that take into account the many many animals that live in our parks. The non-native blackberry bushes are great habitat for many animals and provide food as well. We should carefully consider any changes that we make to plants that are so valuable to the animals that actually live in our city parks. We should also consdier whether the money spent on a project like this could be better spent on pressing human needs. I urge you to not approve this project. I would also like to be informed of its progress.

Sincerely,
Annemarie A. Donjacour

San Francisco Planning Department
EIR Public Scoping Meeting Written Comment Form
Natural Areas Management Plan
Case # 2005.1912E

If you wish to submit written comments on the above project, you may do so on this sheet (although use of this form is not required). Please submit written comments at today's public scoping meeting, or by mail to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **All comments must be submitted no later than 5 P.M., May 26, 2009.**

Write your comments regarding the environmental review for the project here. Use the back of the sheet or additional pages if necessary.

RECEIVED

MAY 2 6 2009

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Name: Evan Elias

Organization (if any): neighbor and volunteer for SPCA

Address: 575 Belvedere St, SF, CA 94117

E-mail Address: eeliasmail@yahoo.com

Thank you for this opportunity to make comments on the scope of the EIR for the Natural Areas Management Plan.

I am a neighbor of the Interior Green Belt and Corona Heights Park. I volunteer with the SFSPCA to manage a Trap-Neuter-and Return feral cat colony in the area. I have spent four hours a week in the Interior Green Belt (IGB) for the past three years. During this nearly six hundred hours of being in and observing the forest there, I have learned a lot about the area and its fauna.

The initial study states that "...no important bird habitat has been designated." in the IGB. This is completely inaccurate. I have observed yellow warblers, Steller's Jays, bushtits, song sparrows, owls and Red-tailed Hawks. The yellow warbler is listed in the initial plan as a "species of concern" under CA state status. (Table 2, p.100.) Steller's

Jays and Red-tailed Hawks are listed as "species of local concern." (Table 3-5, p 3-34, p 3-33.)

I have also heard bird songs that I cannot identify, so there are potentially more sensitive bird species that live in or utilize the IGB. This is a biodiverse bird habitat that would be signifigantly negatively impacted by the removal of eucalyptus trees and brush.

The initial study also suggests removing fifteen Monterey Pines from the nearby Corona Heights Park. This park has a lot of Red-tailed Hawk activity. As previously mentioned, the Hawk is listed as a "species of local concern" in the initial study document. (Table 3-5, p 3-33.) Three Monterey Pines and a fourth large tree were recently removed near this area, two of the Pines because of disease. This loss of small bird habitat immediately led to a decrease in hawk activity. When their food source and perching

areas are removed, the hawks leave. Removing fifteen healthy trees in a known hawk area will significantly impact this species. These trees should not be removed.

The IGB has also been identified in the initial study as having "... no site specific wildlife related areas...." This area is home to skunks, raccoons, opossums and feral cats. The himalayan blackberry provides nesting area and protection for these local mammals. Where are they to go when their homes are destroyed?

The Natural Areas Resource group has singled out feral cats as a problem in local park areas. During my hours of observing, I have seen that the feral cats do not pose a threat to the local wildlife. The cats behave as part of the eco-system, not as top predators. The cats are cautious and on-guard in this environment, and their territory is small. The birds and mammals do not fear

them, and the cats do not exhibit hunting behaviors. Strange, but true.

I support habitat restoration and the protection of native species. But this forest is already home to many species that deserve the right to continue their existence.

In terms of Cumulative Impacts, UCSF is present applying for a FEMA grant to clear twenty three percent of the forest on Mt. Sutro and the IGB, and replant with natives. If the UCSF/FEMA plan and this Natural Areas plan both go forward, Mt. Sutro is slated to lose thirty percent of its present forest. This would be devastating in terms of lost bird and animal habitat. I strongly urge the EIR to take this other project into account when determining this plan's impact.

We are so lucky in San Francisco to have these open spaces in our midst. We need to manage them with care, taking into account all

the species that live in and depend on them. In our zeal to support and enhance some, it is important not to displace and discard others as if they are trash. All of our wildlife is valuable, and needs to be treated with respect.

May 26, 2009

Mr. Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission St., Suite 400
San Francisco, CA 94103

Re: Case No. 2005.1912E: Natural Areas Management Plan

Dear Mr Wycko:

The Golden Gate Audubon Society (GGAS) supports the Natural Areas Management Plan and we are pleased that an Environmental Impact Report (EIR) is being prepared for it. There are several matters of concern we wish to express, and we think that the scope of the EIR should be broadened to cover geology and soils.

Our greatest concern is not with the EIR, but with the plan itself. There is an error of fact, repeated several times, that the bird nesting season in San Francisco and Pacific begins on April 1. That is incorrect. The nesting season for most local bird species is from about February 15 through July 15. In fact Great Blue Herons, owls and hummingbirds may begin nesting in January. Most birds that nest in woodlands, scrub and marshes are on territory by early to mid March and have eggs by April 1. Should vegetation removal take place between mid February and the end of March there will be serious negative impacts to many nesting species. If the plan cannot be changed, this error must be addressed through the EIR process. A reasonable practice that would ensure the safety of almost all nesting birds would be to follow the practices outlined in the plan from February 15 to July 15. Areas that are scheduled for vegetation removal between January 1 and February 15, or July 15 and September 1, should be surveyed for bird nests and nesting activity. If nests are found the project should be modified to ensure that nesting birds are not disturbed.

A4.4 Best Management Practices, Erosion Control: Wood chips may be appropriate in some locations but the use of this erosion control method should be evaluated so that it does not negatively impact wildlife including birds and bees. This should include consideration of birds that require dirt areas for dust baths.

GR-6b and c: These sections suggest using nest boxes for cavity nesting birds and in particular Wood Ducks. This idea may be more appropriate in our "naturalistic parks". Cavity nesting birds were probably fewer prior to the introduction of large trees in San Francisco. Nest boxes may replace cavity nests in such woodlands, but they would be alien in other natural areas. The issue of introducing non-native species into the City is another matter. There are no historic nesting records for Wood Duck in San Francisco County except for one report from the San Francisco Zoo that may have involved a wild Wood Duck with one from the zoo collection. Use

GOLDEN GATE AUDUBON SOCIETY
2530 San Pablo Avenue, Suite G Berkeley, California 94702
phone 510.843.2222 *fax* 510.843.5351 *web* www.goldengateaudubon.org

of nest boxes to enhance nesting for non-native species is questionable and is not supported by GGAS. Use of nest boxes as part of the natural areas plan such as this should trigger consideration in an EIR.

GR-15c: This section suggests maintaining urban forest health by removing dead and dying trees that show signs of disease or insect infestation. This is inconsistent with GR-6a, which calls for leaving snags and dead branches on live trees unless they are hazardous. The EIR should address the issue of snags and standing dead trees and perhaps even suggest alternatives to guide this plan. GGAS has long advocated for a snag policy in San Francisco and we would certainly support developing one through this EIR process.

A 5.15 India Basin Shoreline Park: India Basin Shoreline also supports a huge number and variety of species of waterfowl from fall through spring.

A 5.18 Lake Merced: The project description mentions the Double-crested Cormorant colonies at Lake Merced, but fails to mention Great Blue Herons. Though not a listed species, the herons should be mentioned in this document. In the past Great Blue Herons have shared the three colony sites with cormorants. In 2009 herons nested only in the North Lake Colony and the Mesa Colony.

LM-6c: Permitting access to the shores of the East Lake during any time of year should trigger consideration in the EIR. Such access would increase erosion and if allowed in the time frame suggested of September 1 through March 31 would be likely to impact several nesting species, including the "San Francisco" Common Yellowthroat. This certainly requires consideration in the EIR.

PL-2: This section should be applicable to all Natural Area sites and include Great Horned Owl, Western Screech Owl and Barn Owl nests.

Table 2: Special Status Species…: This should not be limited to breeding birds but should include other species that depend on natural areas during some part of the year. Tri-colored Blackbird utilize Lake Merced during the fall and winter. Brown Pelicans and Peregrine Falcons utilize both Lake Merced and India Basin on an occasional basis. A thorough search of bird records for San Francisco County would identify other species of concern that use natural areas.

E.13 Geology and Soils

We are deeply troubled that impacts on geology and soils are not considered potentially significant. In and of themselves, we see little impact from the projects. It is impacts that result after the projects are in place that should trigger consideration in the EIR. A5.22 Pine Lake is a case in point. Erosion due particularly to off leash dogs and their owners is a significant impact that is resulting in destruction of restoration sites. An associated problem is soil and water contamination resulting from dog and feral cat waste. These are impacts that are likely at other restoration sites like Buena Vista Park, Lake Merced, McLaren Park, and other parks with sandy soils and steep terrain. These impacts need to be treated in the EIR and solutions should be considered. We urge that the EIR process be applied to Geology and Soils.

In the discussion of Lake Merced under Geology and Soils removal of trees on the lake's banks is cited as a potential cause of erosion. The EIR should also consider the impact of not removing single cypress and pines along steep banks that cannot sustain them. Trees such as these have historically fallen and have taken significant amounts of soil with them. There are no cases of trees that were removed causing erosion. This matter in itself should trigger inclusion in the EIR.

Finally, we suggest the EIR should include an updated, comprehensive biological inventory that identifies and describes all species of concern within San Francisco County, their distributions, and their population conditions. If this exceeds the scope of this plan, then a comprehensive biological inventory should be developed specifically for the Natural Areas covered by this EIR.

Thank you for the opportunity to comment on this matter. If you would like to discuss these matters please feel free to contact me at <murphsf@yahoo.com>.

Very truly yours,
Dan Murphy

Golden Gate Audubon Society
Conservation Committee
2945 Ulloa St.
San Francisco, CA 94116
(415) 564-0074

May 26, 2009

RECEIVED

MAY 26 2009

CITY & COUNTY OF S.F
PLANNING DEPARTMENT
RECEPTION DESK

Martha Hoffman
1750 Waller Street
San Francisco Ca 94117

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
San Francisco, California 94103

RE: Significant Natural Resource Area Management Plan (SNRAMP), Environmental Impact Report, Case No. 2005.0912E

Dear Mr. Wycko:

I attended the May 12, 2009 public scoping meeting, and I want to make a brief written comment reflecting the spoken comment that I made at the meeting.

In asking you to look at issues in the Natural Areas Management Plan (NAP), I am particularly concerned with animal welfare issues.

I live next to Golden Gate Park and near the Stanyan and Belgrave Streets entrance to the Interior Green Belt. I have worked on San Francisco SPCA (SF/SPCA) projects in those areas over the years and am very familiar with the areas.

First, while I support restoration efforts, I do not want to lose our forests and I am especially concerned about losing protective habitat for wildlife such as raccoons, skunks, possums, etc. For example, Himalayan blackberry offers protective animal habitat. Extensive clearing of underbrush and blackberry removal must be studied in terms of potential negative impacts. Areas of its protection must be maintained (with regards to the CEQA requirement, E.12 Biological Resources, Topic d: no project shall "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sights"). In this regard Jamie Ray, Director of the San Francisco Wildlife Rehabilitation Program, must be consulted. Ms. Ray is licensed by the California Department of Fish & Game (sfromp.org).

The initial study contains tables listing sensitive species, special status species and an appendix listing bird species found within the Natural Areas. A listing of all animals found within the Natural Areas must be added to these lists.

Second, In regard to feral cats, G.R.7 continues to be very flawed. It must either be removed or completely revised in cooperation with San Francisco Animal Care and Control and San Francisco SPCA.

As a longtime volunteer in the SF/SPCA Feral Cat Program, I have extensive knowledge and experience in observing and working with feral cats in San Francisco. There are very few cats in San Francisco's designated Natural Areas. This is because of the SF/SPCA's Feral Cat TNR (trap, neuter, return) Program. Feral cats should not be singled out as the primary predator or some kind of urgent threat. That is very misguided. From my experience in the field, I would say that they have little impact.

In NAP's discussion of feral cats, rather than focus on the reality in San Francisco, NAP has chosen to dwell on anti-cat and out of state studies. These studies tell us nothing about the feral cats in San Francisco. Alley Cat Allies (alleycat.org) should be consulted as a resource regarding feral cats.

All matters of policy concerning animals in San Francisco need to involve communication and working together with San Francisco Animal Care and Control and the SF/SPCA. NAP has given lip service to these agencies, but has really not shown good faith in working with them. This is not acceptable.

Third, Educational materials must not be about good and bad plants and animals. Respect for all plants and animals must be nourished and developed. Under G.R14, educational materials must have input from all stakeholders including San Francisco Animal Care & Control, the San Francisco SPCA, Recreation and Parks Department and local wildlife expert Ms. Jamie Ray, through the San Francisco public process. Educational materials must not be developed solely by the Recreation and Parks Department.

G.R.7b lists the Cats Indoors program from the American Bird Conservancy as a source of educational information about feral cats and states that the Cats Indoors program is approved by the San Francisco SPCA. *In fact it is NOT approved by the San Francisco SPCA* and is seen as extremely anti-cat and misinformed in its bias. That claim of approval must be removed.

Sincerely,

Martha Hoffman

Martha Hoffman
M.S.W. University of California at Berkeley
Landscape Gardener
San Francisco Feral Cat Program

National Park Service
U.S. Department of the Interior

Golden Gate National
Recreation Area

Fort Mason
Building 201
San Francisco, CA 94123

415-561-4930 phone
415-561-4939 fax

Golden Gate National Recreation Area Fax

To: Jessica Range

Fax number: 415.558-6409

From: Steve Ortega

Date: 5/26/09

Pages to follow: 2

Comments:

If there is a problem, please call: LeeAnn Ciancetti

Telephone: 415.561.4930

United States Department of the Interior
NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Fort Mason, San Francisco, California 94123

IN REPLY REFER TO:

L76 (GOGA-PLAN)

May 26, 2009

Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: Comment Extension Request – Natural Areas Management Plan Initial Study

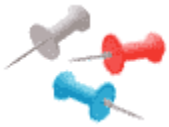
Dear Mr. Wycko:

This letter is in response to the Notice of Preparation of the Initial Study for the Natural Areas Management Plan. Due to staff shortage and vacations we were unable to gather comments regarding this plan by today's due date, May 26, 2009. We would like to request an extension of this due date to Friday, June 5, 2009 so that we may have more time to gather comments.

If you have questions or require additional information, please contact Steve Ortega, Environmental Protection Specialist, at (415) 561-2841.

Sincerely,

Nancy Hornor
Planning Division Chief



Bill Wycko/CTYPLN/SFGOV
05/26/2009 09:16 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Management Plan scoping comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/26/2009 09:18 AM -----



Celeste Langille <cclangille@earthlink.net>
05/25/2009 11:30 PM
Please respond to Celeste Langille <cclangille@earthlink.net>

To bill.wycko@sfgov.org
cc
Subject Natural Areas Management Plan scoping comments

May 25, 2009

Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan

Below are my scoping comments on the the City of San Francisco Planning Department's Natural Area Management Plan project EIR. I am a resident of Pacifica, a current City of Pacifica Planning Commissioner, and a former member of Pacifica's Open Space Committee and also a former member of the City of Pacifica's GGNRA Liaison Committee. I am submitting these comments solely on my personal behalf and my comments are focused on the Natural Area Management Plan involving Sharp Park.

I applaud the goals set forth in the Initial Study and the Natural Areas Program environmental review process.
I would like the City to review and select a full restoration alternative for Sharp Park. Also, the EIR must consider current information regarding sea-level rises and the impact on the western portion of Sharp Park.

The eastern canyon areas (east of Highway One)of Sharp Park contain especially well-preserved native habitat, important populations of special-status species, and other natural areas values. The eastern canyon areas of Sharp Park are susceptible to human impacts and should be off-limits to dogs. The EIR should not select any alternatives involving activities in Sharp Park that would increase recreation demands, including those involving increased vehicle traffic.

I fully support the Recommended Management Actions set forth in the Initial Study and would add restoration of all of Sanchez Creek as a goal. The Conservation and Restoration goals for all areas of Sharp Park in Pacifica should continue to be to maintain all viable populations of special-status species, improve habitat and natural areas connectivity, and prevent introduction of and decrease the amount of non-native invasive species.

Thank You,
Celeste Langille

Mitch Monroe
<mitch@sfdirtlab.com>
05/26/2009 03:23 PM

To jessica.range@sfgov.org
cc
bcc
Subject NAP EIR Scoping Comments

Jessica and others,

Thank you for involving the community of Pacifica to a be a part of the scoping process for teh upcoming DRAFT EIRs for San Francisco's Natural Areas.

Please pass this along to you contemporaries at SFRPD, NAP, SF Planning Dept., and any other interested parties involved in the Recreational Trails process.

SF Urban Riders is a Non-Profit 501c3 whose goal is to create healthy off road cycling recreation for all users, and encourage youth opportunities. We represent a growing number of recreational cyclists who are asking in unison to Please ADD multi use trails, off road bicycle trails, single track trails, and bike skills areas to the EIR scope of any projects in our larger parks and open spaces.

Off Road cycling is a growing contemporary activity that provides healthy recreation accessible at any level of entry, and appeals to a wide demographic. Trails are also the cheapest form of recreational improvement that can be made because they are sustainably designed, then constructed of natural materials by a large volunteer effort. There are many available federal funding sources that favor the inclusion of bicycle trails. SF Urban Riders would make a good partner with SFRPD on many levels and improve the overall quality of our parks.

Please refer to our Bicycle Trail Master Plan which was submitted to SFRPD in mid-April.

In closing, please add bike trails, single track trails and bike skills areas to the NAP EIR Scope.

Best regards,
--
Mitch Monroe
SF DIRTLAB
mitch@sfdirtlab.com
650-255-4323

Nature in the City

PO Box 170088
San Francisco CA 94117
www.natureinthecity.org
415.564.4107

Tuesday, May 26, 2009

To: Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street
Suite 400
San Francisco Ca 94103

From: **Nature in the City**
Peter Brastow, Founding Director
Re: *Initial Study, Significant Natural Resource Areas Management Plan*

1. The SNRAMP EIR must include a **maximum possible ecological restoration** alternative for Recreation and Park's 31 Natural Areas, so that the public has the opportunity to understand the potential for a biodiverse urban ecological future, and how that future would affect people and our environment.

The maximum possible ecological restoration alternative would include the following, for example:

a. Eradication or thorough control of all invasive plants on the San Francisco Weed Management Area (SFMWA) priority weed list.
b. Removal of all isolated invasive tree and shrub stands (not including ones that are serving a specific wildlife habitat function from year to year) from within natural areas to optimize continuity of native wildlife and rare plant habitat.
c. Total enforcement of leash laws in our parks and natural areas, so that, in effect, dogs are ONLY off-leash in DPAs, many of which should be moved away from natural areas for this alternative.
d. Total integration of the Cats Indoors Program (http://www.goldengateaudubon.org/html/catsindoors/catsindoors_page_2.htm#Resources), so that feral cats are not allowed to harm birds and other wildlife and themselves.
e. No designation for MA1s, MA2s, MA3s. The natural landscape must be examined, planned, evaluated and managed as a whole for the benefit of San Francisco's natural heritage and biodiversity.

2. The management framework of MA1s, MA2s and MA3s presents some real problems; instead of explicitly addressing the ecological fragmentation of our natural heritage, this arrangement perpetuates it with a fragmented management approach for the natural areas. Regardless of the relative value of different pieces of our natural areas, they should be managed with coherence, continuity and consistency for wildlife, rare plants, and ecosystem processes. MA-3s should not be subject to "few restrictions on recreational use" nor the "prohibition on (re)introduction of sensitive species." The lines between the areas are fuzzy, and so they should be managed as a whole with the highest degree of conservation protection. Discard the MA1s, MA2s, MA3s approach. If this approach is ultimately applied to Tank Hill, for example, then the unique south-facing cliff habitat will always be considered an "MA3" with no opportunity for restoration of native plant and wildlife habitat.

3. The EIR should thoroughly evaluate the environmental impacts of leaving so many – 95% - of the invasive trees in the natural areas, according to the current plan.

4. The EIR should comprehensively evaluate the impacts of off-leash dog use on San Francisco Natural Areas and the fact that 90% of Dog Play Areas are in the natural areas, according to the current plan.

5. On Page 8 of the NOP, it states, "Trails would be created in previously inaccessible areas, as opposed to improving social trails."
In general, new areas should not be opened up for trail use. Hundreds of miles of social trails criss-cross the natural areas. These should be either improved, if appropriate or closed if appropriate, and the decisions should be based on a comprehensive approach to trail planning. Environmental impacts from trail building, restoration, and closure should be comprehensively evaluated.

6. The impact of the golf course on the natural areas and natural resources at Sharp Park should be thoroughly evaluated, particularly for the impact to the federally-listed endangered San Francisco garter snake and the federally-listed threatened Calfornia red legged frog. The preferred alternative should be the one that recovers the San Francisco garter snake to self-sustainability.

7. Geology and Soils should not be eliminated from the effects discussion in the EIR. We need to know the impact to our native geology and soils from:

a. Rampant commercial off leash dog walking.
b. Leaving eucalyptus and other tree species growing on steep cliffs, where they can contribute to severe bedrock erosion events.
c. Continued deposition of cypress and eucalyptus duff into the natural chert and other Franciscan soils.

Sincerely,

Peter Brastow, Founding Director

INTEROFFICE MEMORANDUM

TO: SAN FRANCISCO PLANNING DEPARTMENT

FROM: BRENT PLATER, GOLF COURSE TASK FORCE MEMBER

SUBJECT: COMMENTS ON SCOPING FOR THE NATURAL AREAS MANAGEMENT PLAN AND THE FINAL PROS CONSULTING REPORT ENTITLED SAN FRANCISCO RECREATIONAL OPPORTUNITIES SUMMARY REPORT

DATE: 5/26/09

CC: SAN FRANCISCO RECREATION AND PARKS DEPARTMENT, SAN FRANCISCO RECREATION AND PARKS COMMISSION, SAN FRANCISCO BOARD OF SUPERVISORS, NANCY PELOSI, JACKIE SPIER, LEELAND YEE, MARK LENO, TOM AMMIANO

INTRODUCTION

This memo provides scoping comments on the Significant Natural Resource Areas Management Plan, and the Laguna Salada Wetlands Enhancement Project at Sharp Park. It also provides comments on Pros Consulting, Inc.'s August 2008 report entitled San Francisco Recreational Opportunities Study Summary Report.

Sharp Park, located in Pacifica but owned and operated by the City and County of San Francisco, is arguably the most important natural area within the Recreation and Parks Department's jurisdiction. The status quo at Sharp Park is unsustainable: the golf course that occupies much of the property is losing money, killing two endangered species, and threatens the surrounding community every year when the golf course floods. These problems are only going to get worse as our climate warms and sea levels rise. Much of the comments I provide will address how to ensure that Sharp Park becomes a community-centered model for outdoor recreation, endangered species recovery, and natural flood control.

As a member of San Francisco's Golf Course Task Force, I was asked to provide comments on the Summary Report, and in particular, to comment on the assumptions made and analysis provided by the Summary Report. Moreover, because I was appointed to the Golf Course Task Force to represent San Francisco's environmental community, I have provided comments that address the environmental consequences of San Francisco's existing golf programs and services, as well as the likely consequences that would occur if any of the Summary Report's recommendations were implemented by San Francisco. See Exhibits AA, KK.

COMMENTS ON THE LAGUNA SALADA WETLANDS ENHANCEMENT PROJECT, THE SIGNIFICANT NATURAL RESOURCE AREA MANAGEMENT PLAN, AND THE FINAL YOUNGER REPORT.

The environmental review for the Significant Natural Resource Areas Management Plan includes an enormous amount of funding and work to implement site-specific measures at Sharp Park. These measures are designed to reduce the take and encourage the recovery of two protected species: the California red-legged frog and the San Francisco garter snake. To ensure that the San Francisco garter snake recovers, the City must analyze and select full restoration alternatives that redesign or eliminate the golf course at Sharp Park.

A. SHARP PARK GOLF COURSE IS LOSING MONEY.

Sharp Park Golf Course costs the City and County of San Francisco hundreds of thousands of dollars a year in net losses to operate, losses that are not and cannot be recovered by the revenue generated by the golf course. The drain Sharp Park places on San Francisco resources robs our other municipal golf courses of needed maintenance; delays the golf fund's repayment of monies borrowed from the open space fund; and puts San Francisco's neighborhood parks and community centers at risk of closure.

These losses have been largely hidden to the public because of an incomplete accounting system: many of the expenses that the City spends to maintain Sharp Park Golf Course are not sourced from the Golf Fund, and therefore are not directly counted against the golf operations. For example, this Fiscal Year San Francisco spent approximately $240,000 from the Capital Fund to fix Sharp Park Golf Course's endangered species-killing pump house. See Exhibit C. San Francisco also spent $24,000 to hire monitors from the Natural Areas Program to reduce the number of endangered species killed by the golf course's operations this fiscal year, see Exhibit D, and even the environmental review process for the Laguna Salada Wetlands Enhancement Project—which is a prerequisite for the golf course to obtain permits to kill the endangered species found at Sharp Park—costs San Francisco taxpayers over $412,000. See Exhibit E.

But even within the Golf Fund, Sharp Park loses a staggering amount of money each year, money that could be used to provide recreational services where San Franciscan's actually live. For example, between Fiscal Year 04-05 and Fiscal Year 07-08, Sharp Park Golf Course drained between $30,000 and $300,000 each year from the golf fund alone. See Exhibit A. The variation in year-to-year losses is related to the number of rounds sold at Sharp Park, which in turn is driven by the wet conditions at Sharp Park that often leave the course unplayable.

Even these losses were hidden by official reports provided by the Recreation and Parks Department. See Exhibit B. The losses to the Golf Fund were hidden for three reasons. First, Exhibit B lists as revenue a subsidy to the Golf Fund from the General Fund. But the General Fund is simply a separate account that holds taxpayer monies: to a San Francisco taxpayer, this is simply another expense, not revenue generated by golf course operations. Second, Exhibit B lists as an expense funds repaid by Harding Golf Course to the Open Space Fund. But like the General Fund "revenues," this is not a true expense to San Francisco taxpayers, but just a transfer of taxpayer funds from one account to another.[1] Third, Exhibit B shows that a large sum of money is placed every year in a "golf unallocated" column. These are revenues and expenses that are drawn from or paid into the upkeep and management of each golf course, and to understand how each course is doing a methodology must be used that allocates these revenues and expenses to each course. Each of these three limitations in the RPD data are corrected in Exhibit A: the general fund and open space transfers are removed from the balance sheet, and the unallocated expenses and revenues are allocated to each course using two different methodologies, for comparison. Thus, Exhibit A is the most accurate reflection available of the day-to-day course operation and maintenance costs for Sharp Park and the City's other municipal golf courses. Combined with the subsidies provided to Sharp Park from the City's other sources of revenue, the golf course's drain on fiscal resources amounts to hundreds of thousands of dollars each year.

Future costs of Sharp Park Golf Course operations are predicted to be even more dire. In 2007, the Recreation and Parks Department concluded that unless changes are made at Sharp Park Golf Course, operating losses at Sharp Park Golf Course will total in the millions of dollars. See Exhibit F. Moreover, Sharp Park's illicitly built sea wall is likely to erode away due to anticipated changes to our ocean and coast wrought by climate change. See Exhibit G. Armoring the sea wall, which will be necessary only if Sharp Park Golf Course remains, will cost upwards of $32,000,000. See Exhibit H. Even the golf course's water supply is likely to become more expensive: the 400,000 gallons of water needed for peak demand must be provided by recycled water if we are to address ongoing droughts, and a recycled water project for Sharp Park is expected to cost $8,000,000. See Exhibit I.

The status quo at Sharp Park Golf Course is infeasible and simply cannot hold. The golf course operations lose too much money, money that could be spent to improve San Francisco's other

[1] It is of course a justified transfer, as Harding Park was given a large loan from the Open Space fund in order to upgrade the golf course several years ago, but to date has been unable to completely repay the funds it borrowed.

municipal golf courses, or keep our community centers open for more hours each day, or fund other essential city services.

B. SHARP PARK PROVIDES A POOR GOLF EXPERIENCE, AND REFURBISHING THE GOLF COURSE IS NOT FEASIBLE.

Sharp Park Golf Course provides a poor golfing experience, and improving this experience will require tens-of-millions of dollars in permitting fees and capital improvements that the City and County of San Francisco simply doesn't have, making any proposed improvements infeasible.

Sharp Park Golf Course is considered substandard by nearly any golf measure. See Exhibit M. The National Golf Foundation found that Sharp Park Golf Course has poor turf conditions, an outdated and ineffective irrigation system, inadequate drainage, flooding problems, and dangerous cart paths. See Exhibit L. Moreover, a survey of golfers indicated that Sharp Park received "F" grades for friendliness of staff, conditions of golf carts, the availability of golf amenities, on-course services, the conditions of the golf greens, and overall course conditions. Id.

Because of the substandard conditions, golfers exhibit "very little loyalty" to the course: they play there primarily because it is cheap, rather than because of the quality or history of the course. See Exhibit L. Indeed, the existing prices—which are some of the lowest in the Bay Area golf market—are believed to be all the market will bear by golf industry experts given the poor conditions at the course. See Exhibit L. Yet even at the existing price points, rounds played at Sharp Park have declined precipitously. Between 2000 and 2006, rounds played at Sharp Park declined by 38%. See Exhibit L. Because of this, Sharp Park currently operates at 45% of its overall capacity, about 15% below industry standards. See Exhibit M. Thus, Sharp Park cannot increase its contribution to the golf fund simply by increasing prices: if prices are raised without concomitant improvements to the golf experience golfers would choose to play elsewhere, reducing overall revenues received from the golf course.

PROs Consulting has argued that Sharp Park should nonetheless be restored to the original Alister MacKenzie design and marketed as an elite, historic golf course. See Exhibit M. Capital improvements alone for this alternative are expected to run as high as 14 million dollars. Id. Additional costs for permitting from the U.S. Fish and Wildlife Service, the Department of Fish and Game, and the Coastal Commission are likely to cost an additional 5-10 million dollars. PROSs Consulting, the National Golf Foundation, and the Recreation and Parks Department all agree that this level of capital investment is not possible from the City and County of San Francisco. See

Exhibits L, M, F. Instead, the proposals suggest privatizing Sharp Park Golf Course operations by executing a long-term lease with a golf developer, allow the developer to raise prices to $120 per round and up, busting the labor union that works at the course, and using these incentives to convince the golf developer to invest the capital necessary to refurbish Sharp Park Golf Course. Id.

None of these requirements—privatization, union busing, and raising golf prices by an order of magnitude—are likely to be palatable in San Francisco. But even if these requirements could be met by San Francisco, it is unlikely the market could support such a golf course at this time or in the future. First, the collapse of the capital market in the past year makes it highly unlikely that the type of capital necessary to refurbish Sharp Park could be obtained: particularly when it is unlikely that permitting agencies such as the U.S. Fish and Wildlife Service and the Coastal Commission would ultimately permit such an intensive use of Sharp Park. More importantly, the Bay Area golf market is already oversupplied causing courses to close and driving prices downward precisely when Sharp Park would have to raise them. Golf demand is declining nationwide, see Exhibit J, and in the Bay Area the decline is particularly acute: the Bay Area currently supplies 6,000,000 more rounds of golf each year then Bay Area golfers demand.[2] See Exhibit K.

Under these market conditions, golf courses will close, and increasingly golf courses that do close are not used for open space, but for urban infill and other developments. See Exhibit O. For example, a municipal golf course in Livermore has been proposed to be partially sold to developers. See exhibit N. Because Sharp Park contains a deed restriction requiring the land to be used as a "public park, or public playground,"[3] it cannot be developed. Because of this, if Sharp Park remains open through ongoing government subsidy, it is likely that some other, better golf course will fail, the land will be sold, and the land will be converted to a more intensive development use. Conversely, if Sharp Park were to close, this would help sustain the market for other, better golf courses and because of Sharp Park's deed restriction we would not face concerns about development pressures impacting the existing open space landscape at Sharp Park.

[2] This data, from PROs Consulting, is likely an underestimate of the excess golf capacity in the Bay Area. PROs did a regional assessment of golf supply, but based Bay Area demand for golf on national averages, rather than conducting local assessments for golf demand. This is likely to overestimate golf demand in the Bay Area: the Bay Area is blessed with a multitude of recreational opportunities that compete with golf for our recreational time and dollars, and existing data indicates that regional golf courses continue to operate below capacity because of it.

[3] Thee deed restriction does not state that the land must be used for "recreational purposes," as is often reported. The existing golf course, which precludes entry to Sharp Park to anyone that is not golfing or obtains prior permission from the private golf concession arguably violates the deed restriction.

C. SHARP PARK GOLF COURSE DESTROYED HISTORIC HABITAT FOR ENDANGERED SPECIES AND CONTINUES TO TAKE SPECIES WITHOUT A PERMIT.

Sharp Park has always provided suitable habitat for the San Francisco garter snake and the California red-legged frog, but the construction of Sharp Park Golf Course and the building of Sharp Park's sea wall has destroyed the vast majority of habitat present at the site. However, the Laguna Salada enhancement plan seems to presume that Laguna Salada was a salt-water lagoon that was inhospitable to the snake and the frog. It therefore seems to presume that the golf course and sea wall somehow prevent Laguna Salada from becoming too saline for these animals to survive. This erroneous assumption hinders the ability of the Recreation and Parks Department to consider feasible restoration alternatives at Sharp Park.

As a preliminary matter, the California red-legged frog is relatively tolerant to salinity for an amphibian, which is why we have exemplary coastal populations at places like Rodeo Lagoon at Fort Cronkhite and Abbotts Lagoon in Point Reyes. See Exhibit P. Indeed, a little bit of salinity is good for the frog, because the non-native, invasive, and predatory bullfrog is less tolerant of salt, and so a little salinity actually ensures that the California red-legged frog population remains robust while the bullfrog population is constrained.

Historically, both the California red-legged frog and the San Francisco garter snake thrived at Sharp Park: until the golf course and sea wall destroyed the functioning ecosystem there. See Exhibit Q. Sharp Park once contained a backbarrier lagoon system that protected the lagoon from coastal intrusion except in the most extreme storm events. During these events, salt water intrusion would be balanced against freshwater rainfall and freshwater drainage that funneled from the large watershed into Laguna Salada, keeping salinity levels balanced and low enough for the frog to survive. This would occur until the backbarrier lagoon would "heal" itself through natural sand movement that would rebuild the barrier system. Moreover, because the golf course did not exist, there was a gradient of wetlands upland of Laguna Salada, each with higher freshwater content, that the frog and snake could use through small-scale migrations until optimum conditions returned to the lagoon. See Exhibit R.

However, when the golf course was built, these upland wetland habitats were completely destroyed. Moreover, in a great act of hubris, Alister MacKenzie destroyed the natural barrier along the ocean in order to place 7 links of golf on the beach. When MacKenzie did this, massive coastal

floods were unleashed on Sharp Park and destroyed all seven of these holes, and in one instance ocean sea waters crept inland as far as the Sharp Park golf course clubhouse. See Exhibit S.

The frog and snake populations survived this inundation. The earliest surveys for the San Francisco garter snake at Sharp Park date back to the 1940s, after the course was designed but before the illicitly-built sea wall was constructed to protect Sharp Park from further coastal storms. At that time, the snake was considered "abundant" at Sharp Park. But follow-up surveys in the 1970s found a population in decline, and then, subsequent to the construction of the sea wall, surveys indicated that the snake was near extinction. In 2006, the US Fish and Wildlife Service concluded that a lawn mower killed a San Francisco garter snake at Sharp Park. See Exhibit T. Examination of the dead San Francisco garter snake indicated lacerations consistent with lawn mower blades and grass clippings in the wounds. See Exhibit U. In 2008, one to two San Francisco garter snakes were observed all year. See Exhibit V.

Today, the frog and the snake are literally squeezed between a fairway and a hard place. The golf course has destroyed all suitable upland habitats. If the sea wall were to the fail—and it will unless we invest millions of dollars to armor the sea wall or replace it with the natural barrier protections that were once there—the frog and the snake would not have any upland wetland areas to move into. Moreover, even if the sea wall does not fail, there is currently not enough habitat at the lagoon to ensure that the snake can recover: the population would remain at such a low level that a random event such as a disease or pollution spill or poaching would result in the extirpation of the population.

Moreover, the golf course's ongoing maintenance and operations take both species. Yet the City does not have a permit to take either species; it has implemented no mitigation measures to reduce take of the snake to date; and the mitigation measures that have been implemented to reduce take of the frog are not effective in reducing take of frog egg masses and tadpoles to zero. See Exhibit V. In addition, most of the California red-legged frog egg masses are laid at Horse stable Pond, where Sharp Park Golf Course's pump house is found. After the recent $240,000 construction project to fix a broken pipe from the pump house through the sea wall to the ocean, biologists concluded that entrainment of frog egg masses, tadpoles, and perhaps adults could occur, pumping individuals from Laguna Salada out to sea. See Exhibit W.

Because the San Francisco garter snake is a fully protected species under California law, the golf course's operations and maintenance can never be incorporated into a take permit for the species.

Therefore, as long as the golf course is in operation, it will be at risk for substantial civil and criminal penalties for taking the species. Take may occur directly, such as killing snakes with lawn mowers, or it may occur indirectly, through habitat modification that leads to the death or injury to individual animals, especially through the modification of habitat in ways that significantly impacts essential behavior patterns such as breeding, foraging, estivating, and other activities.

If the City were to attempt to obtain a permit for the Laguna Salada Wetlands Enhancement Project or the Natural Areas Program Management Plan that incorporates the threat to the species—the golf course ongoing maintenance and operations—into the permit, or the Department of Fish and Game were to issue such a permit, the permit would be unlawful, as only bona fide restoration and recovery efforts are eligible for fully protected species take permits under California law.

In the absence of any legal authority to continue golf course operations without violating California and federal environmental laws, alternatives that retain the golf course in its existing configuration and cause take are simply not feasible, and cannot be assessed under CEQA. Only alternatives that reduce take to zero with a reasonable certainty may be assessed as feasible alternatives under CEQA. Only alternatives that eliminate or redesign the golf course can meet this standard, and therefore these are the only alternatives that can be assessed as feasible.

The importance of Sharp Park for the long term survival and recovery of the San Francisco garter snake cannot be overstated. It is the northernmost population within the species range, and as climate change shifts the species habitats northward, this population is therefore the most likely to successfully adapt to changing conditions. See Exhibit LL. It is also the most genetically in tact of any population, which means it is the population that could best serve as a source population for the reintroduction of the species into historic habitats. Id. And reintroduction is needed: existing recovery goals require 10 viable populations be present in the wild before the species can be considered recovered, and at present there may only be six populations, none of which are known to be viable in the long run under existing conditions. Id.

If San Francisco only eliminates active take of the snake at Sharp Park, but does not provide adequate new habitat for the species to recover, in the 50-year time horizon the species will be lost from Sharp Park, and probably the entire world.

D. THE LAGUNA SALADA WETLANDS RESTORATION PROJECT MUST CONSIDER THE IMPACTS OF CLIMATE CHANGE AND THE LONG-TERM SUSTAINABILITY OF THE SITE.

Our best predications about how global warming will impact Sharp Park indicate that existing problems with flooding, drainage, endangered species take, and the construction of the sea wall will only get worse. The City must consider alternatives that plan for the long-term adaptability of Sharp Park to these changes so that the recovery of the San Francisco garter snake can be assured at the site. See Exhibit Y.

Historically Sharp Park included a backbarrier lagoon system. This system contained a barrier sand system that separated Laguna Salada from the Pacific Ocean and protected the lagoon from massive coastal intrusions. However, Alister McKenzie's original golf course design destroyed this protection by laying seven links of golf on the beach. By destroying this protective system, the design unleashed two massive coastal storms that inundated much of Sharp Park with sea water, and destroyed much of the golf course, including the seven beach-side links.

To prevent the ocean tides from inundating Sharp Park, the City built, over time, an illicitly and poorly constructed sea wall at Sharp Park. However, in so doing the City plugged the natural freshwater outflow—Sanchez Creek—and prevented the freshwater that accumulated in the large water shed of which Sharp Park is a part from reaching the ocean. Thus, Sharp Park now annually floods with freshwater.

Sharp Park's sea wall is likely to erode away unless something is done to prepare the area for the impacts of global warming. See Exhibit G. There are essentially two alternatives: armor the sea wall at a cost of $32 million, or attempt to recreate an adaptive barrier that will be more resilient to the changes that will occur due to climate change and that will help protect the coast from global warming.

Armoring the sea wall could affect the entire beach at Sharp Park, as it may affect beach dynamics and sand movement. An alternative is to try and recreate, after snake and frog recovery efforts have succeeded and the population is secure, the more dynamic barrier lagoon system that likely existed at Sharp Park historically. This alternative is likely to be cheaper, more effective, and more sustainable than placing an unmovable barrier across the mouth of Sanchez Creek that will not be able to adapt to the changes wrought by global warming. See Exhibit X.

Therefore, it is essential that the City consider alternatives that will provide for the long-term sustainability and recovery of the Laguna Salada ecosystem and the San Francisco garter snake. Opportunities to learn more about this possibility will be discussed at a conference in Pacifica, CA at the end of June. See Exhibit Z.

E. FULL RESTORATION OF SHARP PARK WILL PROVIDE SAN FRANCISCANS WITH RECREATIONAL AMENITIES THAT THEY ACTUALLY DEMAND.

Full restoration alternative must be considered at Sharp Park for another reason: San Francisco's number one recreational demand is for more hiking and biking trails, while golf finishes 16th out of 19 recreational options in the same survey. See Exhibit BB. This is direct evidence that San Francisco is not providing what modern San Franciscan's demand from their recreational facilities. The primary reason this is the case is because hundreds of acres of City property are locked into exclusive golf uses created decades ago and have remained static, while San Francisco residents' recreational preferences have changed.

Moreover, the San Francisco Board of Supervisors unanimously passed a resolution ordering the Recreation and Parks Department to consider full restoration alternatives at Sharp Park. This is another indication of the overwhelming public support for San Francisco to reconsider what it supplies to its residents. Even Sharp Park's existing concessionaire has recognized that San Franciscans have little demand for the existing golf course, stating in a proposal to the City that the typical golfer at Sharp Park is a "local resident" of the course. See Exhibit FF.[4]

Under these circumstances, it is imperative for the City to consider and select alternatives at Sharp Park that restore the site and provide recreational opportunities that are compatible with that protection. For example, a full restoration alternative has been proposed at www.restoresharppark.org. See Exhibit CC. This restoration proposal would create a community centered model of natural flood control, outdoor recreation, environmental education, and

[4] The Current concessionaire is on a month to month lease, and this lease should be cancelled as soon as practicable and not renewed. The concessionaire has shown outright hostility to the minimum environmental protections imposed on the golf course to date, by orchestrating a public relations campaign against the environmental protections and also be redesigning the golf course logo and emblem with a biologically inaccurate depiction of a California red-legged frog preventing a golf ball from being in play. This emblem was labeled "Sharp Park Home of the Red Legged Frog," and sold on t-shirts and other memorabilia at the golf course club house. See Exhibit GG. The existing management simply does not have the temperament or character necessary to solve the environmental problems imposed by the golf course. Moreover, as early as 1993, San Francisco's Civil Grand Jury discovered that mandatory investments in the golf course were not being made by the concessionaire. See Exhibit MM. A new concessionaire is needed to investigate and remedy these allegations.

endangered species recovery. These alternatives are feasible and must be considered during the EIR process.

F. RPD MUST SELECT APPROPRIATE STAFF AND CONSULTANTS TO CONDUCT FULL RESTORATION ALTERNATIVES.

Currently RPD has an enormous contract with consulting giant TetraTech to perform the Laguna Salada enhancement restoration project. However, full restoration alternatives will require that existing subcontractors with relevant expertise become more involved in the restoration planning process. For example, subcontractor Greg Kamman is the only individual named in the Laguna Salada Wetlands Enhancement Project with enough expertise to prepare serious alternatives for Sharp Park that consider the long-term sustainability of the berm, the original historic conditions of the site, and the dynamic conditions that will be imposed by global warming on the site. Additional experts such as coastal ecologist Peter Baye, coastal engineer and Pacifica resident Bob Batallio of Philip Williams and Associates, Darren Fong of the National Park Service, Carlos Davidson of San Francisco State University, and many other local individuals with site-specific knowledge of Sharp Park and tidal conditions on amphibian and reptile habitats must be consulted, because no one on the team specified by TetraTech have expertise in these areas. Indeed, Karen Swaim, the consulting herpetologist, simply does not have the expertise and understanding of dynamic coastal systems to provide full support for a project of this magnitude.

More importantly, Dennis Murphy and his colleagues are inappropriate consultants for this project. See Exhibit HH. As a preliminary matter, Dr. Murphy is not qualified to consult on these projects, as he is a butterfly expert and not an expert in herpetology, coastal ecology, and climate change. Moreover, Dr. Murphy's objectivity and reputation have come into question because of his relationship with developers. See Exhibit DD. Mr. Murphy simply should not be permitted to consult on this project when local, objective experts with site-specific knowledge of Sharp Park and with relevant expertise are available for the Department.

G. FULL RESTORATION CAN BE FUNDED BY PRIVATE MITIGATION BANKS OR BY PUBLIC-PRIVATE PARTNERSHIPS.

Full restoration alternatives must be considered for another reason: both private and public models indicate restoration will provide the City and County of San Francisco with net profits that are greater than any golf amenity that could be create at Sharp Park.

RPD has already received a prospectus from a wetlands mitigation banking company that has proposed to do a fully public wetlands mitigation bank at the site. For the types of wetlands that could be restored at Sharp Park, CalTrans was paying up to $3.5 million dollars per acre as recently as last year. See Exhibit II. There are approximately 200 acres at Sharp Park that could be developed into wetlands under this model, bringing in a gross revenue of over $700 million dollars. A portion of these funds would be held in trust to pay for ongoing maintenance and upkeep, another portion would be used to conduct the restoration work. But the remaining funds would be profit to San Francisco: and more profit that Sharp Park Golf Course could provide to the City over the next 100 years. Although mitigation banks have been controversial in the environmental community, a fully public mitigation bank with reasonable constraints on access to the bank would be met with 100% support from the Bay Area's environmental community and would allow San Francisco to be a leader in environmentally sound restoration and financing projects.

Another model is also feasible. At Crissy Field restoration was funded by a collaboration of public grants and private philanthropic donations. This model could also succeed at Sharp Park, and must be explored by the City. These restoration alternatives would also provide revenue for Pacifica. Golf courses are no longer the amenity that developers are designing projects around. See Exhibit NN. Instead, developers are looking for natural resources to use as a center piece and an attraction to their developments. Pacifica already has plans to create a new urbanism city scape at Palmetto Avenue, which currently dead-ends into a chain-link fence on Sharp Park's north side. If Sharp Park were restored and a trail created to link Palmetto Avenue with a restored trail system at Sharp Park, Pacifica would have a recreational amenity unlike any other on the California Coast, one that integrates the best of new urban design with the natural resource amenities that modern communities and tourists are willing to pay a premium for.

H. RESTORING SHARP PARK TO A NATURALISTIC STATE WOULD BE GOOD FOR THE GAME OF GOLF.

Sharp Park Golf Course is losing money, killing two endangered species, and puts the surrounding community at risk every year when it floods. The status quo simply isn't sustainable at Sharp Park: something must change there. The question is what will Sharp Park become. For the good of the game, Sharp Park Golf Course must close.

Nationwide the game of golf is in decline. See Exhibit J. This decline is more acute in the Bay Area, where we have an unparalleled diversity of recreational opportunities competing with golf for our recreational dollars. See Exhibit K. Currently the Bay Area supplies 6 million more rounds of

golf than golfers demand each year, and this is causing golf courses to close in nearly every Bay Area county. Id. Golf courses in Livermore, Forest Knolls, San Francisco, and in Pacifica are already up for sale or are being proposed for conversion to some other use, and the best predictions indicate that more golf courses will suffer this fate before the golf market and our entire economy stabilize.

Sharp Park, by any measure, provides a marginal golf experience. In 2007 the National Golf Foundation gave Sharp Park an "F" grade in nearly every category it measured, including friendliness of staff, conditions of golf carts, the availability of golf amenities, on-course services, the conditions of the golf greens, and overall course conditions. If we continue to subsidize Sharp Park Golf Course to keep it open, under existing market conditions other, better golf courses will close, and the game of golf in the Bay Area will be worse because of it.

Even if we only concern ourselves with San Francisco's municipal golf courses, it would be best for the game if Sharp Park were to close. Sharp Park loses between $30,000 and $300,000 each year from San Francisco's golf fund alone, and it loses millions more from other taxpayer subsidies. These are loses, not just expenses: revenues from Sharp Park doesn't even cover the course's operating costs, let alone the capital and open space projects that are required to keep the golf course functioning. Every dollar that Sharp Park drains from our coffers is another dollar we cannot spend improving the City's other municipal courses. If we were to take a portion of the resources we spend at Sharp Park and instead spend those resources at Lincoln, Harding, Golden Gate, and our other courses that are in desperate need of attention, the playing conditions at these courses would improve greatly and San Francisco could truly bill itself as a premier golf destination.

There is no merit to the idea that Sharp Park Golf Course today contains some historic or architectural value that is worth preserving. The original McKenzie design was fundamentally flawed to begin with, and built in an inappropriate location to boot. The seven beach side holes were destroyed by two massive coastal storms which brought sea water to the clubhouse within a few years of opening day, and the subsequent construction of the sea wall, Highway 1, and years of deferred maintenance destroyed the rest of McKenzie's design. In 1972, the entire course was rebuilt by Robert Muir Graves, and golf historians such as Daniel Wexler have therefore concluded that "no appreciable trace of [McKenzie's] strategy remains in play" at Sharp Park today. See Exhibit JJ.

Some have argued that Sharp Park should be restored not to a naturalistic state, but to McKenzie's original design. But this is not feasible. To do so would cost between 14-20 million in capital, not to mention the several millions of dollars in permitting and mitigation fees for harming

endangered species. See Exhibit AA. In today's market and in Pacifica's relatively rural, low-density location, that level of capital investment simply cannot be found for such a risky investment. Moreover, regulatory agencies wouldn't permit such an intensive use on endangered species habitats, so any such proposal would eventually be denied. And other communities with publicly owned McKenzie courses have found that the design simply cannot generate revenue: McKenzie's designs too often fail to meet the demands of the modern golfer and new golf technology, and are being redesigned to modernize the course for today's game. Exhibit OO. But most importantly, if McKenzie's original design was recreated, it would suffer the same fate as the original: it would again wash away to sea, only this time more rapidly and violently as climate change causes sea levels to rise and storm intensity and frequency to increase along California's coast. See Exhibit G.

Some golfers will disagree with all of this. Those golfers, content with the status quo, will contest the financial data San Francisco has provided (without providing any alternative financial data); they will claim that McKenzie's design still exists at Sharp Park (without pointing to a single sand trap, let alone a link, that McKenzie would recognize as his handiwork today); they will argue that a private marketing company with a clever advertizing campaign is all that is necessary to reverse the decline in Bay Area golf (even though brining the PGA tour to San Francisco has been unable to do that).

If these golfers succeed keeping Sharp Park open at any price, the game will suffer. The demand simply isn't available to support all of the Bay Area's courses, and a great course will fail to keep Sharp Park alive. It could be Harding Park, or Crystal Springs, or Lake Chabot, or some other course: we currently do not have the data available to know which marginal enterprise will fail with any certainty. But we do know that courses on the margin of profitability simply can't compete in today's market with a golf course, even a terrible one, that is subsidized with hundreds of thousands of dollars in public capital every year.

And if our good courses close because we subsidize our poor ones, how can we expect the game to thrive in the future? The competition is stiff: we have the birthplace of mountain biking (Mt. Tam), the most famous big wave surf in the world (Mavericks), and perhaps most troubling to those who'd like to see more people golfing, we have the birthplace of the iPod and the internet search engine (Silicon Valley), which the data indicates are as responsible for this past decade's decline in outdoor recreation as anything else.

To have any hope for future growth, the game of golf must put its best foot forward against this competition. That means closing golf courses that provide a marginal experience, and reinvesting in our golf courses with more promise. That is why Sharp Park must close: for the good of the game.

Loam Gnome
<loamgnome@gmail.com>
05/26/2009 01:51 PM

To jessica.range@sfgov.org, bill.wycko@sfgov.org, Dawn Kamalanathan <dawn.kamalanathan@sfgov.org>, jared.blumenfeld@sfgov.org, dennis.kern@sfgov.org, Sean

cc

bcc

Subject Request for bike friendly TRAILS in the NAP Recreational Trail EIR.....from SF Urban Riders

Attention SFRPD, NAP, SF Planning Dept. and any other interested parties involved in the Recreational Trails process

SF Urban Riders is a Non-Profit 501c3 whose goal is to create healthy off road cycling recreation for all users, and encourage youth opportunities.

We represent a growing number of recreational cyclists who are asking in unison to Please ADD multi use trails, off road bicycle trails, single track trails, and bike skills areas to the EIR scope of any projects in our larger parks and open spaces.

Off Road cycling is a growing contemporary activity that provides healthy recreation accessible at any level of entry, and appeals to a wide demographic. Trails are also the cheapest form of recreational improvement that can be made because they are sustainably designed, then constructed of natural materials by a large volunteer effort. There is many available federal funding sources that favor the inclusion of bicycle trails. SF Urban Riders would make a good partner with SFRPD on many levels and improve the overall quality of our parks.

For More Information on why sustainable multi use access is necessary please feel free to review our Master Plan which is available online:
http://sfurbanriders.org/wordpress/lead-story/unlease-the-proposal/

ADD BIKE TRAILS, SINGLE TRACK TRAILS AND BIKE SKILLS AREAS TO THE NAP EIR.

Sincerely,

Dan Schneider
SF Urban Riders
415-298-2504
www.sfurbanriders.org

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San Francisco Dog Owners Group

PUBLIC COMMENT ON INTIAL STUDY SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN (SNRAMP)

May 26, 2009

Bill Wycko
San Francisco Planning Dept.
Natural Areas Management Plan
1650 Mission St, Suite 400
San Francisco, CA 94103

Dear Mr. Wycko,

The San Francisco Dog Owners Group (SFDOG) is a registered 501(c)(3) non-profit dedicated to responsible dog ownership and preserving off-leash access in our parks. We are active in our neighborhood parks, having organized park clean-ups and dog behavior/training workshops in the parks, and distributed flyers on "Park Petiquette", dog training, preventing poisoning, and emergency preparedness for pets. We have over 900 dues-paying members and our listserves and website routinely reach thousands more.

SFDOG has significant concerns with the Initial Study for the EIR for the Natural Areas Program as prepared by Tetra Tech. I have outlined our requests for improving the analysis to be undertaken for a quality EIR in the following pages. Briefly, our concerns include errors and omissions in information provided, obvious environmental impacts that are not addressed, biased descriptions of research, and policies based on anecdotes rather than rigorous scientific studies. Unfortunately, because of these errors and omissions, this document reflects poorly on the SF Planning Dept, as will any EIR based solely on the recommendations in this poorly crafted Initial Study.

The Natural Areas Program and its Management Plan have been one of the Recreation and Park Department's most controversial endeavors, and you can be sure that advocates on all sides will pore over the full EIR with an eye toward possible litigation. Please expand the scope of the EIR to include the suggestions described in this public comment. If you have any questions, I would be happy to discuss this comment with you in more detail. Thank you.

Sincerely,

Sally Stephens
Chair, SFDOG

P.O. Box 31071 • San Francisco, CA • 94131-0071
tele: 415.339.7461 • e-mail: info@sfdog.org • web site: www.sfdog.org

PUBLIC COMMENT ON INTIAL STUDY SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN (SNRAMP)

San Francisco Dog Owners Group (SFDOG)
May 26, 2009

The Initial Study for the SNRAMP EIR has several glaring problems. These must be addressed if the full EIR is to have any validity.

SF Animal Care and Control estimates that 1/4 to 1/3 of the households in San Francisco are home to at least one dog (the national average is 1/4 of households). San Francisco consistently ranks as one of the most dog-friendly cities in the country and it is therefore likely that there are more households with dogs in San Francisco than the national average. There are therefore 130,000 to 150,000 dogs in San Francisco. People with dogs are the largest group of park users in the city; most visit parks with their dogs several times every day, rain or shine.

Dogs do not go to the parks by themselves; people bring them to parks. Attempts to restrict access by dogs to areas within or adjacent to natural areas are essentially attempts to keep a large group of people from enjoying those areas. The net effect of the Management Plan will be to deny access by a small group of people to a large group of people who simply want to visit their neighborhood parks.

Note that, of the 31 city parks with natural areas mentioned in the 2006 Management Plan, NAP claims the entire park (100%) in 17 of them. In an additional 10 parks, NAP claims over 50% of the park acreage. The four with fewer than 50% of their land claimed by NAP are: Golden Gate Park (3% of land is claimed by NAP), Pine Lake (28%), Buena Vista Park (17%), and Golden Gate Heights Park (13%). To be fair, not all NAP-claimed land will have significant restrictions on access. But a majority of NAP land (57%) will have significant restrictions (MA-1 and MA-2), with people restricted to paths only and dogs restricted to on-leash only, if allowed at all. In 8 parks, all land in the natural area will have significant restrictions on access (all the natural area is classified as MA-1 or MA-2). The NAP Management Plan keeps people out of 1/3 of the city's parkland. In some cases, this denial of access will be to the only park within easy walking distance in the neighborhood.

SFDOG has the following specific concerns about the Initial Study and the full EIR for the NAP:

THERE IS NO SCIENTIFIC CONSENSUS TO SUPPORT THE BASIC PREMISE BEHIND GR-8 – THAT DOGS ARE HARMFUL TO PLANTS AND WILDLIFE. THERE IS THEREFORE NO REASON TO RESTRICT DOGS IN NATURAL AREAS, NO REASON FOR GR-8.

It is a basic gospel of the Natural Areas Program and its supporters, and therefore embedded in the management plan that is the subject of this EIR, that dogs, and in particular off-leash dogs, are harmful to plants, birds, and other wildlife. These claims are often stated as fact. However, the reality is that there is **no scientific consensus that off-leash dogs have a significant impact on bird and wildlife populations.** Some studies have shown an impact. But others have found no significant effect on bird and wildlife diversity and populations.

A recent study by Forrest and Cassady St. Clair (2006) studied the effects of dogs on diversity and abundance of birds and small mammals at 56 sites in urban parks in Edmonton, Alberta. Half of the sites were visited by off-leash dogs, half were on-leash or no dogs. City officials reported the on-leash sites had high public compliance with leash laws. Before beginning the study, the researchers fully expected "that designated off-leash

areas would represent comparatively poor habitat and would negatively influence diversity and/or abundance of birds and small mammals relative to nearby habitat where dogs were required to be leashed within the same urban park system."

To their surprise, they discovered that **whether a site was on- or off-leash had "no measurable effect on the diversity or abundance of birds and small mammals."** This lack of difference between on- and off-leash sites was seen even when they considered only those species that appeared to be breeding, or only those species that nested on the ground or in low shrubs.

This study may be more relevant to the NAP than other studies of dog impacts on diversity because both the NAP and the parks studied in Edmonton are urban parks. Indeed, one possible explanation the researchers give for why there was no observed difference is that "**wildlife, particularly birds, in suburban and urban areas exist there because they are fairly tolerant of moderate levels of human activity**."

Compare this to studies cited in a report, commissioned by the NAP to comment on the management plan, by Huntsinger and Bartolome (2005; available online at:
http://www.parks.sfgov.org/wcm_recpark/NAP/scientificreview_huntsinger.pdf)
that purports to prove negative impacts from dogs. They cite a report on dogs' impacts on Rocky Mountain wildlife (not urban) and on gazelles (definitely not urban). It is not clear whether other studies cited refer to birds and other wildlife in urban parks or not. The city of San Francisco is the second most densely populated city in the US (only Manhattan is denser). Our parks are not remote, pristine wildernesses. **When deciding the relevance of any study of the impacts of dogs on plants and wildlife to the NAP, the full EIR must consider whether the study took place in an urban park where wildlife is likely to be more tolerant of dogs and people. If not, the study's relevance to the NAP must be discounted.** The Huntsinger and Bartoleme review makes no attempt to sort out studies done under conditions like those in NAP areas (urban parks) from those done in remote wilderness areas. Therefore, its conclusions cannot be used as a basis for the restrictions proposed in GR-8.

In addition, the sections of the Huntsinger and Bartoleme review that deal with dogs are full of "anecdotal accounts" of negative impacts. The problem is that **anecdotal accounts are not reliable and cannot be used as the basis for public policy**. For example, an underlying assumption in the NAP Management Plan used to justify on-leash restrictions on trails is that off-leash dogs on trails roam widely and frequently disturb plants, wildlife, and other park visitors. However, a study by Beckoff and Meaney (1997), published in a peer-reviewed journal, tested this assumption and found that it is not true. Beckoff and Meaney observed the behavior of dogs in six parks in and around Boulder, Colorado. They positioned themselves at various vantage points along trails and recorded everything they saw. They also followed individual dogs during the entire time they were in the park, recording everything the dogs did. Finally, they gave a questionnaire to all park visitors, obtaining more responses from non-dog owners than dog owners.

Their data showed that off-leash dogs generally did not travel far off trail, and when they did, it was for short periods of time. "There is no doubt that *some* dogs go off trail for various amounts of time and that *some* dogs do occasionally disturb people, wildlife, and habitat. However, compared to people, dogs did not seem to do much damage to vegetation or bodies of water, and they only rarely chased wildlife... **People disrupt wildlife more frequently than dogs, and people cause more damage to vegetation and to bodies of water**."

Beckoff and Meaney note that: "In Boulder and perhaps in other areas, **reports of unruly dogs seem to attract a lot of attention, but of course, people do not report when dogs are well-behaved**." It is human nature to remember when something bad happens, but not to notice all the times nothing bad occurred. That's not a problem unless you take a remembered bad incident and assume it is "typical." That is the basic flaw in anecdotal accounts, which really say more about the biases of those making the reports than they say about what is really happening.

In a recent study that tested another common assumption, Warren (2007) tested whether recreational disturbances changed the feeding behavior of the Western Snowy Plover at Crissy Field and at two sites at Point Reyes. Warren admits in the study that she fully expected the data to show that as the frequency of disturbance increased, the birds would spend less time actively foraging for food and more time alert. Instead, she found no significant relationship between feeding behavior and direct disturbance by people recreating on the beach. What other assumptions about effects of disturbances by dogs and people will be similarly disproved when studies are done that put them to the test? How much bad public policy will have been set based on these erroneous assumptions?

THE FULL EIR MUST INCLUDE A COMPLETE, UNBIASED ANALYSIS OF ANY SCIENTIFIC LITERATURE WITH REGARD TO DOGS IN PARKS. SPECIAL ATTENTION MUST BE PAID TO STUDIES OF THE IMPACTS OF DOGS CONDUCTED IN URBAN PARKS (COMPARABLE TO NAP), AS OPPOSED TO STUDIES MADE IN WILDERNESS AREAS WHERE WILDLIFE IS NOT ACCUSTOMED TO PEOPLE AND DOGS (NOT COMPARABLE TO NAP).

THE FULL EIR MUST CAREFULLY LOOK FOR AND CONSIDER BIAS IN DATA USED BY THE NAP TO JUSTIFY THE RESTRICTIONS IN GR-8.

In May 2006, the Point Reyes National Seashore (PRNS) management claimed that an oyster farm in Drakes Bay was harming marine wildlife and causing significant negative impacts on the environment and, therefore, should be closed. A PRNS report stated that the oyster farm workers disturbed seals, causing a huge decline in seal population, and that sediment from oyster feces was harming eelgrass beds. Therefore, the oyster farm did not belong in a national seashore. Corey Goodman, a microbiologist at UC Berkeley, member of the National Academy of Sciences, and a former Chair of the National Research Council's Board of Life Sciences, analyzed the raw data used in the studies cited by PRNS staff and found that the data did not support nearly every negative impact claimed.

On the September 27, 2007 episode of the KQED-FM program "Quest", Goodman said, about the published claims by PRNS staff: "Essentially every one of the scientific claims that they made are refuted by their own scientific data.... They have made intentionally misleading claims, statements about data that are untrue, claims of cause and effect that are untrue. I think this is serious because they have misused science to mislead the public."

An Interior Dept's Inspector General report and a second report by the National Academy of Sciences agreed with Goodman's analysis. Yet, convinced that the oyster farm did not belong there, PRNS staff misrepresented their data to support that conclusion.

Similar concerns have been raised about government claims of impacts of dogs on wildlife in the context of native plant restoration. For example, two reports (in 1996 and 2006) by Daphne Hatch, an employee of the Golden Gate National Recreation Area, argued that off-leash dogs should be restricted to protect Western Snowy Plovers at Ocean Beach (in the context of restoration of Ocean Beach). The 1996 Report states that on 15 occasions, at least 100 plovers were "inadvertently disturbed" by dogs running on the beach, and compared that to the 48 plovers inadvertently disturbed by people on the beach. However, if you look at the data, you see that the surveys that showed disturbances by people were a subset in time of those involving dogs. Indeed, the disturbances from people were noted in about half the recording time (24 hours of observations) as that devoted to studying dogs (40 hours). Had the people been observed for an equally long period of time, the numbers of disturbances caused by dogs and people would have been nearly the same. Other data presented in both studies

show no impact of off-leash dogs on the numbers of plovers. Yet the conclusion drawn in the report is that off-leash dogs have to be restricted to "protect" the plovers.

THE FULL EIR MUST RE-ANALYZE ANY DATA PROVIDED BY NAP (ESPECIALLY DATA NOT PUBLISHED IN A PEER-REVIEWED JOURNAL) TO ENSURE THAT CONCLUSIONS AGAINST DOGS ARE ACTUALLY SUPPORTED BY THE DATA. THE FULL EIR MUST AVOID A SITUATION SIMILAR TO THE ONE IN POINT REYES, IN WHICH GOVERNMENT RESEARCHERS MISREPRESENTED SCIENTIFIC RESULTS TO BOLSTER A CASE AGAINST AN OYSTER FARM.

THE FULL EIR CANNOT CONSIDER CLOSING THE LAKE MERCED DOG PLAY AREA AS CALLED FOR IN THE INITIAL STUDY (LM-7a) B ECAUSE RPD MADE THIS AN OFFICIAL OFF-LEASH AREA YEARS AGO AND PROMISED IT TO THE DOG-OWNING COMMUNITY. EVEN NAP HAS ACKNOWLEDGED THIS STATUS PUBLICLY. THE FULL EIR MUST CORRECT INCORRECT STATEMENTS ABOUT THE RPD DOG POLICY MADE IN GR-8b.

The Initial Study says (page 36): "Due to the CCSF moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed. Restoration of the site would continue, following the removal of the DPA." The Notice of Preparation of an EIR for the Natural Areas Management Plan states that the final draft plan was published in February 2006. That is the plan that will be studied in the full EIR. However, the 2006 Management Plan says about the Lake Merced DPA in Recommendation LM-7a (page 6.1-18): "The SFRPD and the Dog Advisory Committee should consider relocating the DPA to a different location. In the meantime, this DPA can remain open, but impacts should be monitored. If use levels increase during this time such that impacts to breeding bird habitat are detected, signs and other mitigations should be implemented." There is NO mention of closing the DPA. Monitoring and mitigation can be considered in the full EIR because they are mentioned in the 2006 Management Plan. Closing the DPA is NOT an option that can be considered in the full EIR for the Management Plan because it is not mentioned in the Management Plan. This must be corrected in the full EIR.

In addition, the 2002 RPD Dog Policy sets forth a public process to create or to close a DPA, which includes evaluation by the Dog Advisory Committee (DAC). DPAs cannot be closed without that public process. It is especially true that a DPA cannot be closed because a consultant doing an Initial Study or an EIR decides it should be. The DAC was "sunset"-ed in February 2007 and no public process to replace it has been announced by RPD. Until a replacement public process to close DPAs that does not include the DAC is devised by RPD, there is no legal way to close a DPA. While there is a moratorium on creating new DPAs as RPD conducts system-wide DPA planning, there is also a moratorium on closing existing DPAs until the system-wide planning is completed. Therefore, **closing the Lake Merced DPA cannot be considered as part of the Management Plan nor as part of the full EIR.**

It is not the role of the Initial Study to CHANGE what is in the draft 2006 Management Plan as described above. Nor is it their role to add a NEW natural area, # 32 the Everson/Digby lots (page 46 of the Initial Study) that is not in the 2006 Management Plan. The public has not been informed that the area currently used as neighborhood open space is now a "natural area" with who knows what restrictions attached to its use.

WHEN CONSIDERING ANY IMPACTS OF DOGS IN PARKS, THE FULL EIR MUST TAKE INTO ACCOUNT THE DIFFERENCE BETWEEN "FREE-ROAMING" AND "OFF-LEASH" DOGS.

"Free-roaming" dogs are dogs that are running WITHOUT any human oversight. Examples of free-roaming dogs would be a dog whose owners did not know that it had escaped from a backyard, or a feral dog that lives without any human control. "Off-leash" dogs are dogs that are running WITH human oversight. Their guardian is nearby and controls them with voice commands. Studies that discuss impacts of free-roaming dogs CANNOT be used to indicate similar impacts from off-leash dogs. This distinction must be considered by the full EIR when considering any reported impacts of dogs in parks.

THE EIR MUST ADDRESS THE NEGATIVE ENVIRONMENTAL IMPACT ON TRAFFIC (E-5a), AIR POLLUTION (E-7b), AND GLOBAL WARMING (E-7f) IF AREAS THAT ARE CURRENTLY OFF-LEASH ARE CLOSED TO PEOPLE WITH DOGS.

According to the Draft Management Plan for the Natural Areas Program (NAP), approximately 80% of the currently legal off-leash areas in San Francisco city parks are located either within or adjacent to areas subsequently claimed by the NAP (note that the off-leash areas were there first). The Plan calls for the immediate closure of parts of the currently off-leash areas in two parks (a reduction of 29% in Bernal Hill and of 14% in McLaren Park; note that the plan states that some of the area in Bernal Hill to be closed is steep and inaccessible and therefore is excluded from their claimed reduction of 17%). These two closures will reduce the total acreage in city parks available for off-leash recreation by approximately 15%. In addition, the Plan calls for monitoring of off-leash areas in Buena Vista Park, Golden Gate Park, Lake Merced, and McLaren Park. Should NAP claim that dogs are causing any problems, NAP will call for the closure of all or parts of those areas. Finally, the Plan calls for expanding the most-sensitive MA-1 areas into less-sensitive MA-2 and even MA-3 areas when funding becomes available. Thus, an off-leash area that is currently adjacent to an MA-3 area, and therefore, not under any restrictions, could find itself, in the future, adjacent to an MA-2 or even an MA-1 area. Should NAP determine that dogs in the off-leash area have a negative impact on newly adjoining MA-1 and MA-2 areas (or even on an MA-3), they can call for closure of the off-leash area.

Clearly, 80% of the currently legal off-leash areas in San Francisco's city parks are at risk of closure because of the potential activities of the NAP as outlined in the NAP Management Plan. What will happen to the hundreds of thousands of people with dogs who are shut out of their neighborhood park if any or all of the 80% of off-leash areas are closed? They will be forced to drive across town to the remaining legal off-leash areas. Public transit is not an option for people with dogs. MUNI buses and trains forbid dogs during rush hours before and after work, the primary times that people are walking and playing with their dogs in parks. Forcing large numbers of people to drive across town to use the remaining legal off-leash areas will increase traffic and air pollution, and will contribute to global warming. The negative impact on the environment of this driving must be acknowledged and addressed in the full EIR.

The full EIR must consider not only the impacts on traffic, air pollution, and global warming of the proposed closure of off-leash areas in McLaren Park and Bernal Hill, but also the impacts of closing the off-leash areas in the parks specifically slated for monitoring, as well as the impacts of closing all 80% of the legal off-leash areas within or adjacent to areas claimed by the NAP.

THE ENVIRONMENTAL IMPACT ON THE REMAINING OFF-LEASH AREAS IF PEOPLE WITH DOGS ARE FORCED OUT OF LEGAL OFF-LEASH AREAS WITHIN OR ADJACENT TO NATURAL AREAS MUST BE CONSIDERED IN THE FULL EIR.

Any large group of park users that is concentrated into a small area – whether it be soccer players, kids with Frisbees, or people with dogs – can cause some damage to those areas. The full EIR must look at the impact on the remaining legal off-leash areas of serious overuse if closures of current off-leash areas are demanded by NAP because of the Management Plan.

In addition, tens of thousands of people with dogs walk off-leash in the Golden Gate National Recreation Area (GGNRA) every day, including Fort Funston, Ocean Beach, and Crissy Field. Many of these people live adjacent to these areas; indeed, proximity and ease of access for dog walking is one reason people buy homes in neighborhoods adjacent to the GGNRA. However, the GGNRA is considering severely restricting off-leash access to the lands under its control. Should the GGNRA's restrictions occur, thousands more people with dogs could be forced to use the legal off-leash areas in San Francisco city parks. The cumulative impact of closing off-leash areas because of the NAP and the GGNRA must be included in the full EIR.

THERE ARE ALSO SEVERAL NON-DOG-RELATED ISSUES THAT SHOULD BE INCLUDED IN THE FULL EIR.

THE FULL EIR MUST CONSIDER THE NEGATIVE IMPACTS ON WIND (E-8) AND EROSION (E-13) OF REMOVAL OF TREES AND NON-NATIVE PLANTS FROM NATURAL AREAS.

The Management Plan calls for replacing trees removed from natural areas with other trees, but says the replacement trees may not be planted at the same site. Also, new trees will not be the same size as the ones removed, for many years, if ever. Many trees were planted in parks to provide windbreaks not only for the parks, but also for the homes immediately adjacent to the parks. Removing these trees will remove the windbreaks, with potential property damage to the homes.

Over the years, homeowners and park officials planted many non-native plants, especially ice plant, because they were the only plants that would stabilize San Francisco's sandy hills. Native plants frequently require drifting sand to thrive, and they, therefore, were not effective at stabilizing the hills. Land within many natural areas is fairly steep. Removing the ice plant and other non-native plants that have stabilized the hills for decades will result in increased erosion in city parks.

For example, NAP plans for all four parks in the Golden Gate Heights neighborhood (Grandview, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill) call for "scattered, open sand". These parks are located near the top of several hills, on steep, west-facing slopes with nothing to block strong ocean winds. Even with the ice plant that has covered the areas for decades, drifting sand still blocks streets, clogs sewers, and damages nearby homeowners' property. Clearly, removing the stabilizing plants and creating areas of "scattered, open sand" will cause significantly more erosion and damage.

NAP staff have stated in public meetings that the program has no "legal" responsibility for damage to homeowners' property that result from their actions (e.g., removing ice plant that stabilized sand resulting in drifting sand damaging a park neighbor's backyard, as has happened around Grandview Park). In a scientific review of the NAP Management Plan, reviewer Peggy Fielder, one of the paid authors of the original management plan, was asked: "Have the secondary consequences of management activities been adequately identified and

addressed (e.g., effects on healthy trees, forests, plants, animals, birds, wind patterns, erosion, restrictions, use of herbicides, and the necessity of removing invasive animals)?" Fielding replied: "Probably not, but this is not a function of the plan." These secondary consequences MUST be considered during the full EIR, especially the effects on windbreaks and erosion, and on the PEOPLE who live in homes next door to a city park!

Natural areas do not occur in a vacuum. Because our city parks are located within a densely populated urban city, the effects of NAP management decisions, such as removing non-native trees or plants that stabilize hillsides, extend beyond the public areas of the park itself. It is not sufficient to only consider wind and erosion within the park. The full EIR MUST evaluate the physical effects (not the just legal) that include erosion, sand and wind effects on homeowners and property adjacent to the parks that contain natural areas.

THE FULL EIR MUST CONSIDER THE NEGATIVE IMPACT OF CREATING HABITAT IN NATURAL AREAS THAT ENCOURAGES MOSQUITO BREEDING, INCREASING THE PUBLIC HEALTH RISK OF WEST NILE VIRUS.

Many of the plans for individual natural areas call for creating ponds and standing water sources. These habitats are prime mosquito breeding areas. The Initial Study only mentions "small water features" as being potential mosquito breeding sites. However, larger ponds are also important breeding sites. The impact on public health of mosquito breeding at ALL ponds in ALL natural areas MUST be addressed in the full EIR. The impact of increasing the size and number of ponds at each site MUST be considered. This is an especially important issue at Sharp Park, one of only four places in San Mateo County where the threat of mosquito breeding is high enough to warrant helicopter spraying of larvicide in addition to ground applications. Increasing the size and number of ponds for frog habitat at Sharp Park will significantly increase the threat of mosquito breeding there. The impact of an increased use of BT, a biological control agent, to control mosquito breeding in larger or more ponds must be considered in the full EIR.

THE NEGATIVE IMPACT ON HOMES ADJACENT TO NATURAL AREAS FROM PRESCRIBED BURNING SHOULD THOSE BURNS GET OUT OF HAND MUST BE CONSIDERED IN THE FULL EIR (E-15h).

The Initial Study states (page 11) that NAP "no longer is proposing prescribed burning would not occur. The SNRAMP will be updated to reflect this change." The full EIR is authorized to study the 2006 Management Plan. Significant changes to the 2006 Management Plan cannot be made before the EIR is done. Therefore, the change referred to in the Initial Study cannot be made. In any event, the full EIR MUST consider the potentially catastrophic impact of prescribed burns on adjacent homes, as well as parkland, should a burn get out of hand.

THE FULL EIR MUST INCLUDE THE IMPACTS ON AESTHETICS OF POOR MAINTENANCE BY NAP STAFF AND THEIR VOLUNTEERS. THE FULL EIR MUST ALSO INCLUDE THE EFFECTS OF POOR MAINTENANCE ON THE NEED FOR MORE HERBICIDES IN NATURAL AREAS.

Any full EIR must consider whether or not the natural areas can be maintained as described in the management plan. In most parks, the 2006 Management Plan allocates fewer than 20 days/year for

planting/maintenance of the natural areas. In 16 of the 31 natural areas in the 2006 Management Plan, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants.

In addition, poor maintenance allows non-native vegetation to grow back, requiring repeated applications of herbicides to get rid of the unwanted non-natives.

The full EIR MUST consider the benefits of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-third of San Francisco's city parkland for the program, too much area to be adequately maintained by NAP staff. The Management Plan is much more ambitious in the amount of work to be done annually, than NAP has demonstrated it has the capacity to actually DO on a consistent basis. It would be preferable to have a workable management plan that is achievable within the resources of the city and the volunteer commitment made to NAP, than to have a utopian plan including monitoring and research goals that are not attainable.

Finally, with regard to aesthetics… Who decides what is aesthetically pleasing? For many people, brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing. For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green, not brown half the year. How will the different aesthetics of what a park should look like be included in the full EIR? Will the full EIR include a study of what San Francisco residents want/like to see in their parks? How will people, who are part of the environment, be part of the EIR evaluation?

--end--

THE STUDIES REFERENCED IN THIS PUBLIC COMMENT ARE:

1) **"Effects of dog leash laws and habitat type on avian and small mammal communities in urban parks", Andrew Forrest, Colleen Cassady St. Clair, *Urban Ecosyst* (2006) 9, p. 51-66**

Abstract: "Remnant natural areas within urban settings can act as important refuges for wildlife, substantially increasing local biodiversity. However, habitat suitability for these species is potentially affected by human recreational activities including the presence of free-running dogs. To compare the diversity and abundance of songbird and small mammal communities between areas with bylaws that require, or do not require, dogs to be leashed, point counts and live-trapping surveys were conducted in three habitat types (deciduous, coniferous, and meadow) in the river valley parks of Edmonton, Alberta. Among birds, there was no difference between areas with different leashing bylaws in species diversity for any of the three habitat types. Similarly, there was no difference in bird diversity for a subset of species that were plausibly breeding at these sites. However, higher bird diversity was recorded in deciduous and coniferous sites than in meadow sites, regardless of leash designation, probably as a function of the horticultural practice of mowing meadows. Among both birds and small mammals, there was no difference in the abundance of individuals as a function of leashing bylaws. Our results suggest that off-leash dogs have no effect on the diversity or abundance of birds and small mammals in urban parks, but it is also possible that other factors, such as leash law compliance, reduced or obscured the effects of off-leash dogs in this study."

Before beginning the study, the researchers "hypothesized that designated off-leash areas would represent comparatively poor habitat and would negatively influence diversity and/or abundance of birds and small mammals relative to nearby habitat where dogs were required to be leashed within the same urban park system… [On-leash sites] were believed by city officials to have high public compliance with leash laws. Off-leash sites were either in officially designated off-leash areas or, in two cases, in areas that were designated as on-leash but were known to experience frequent use by off-leash dogs and their owners." (p. 53)

Researchers conducted bird surveys in all 56 sites (half off-leash, half on-leash) a total of three times between May and July 2002. Each survey involved a 5-minute, 100 m, fixed radius point count, followed by a 5-minute playback of a black-capped chickadee mobbing call (known to attract several bird species and used to increase detection of less vocal species). A 5-mintue post-playback point count concluded the survey. Researchers recorded all birds that were seen or heard during the 15-minute period. They only counted birds if they interacted with the environment (that is, they did not count birds flying over the survey site). Small mammals were live-trapped at a randomly selected subset of 32 of the original 56 sites.

They found that "Designation of sites for dogs to be on- or off-leash had no measurable effect on the diversity or abundance of birds and small mammals within the sites that we surveyed in the Edmonton River valley. There was a similar lack of difference in bird abundance when we restricted analyses to only those species that appeared to be breeding, only those species that nest on the ground or in low shrubs, and only the most abundant species." (p.61)

2) **"Interactions Among Dogs, People, and the Environment in Boulder, Colorado: A Case Study", Marc Bekoff and Carron A. Meaney, *Anthrozoos*, (1997), 10(1), p. 12-31.**

Abstract: "From September 1995 to April 1996 we studied interactions among dogs, people, and the environment in Boulder, Colorado, Data on behavioral disturbances by off-leash dogs who were accompanied by a person were collected with respect to dog-dog and dog-human interactions, dog-wildlife encounters, dogs trampling vegetation, and dogs entering and disturbing bodies of water. A questionnaire also was administered. Behavioral data showed that off-leash dogs generally did not travel far off trail, that when they did it was for short periods of time, and that they rarely were observed to chase other dogs, disturb people, chase wildlife, destroy vegetation, or enter bodies of water. Results from analyses of the questionnaire (skewed toward non-dog owners) showed that dog owners and non-dog owners agreed that people were more disruptive to the environment than dogs and that unruly people were more problematic than unruly dogs. We conclude that the well-being and interests of dogs should not summarily and dismissively be compromised when dogs and people attempt to share limited space that can be used by all parties for recreational purposes. Indeed, a higher percentage of people reported that the quality of dogs' experience of the outdoors would be compromised more than their own enjoyment if dogs could not walk off-leash in areas where this is currently permitted. The methods used and the results from this case study can serve as a model for other locations in which dogs and people compete for limited spatial resources."

In this study, the researchers observed the behaviors of dogs in six parks in and around Boulder. They positioned themselves at various vantage points along trails and recorded what they saw. They also followed individual dogs during the entire time they were in the park, recording everything they saw the dogs do. They administered a questionnaire they designed, with the help of professional pollsters, to all visitors entering the parks being studied. More non-dog owners (53.2%) responded to the questionnaire than did dog owners (46.8%).

"There is no doubt that *some* dogs go off trail for various amounts of time and that *some* dogs do occasionally disturb people, wildlife, and habitat. However, compared to people, dogs did not seem to do much damage to vegetation or bodies of water, and they only rarely chased wildlife… People were more disruptive than were dogs, and when dogs did go far off trails they often were lured off by people [e.g., by chasing a thrown stick]…" (p.26) "People also reported (and direct observations confirmed the fact) that people disrupt wildlife more frequently than dogs, and people cause more damage to vegetation and to bodies of water." (p. 27)

3) **"Recreation Disturbance Does Not Change Feeding Behavior of the Western Snowy Plover", Megan Warren, UC Berkeley Environmental Sciences 196, Senior Research Seminar, May 7, 2007**

Abstract: "The Western Snowy Plover (*Charadrius alexandrinus nivosus*) is a small shorebird that has many scattered wintering populations along the Pacific Coast of the United State, including several in the Bay Area. This species has been listed as threatened since 1993 under the federal Endangered Species Act of 1973. For this study I measured disturbance rates, types, plover responses and feeding time in three different sites in the San Francisco Bay Area to explore the link between recreation disturbance and feeding behavior. I predicted that as frequency of disturbance

increased, the birds would spend less time actively foraging and more time alert. However, data showed no significant relationship between feeding behavior and direct disturbance by human recreators. Instead, I now predict that recreation has a more indirect effect on the western snowy plover feeding behavior. Future research should focus on indirect effects of recreation, such as habitat disturbance and food source quality."

Warren observed plover behavior at Crissy Field (high-use recreational site), Limantour Beach (medium-use recreational site), and Abbott's Lagoon (low-use recreational site). Surveys were made of birds' responses to recreational activity in four categories – no response, mild response (causing a resting plover to stand), moderate response (causing a plover to stand up and/or walk away), and major response (causing the plover to flush). Feeding behavior surveys quantified how the plovers budgeted their time during the dusk feeding period. Plovers were observed: 1) searching for food, defined as movement along the shoreline with its head down visually scanning for prey; 2) actively foraging, defined as head down with its beak in the sand eating the prey; and 3) time spent alert, defined as a bird standing still with its head up visually scanning the beach. A linear regression was used to test the relationship between frequency of disturbance and foraging, alert and searching time.

"The Crissy Field study did not provide any relevant results, however, the data from the two Point Reyes study sites do not support the hypothesis that western snowy plovers in more heavily disturbed areas devote less time to actively foraging and more time to being alert… These results suggest that direct recreation disturbance is not as significant as earlier thought, and that links between recreation and western snowy plover feeding behavior are more subtle." (p. 9)

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Effects of dog leash laws and habitat type on avian and small mammal communities in urban parks

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Abstract Remnant natural areas within urban settings can act as important refuges for wildlife, substantially increasing local biodiversity. However, habitat suitability for these species is potentially affected by human recreational activities including the presence of free-running dogs. To compare the diversity and abundance of songbird and small mammal communities between areas with bylaws that require, or do not require, dogs to be leashed, point counts and live-trapping surveys were conducted in three habitat types (deciduous, coniferous, and meadow) in the river valley parks of Edmonton, Alberta. Among birds, there was no difference between areas with different leashing bylaws in species diversity for any of the three habitat types. Similarly, there was no difference in bird diversity for a subset of species that were plausibly breeding at these sites. However, higher bird diversity was recorded in deciduous and coniferous sites than in meadow sites, regardless of leash designation, probably as a function of the horticultural practice of mowing meadows. Among both birds and small mammals, there was no difference in the abundance of individuals as a function of leashing bylaws. Our results suggest that off-leash dogs have no effect on the diversity or abundance of birds and small mammals in urban parks, but it is also possible that other factors, such as leash law compliance, reduced or obscured the effects of off-leash dogs in this study.

Keywords Urban parks · Dogs · Birds · Small mammals · Wildlife · Diversity · Leashing by-laws

Introduction

In developed countries of the world, 75% of humans already live in urban areas and the worldwide urban population is estimated to be increasing by 175 000 people each day (UN,

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2003). As urban areas expand to accommodate increases in both the human population and urbanization, remaining natural areas are giving way to further anthropogenic development (Searns, 1995). Increasing development in and surrounding cities heightens the value of remaining natural areas, which frequently occur in river valleys and ravines, and large areas of this sort may be capable of supporting several native wildlife species. In the city of Edmonton, Alberta, the North Saskatchewan River valley and several adjacent ravines comprise an enormous urban park system of 7400 ha, renowned as being the largest contiguous area of urban parkland in North America. Much of this area remains in a relatively natural state and appears to sustain a high diversity of wildlife (Mowat, 1993). In the past, city planners have developed park and trail systems within the river valley for a variety of human recreational uses. However, more recently and more generally, urban natural areas are recognised by both city planners and ecologists for their value in the conservation of biodiversity (Clergeau et al., 1998; Fernandez-Juricic and Jokimaki, 2001).

Protecting the biodiversity within urban parks requires that city planners carefully manage the variety of competing pressures on these areas. These pressures arise from high levels of human visitation associated with a number of recreational uses, the presence of both official and unofficial trail systems, and even such things as illegal garbage disposal (Tilghman, 1987). Dog-walking is one of the most common recreational activities in the Edmonton river valley and is conducted by about a quarter of park users (Edmonton Community Services, 2001). To accommodate dog-walkers, the City of Edmonton has designated certain parks and trails as 'off-leash' areas where dog owners are permitted to walk their dogs without a restraining leash. In total, there are 40 such areas in Edmonton, and 14 of these are within the North Saskatchewan River valley. Because the activity of domestic dogs may affect wildlife in urban areas, civic employees were interested in estimating diversity and abundance of small animals that might be most susceptible to dog disturbance in areas with and without leash laws.

A variety of negative effects on wildlife have been documented for domestic dogs elsewhere and these may plausibly apply to the Edmonton area. Most generally, wildlife may be chased or disturbed by dogs as a vestige of their natural hunting instincts (Sime, 1999). Flushing in response to the presence of dogs is a documented and conspicuous response shown by some city-dwelling passerines (e.g., Fernandez-Juricic and Telleria, 2000) and colonial shorebirds (e.g., Mitchell et al., 1988; Lafferty, 2001). Dogs can also cause physical injury (Doncaster, 1994; Shine and Koenig, 2001), nest disturbance (Govan, 1998), and even death (Fuller, 1990). Other effects may be more subtle and less easily observed. As examples, disturbance by dogs can cause energetic loss when it results in an evasive response, increased vigilance, or lost foraging opportunities (Burger, 1986; Fernandez-Juricic and Telleria, 2000). Domestic dogs also have the potential to introduce disease or parasites into urban wildlife populations (Sime, 1999). Finally, the presence of dogs may exert a cumulative effect with other disturbances to reduce habitat suitability (Fernandez-Juricic, 2002).

Because leashing of dogs may reduce some forms of disturbance (e.g., chasing) (Lafferty, 2001), we investigated the effect that dog leash laws have on the diversity and abundance of songbirds and small mammals. These groups are relatively unstudied in this context, yet appear to be both abundant and diverse (in the case of birds) in the Edmonton River Valley (Mowat, 1993). In general, urban bird communities appear to be more influenced by habitat features that occur at a local level than they are by large-scale landscape characteristics (Cleargeau et al., 1998, 2001) and this may be true of fragmented populations more generally (Mazerolle and Villard, 1999). Therefore, off-leash dogs in the Edmonton River Valley, which are officially restricted to designated sites, may affect wildlife on a very small spatial scale. Accordingly, we hypothesized that designated off-leash areas would represent comparatively

poor habitat and would negatively influence diversity and/or abundance of birds and small mammals relative to nearby similar habitat where dogs were required to be leashed within the same urban park system.

Methods

Study area

All census sites were located in the North Saskatchewan River valley and adjoining ravines within the city of Edmonton, Alberta (53° 33′ 00″ N–113° 28′ 00″ W). Within the 7400 hectares of parkland are 190 kilometers of multi-use trails and 22 different park areas. The presence of these amenities attracts an estimated 2 million users annually (Anonymous, 2002).

A total of 56 separate sites were selected within the river valley with an equal number of sites located in areas designated as requiring dogs to be on-leash and off-leash. On-leash sites were defined as sites which either disallowed dogs or required that they be leashed. These areas were also believed by City officials to have high public compliance with leash laws (K. Moore, personal communication). Off-leash sites were in officially designated off-leash areas or, in two cases, were in areas that were designated as on-leash, but were known to experience frequent use by off-leash dogs and their owners (K. Moore, personal communication). Sites were further categorized into three habitat classifications according to the dominant vegetation type: deciduous-dominated, coniferous-dominated, and meadow. Aspen (*Populus tremuloides*), the dominant tree species in the North Saskatchewan River valley, was qualitatively the most common tree species in deciduous-dominated sites (Mowat, 1993) which also contained balsam poplar (*Populus balsamifera*). Coniferous sites were generally located on north-facing slopes or in steep-sided ravines, and were dominated by white spruce (*Picea glauca*). Within meadow sites, we used two habitat sub-types; those that consisted of natural unmowed vegetation (i.e. semi-natural sites) and grassy areas comprised partly or mainly by introduced grass species that are routinely mowed by the City (i.e. manicured sites). We anticipated that manicured sites may have different communities than natural ones, but too few natural sites of sufficient size were available to obtain similar numbers of sites within that habitat alone. The few natural sites that we did find were located in small patches of grassland on south-facing slopes and along the bottom of the river valley. Vegetation cover in the natural sites was comprised of several species of grass (e.g. *Bromus inermis*, *Agropyron* spp., *Festuca* spp.), thistle, and leguminous species (e.g. *Melalotus* spp.) (Mowat, 1993). The distribution of on-leash sites among habitat types was 11 deciduous, 10 coniferous, and seven meadow sites. Within off-leash areas, sampling occurred at 10 deciduous, 10 coniferous, and eight meadow sites. We used 1:10 000 locally-produced orienteering maps to place our sampling sites at the center of target habitat patches and then navigated to them using known reference points. The location of trails was not considered during site selection. The centers of the sites were placed at least 250 meters apart to minimize the possibility of double-counting individuals.

Bird surveys

We conducted bird surveys in all 56 sites a total of three times each between May and July 2002. Surveys were conducted between sunrise and 10 AM and only under calm weather

conditions (wind less than 5 on the Beaufort scale) without significant precipitation. Each site was sampled at a different time on each visit to control for temporal variation.

Each survey involved a 5-minute, 100 m, fixed-radius point count (Bibby et al., 1992) followed by a 5-minute playback (*sensu* Gunn et al. 2000 after Desrochers and Hannon, 1997) of a black-capped chickadee (*Poecile atricapillus*) mobbing call. The chickadee mobbing call is known to attract several bird species that occur within the study area (Hurd, 1996; Gunn et al., 2000) and we used it to increase detection of less vocal species (e.g., woodpeckers) and to provide opportunities for behavioural observations (below). A 5-minute post-playback point count concluded each survey. We recorded all birds that were seen or heard during the 15 min. Birds were only counted if they interacted with the habitat, meaning that birds observed flying over the study site were not recorded. Caution was taken to minimize the chance of double counting individual birds by carefully noting their direction and apparent movement during the census. When possible, we observed individual birds carefully to collect evidence of breeding activity (after Vickery et al., 1992) by taking advantage of the close approaches that typically followed use of the mobbing call (Gunn et al., 2000). Individual bird species were considered to be breeding at a site if we recorded one of the following criteria: (a) a male was singing on at least two of the three visits, or (b) an individual of either sex was seen exhibiting breeding behavior (i.e., traveling in a pair, carrying nesting material, food, or fecal sacs) on any visit (after Gunn et al., 2000).

Small mammal surveys

To accommodate the greater effort that it required, small mammals were live-trapped at a randomly selected subset of 32 of the original 56 sites between mid-July and mid-August, 2002. The distribution among habitat types of the 32 sites was 10 deciduous, 10 coniferous and 12 meadow sites. Twelve meadow sites were selected to allow for equal sampling effort among meadow sub-types (n = 6 of each) and among dog treatments (n = 3 within each meadow sub-type).

Each site was sampled using an array of 10 Victor Tin-Cat® live-, multiple-capture traps placed approximately 20 m apart. The arrangement of traps varied between sites to accommodate local physical features, but was generally comprised by two parallel lines of traps placed greater than 3 m away from either side of a trail. When possible, all traps were placed within the site's point count radius. When this was not possible, traps were placed as close as possible to the point count center and within the same habitat type.

Each site was pre-baited for five nights then trapped for two consecutive nights to permit mark-recapture population estimation (Sutherland, 1996). Three or four sites were trapped per night and these were spread among two or more of the treatment and habitat types to control for seasonal variation in small mammal numbers. Pre-baiting was conducted using pop cans with enlarged openings that were nailed in place and baited with sunflower seeds. To maximize trapping success, traps were placed along woody debris and in other areas likely to be used by small mammals. Traps were covered with plant material to conceal their presence from the public and to provide insulation from both heat and cold. Traps were set in the evenings, baited with a handful of sunflower seeds and dry cat food, and checked the following mornings. During the day between the first and second night of trapping, each trap was locked open and left in place. Traps that were placed in manicured meadow sites were covered with wooden boards for additional protection from the elements.

Following the first night of trapping, each trapped individual was identified to species, sexed, weighed, and marked with a permanent marker at the base of its tail and then released.

The average time it took to process each animal was approximately 1 min. After the second night of trapping the same procedure was followed but no animals were marked.

Statistical analysis

We calculated species diversity using the Shannon-Wiener diversity index (following Krebs, 1994). To examine differences in diversity and abundance among treatments and habitat types, we used parametric tests (ANOVA and *t*-tests) when the data satisfied the assumptions of normality and homogeneity of variance (Sokal and Rohlf, 1981). In some cases the data needed to be transformed to meet these assumptions so the square-root transformation ($\sqrt{Y} + \frac{1}{2}$) was applied (Sokal and Rohlf, 1981). We used Tukey's honestly-significant difference (HSD) statistic to conduct post-hoc, pair-wise tests among ANOVA means (Sokal and Rohlf, 1981). When the assumptions were not met and the data could not be transformed to meet them, we used the non-parametric analogue to a *t*-test, the Mann-Whitney U test.

Results

Birds

In total, 2 203 birds representing 61 species (including two unidentified *picidae* and *interidae* spp.) were counted during the bird censuses. The black-capped chickadee (see Table 1 for scientific names) was the most abundant species, accounting for 30% of all observations. Other common species, each accounting for at least 5% of all observations, were the least flycatcher, red-eyed vireo, red-breasted nuthatch, and yellow warbler.

We examined bird diversity as a function of habitat type and leashing bylaw designation in two ways; by including all birds that were detected and with only those birds that exhibited evidence of breeding. Across all species, bird community diversity differed as a function of habitat (Fig. 1(A); $F = 100.0, df = 2,50, P \leq 0.001$), but not as a function of dog leashing bylaws ($F = 1.5$, $df = 1,50$, $P = 0.23$) or the interaction between leashing bylaws and habitat ($F = 0.6$, $df = 2,50$, $P = 0.53$). Posthoc tests revealed that bird diversity did not differ between the deciduous-dominated and coniferous habitats (Tukey's HSD $P = 0.85$), but both of these were significantly more diverse than the meadow areas (Fig. 1(A); Tukey's HSD $P \leq 0.001$ for each). These results were qualitatively identical for birds that exhibited evidence of breeding (Fig 1(B)). Again, diversity differed as a function of habitat (Fig. 1(B); $F = 78.9, df = 2,50, P \leq 0.001$), but not bylaw designation (Fig. 1(B).; $F = 0.003$, $df = 1,50$, $P = 0.87$) or the interaction between bylaw designation and habitat ($F = 0.06$, $df = 2,50$, $P = (0.60)$. Pair-wise differences between habitats were also similar; breeding bird diversity did not differ between deciduous-dominated and coniferous habitats (Fig. 1(B). Tukey's HSD $P = 0.21$), but both of these habitat types had significantly greater diversity than meadow areas (Fig. 1(B); Tukey's HSD $P \leq 0.001$ for each).

To assess differences in the abundance of birds as a function of leash designation, we compared the maximum number of individuals of all species detected at each site. The average of these abundances differed between habitat types (Fig. 2; $F = 106.2, df = 2,50$, $P \leq 0.001$), but not between on-leash and off-leash sites (Fig. 2; $F = 0.004$, $df = 1,50$, $P = 0.95$) or as a function of the interaction between leashing bylaw designation and habitat type ($F = 1.1, df = 2,50, P = 0.34$). The effect of habitat resulted in similar differences as before, and meadow sites had approximately 80% fewer birds than deciduous and coniferous-dominated sites.

Table 1 Summary of the number and species of birds detected during censusues

Common name	Latin name	Number of detections during surveys (% of these detections made in OFF leash sites)	
ring-billed gull	*Larus delawarensis*	8 (63)	
ring-necked pheasant	*Phasianus colchicus*	2 (100)	
sharp-shinned hawk	*Accipiter striatus*	3 (33)	
Cooper's hawk	*Accipiter cooperii*	4 (50)	
pileated woodpecker	*Dryocopus pileatus*	8 (50)	
downy woodpecker	*Picoides pubescens*	44 (50)	a
hairy woodpecker	*Picoides villosus*	3 (33)	
unidentified woodpecker	*Picidea*	6 (33)	a
northern flicker	*Colaptes auratus*	1 (0)	
yellow-bellied sapsucker	*Sphyrapicus varius*	2 (50)	
western wood-pewee	*Contopus sordidulus*	2 (50)	
eastern phoebe	*Sayornis phoebe*	5 (40)	
alder flycatcher	*Empidonax alnorum*	3 (33)	
least flycatcher	*Empidonax minimus*	114 (56)	a
American crow	*Corvus brachyrhynchos*	53 (66)	
common raven	*Corvus corax*	2 (0)	
blue jay	*Cyanocitta cristata*	14 (50)	
black-billed magpie	*Pica pica*	56 (43)	
black-capped chickadee	*Poecile atricapillus*	670 (51)	a
boreal chickadee	*Poecile hudsonicus*	2 (0)	
white-breasted nuthatch	*Sitta carolinensis*	47 (45)	a
red-breasted nuthatch	*Sitta canadensis*	148 (45)	a
house wren	*Troglodytes aedon*	12 (33)	a
ruby-crowned kinglet	*Regulus calendula*	13 (46)	a
golden-crowned kinglet	*Regulus satrapa*	8 (38)	a
American robin	*Turdus migratorius*	68 (53)	a
Swainson's thrush	*Catharus ustulatus*	7 (57)	b
hermit thrush	*Catharus guttatus*	1 (0)	b
cedar waxwing	*Bombycilla cedrorum*	10 (70)	a
blue-headed vireo	*Vireo solitarius*	27 (30)	a
red-eyed vireo	*Vireo olivaceus*	141 (57)	a
warbling vireo	*Vireo gilvus*	4 (50)	
black-and-white warbler	*Mniotilta varia*	1 (100)	
Tennessee warbler	*Vermivora peregrina*	11 (36)	b
orange-crowned warbler	*Vermivora celata*	3 (33)	
yellow warbler	*Dendroica petechia*	194 (51)	a
Magnolia warbler	*Dendroica magnolia*	1 (0)	
yellow-rumped warbler	*Dendroica coronata*	31 (19)	a
blackpoll warbler	*Dendroica striata*	7 (71)	
ovenbird	*Seiurus aurocapillus*	13 (38)	a,b
Canada warbler	*Wilsonia canadensis*	2 (100)	
American redstart	*Setophaga ruticilla*	3 (0)	
red-winged blackbird	*Agelaius phoeniceus*	1 (0)	
unidentified blackbird	*Icteridae*	9 (11)	a
northern oriole	*Icterus galbula*	7 (57)	a
western tanager	*Piranga ludoviciana*	31 (48)	a
rose-breasted grosbeak	*Pheuticus ludovicianus*	6 (50)	
purple finch	*Carpodacus purpureus*	5 (40)	a

(*Continued on Next Page*)

Table 1 (*Continued*)

Common Name	Latin Name	Number of detections during surveys (% of these detections made in OFF leash sites)	
pine siskin	*Carduelis pinus*	56 (34)	
red crossbill	*Loxia curvirostra*	6 (100)	
white-winged crossbill	*Loxia leucoptera*	7 (100)	
savannah sparrow	*Passerculus sandwichensis*	54 (52)	a,b
le Conte's sparrow	*Ammodramus leconteii*	8 (63)	a,b
vesper sparrow	*Pooecetes gramineus*	2 (100)	a,b
dark-eyed junco	*Junco hyemalis*	39 (54)	a,b
chipping sparrow	*Spizella passerina*	69 (42)	a
clay-colored sparrow	*Spizella pallida*	63 (43)	a,b
white-throated sparrow	*Zonotrichia albicollis*	60 (55)	a,b
Lincoln's sparrow	*Melospiza lincolnii*	1 (0)	
song sparrow	*Melospiza melodia*	21 (62)	a,b
house sparrow	*Passer domesticus*	4 (50)	
Total detections		2203 (49)	

[a]Species considered to be breeding, within at least one study site (see methods for definition)
[b]Species that nest on the ground or in low shrubs which were thus considered to have potentially greater vulnerability to the effects of urban dogs

We considered the 11 species that nest on the ground or in low shrubs to have potentially greater vulnerability to the effects of urban dogs. Thus, we compared the abundance of these species individually as a function of dog designation and grouped birds by habitat to increase the power of the test (*sensu* Cohen, 1988). Eight species displayed clearly non-significant differences in abundance between on-leash and off-leash sites (Mann-Whitney $U \leq 92.0$, $df = 1$ to 29, $P \geq 0.16$ for each species). The ninth species, the song sparrow, was only marginally non-significant ($U = 9.0$, $df = 7$, $P = 0.08$), but in the unpredicted direction; almost twice as many sparrows were counted in off-leash sites as were in on-leash areas. When subjected to a Bonferroni adjustment to account for the multiple comparisons, all species-specific differences were highly non-significant (adjusted P required for significance (0.0056). There were insufficient data to analyze the two other ground-nesting species (vesper sparrow and hermit thrush) that were counted during the surveys.

In addition to these ground-nesting birds, we also examined differences in the abundance of the five most common forest species encountered during the survey period for which differences may have been more apparent owing to larger values and lower variance (again, *sensu* Cohen, 1988); black-capped chickadee, least flycatcher, red-breasted nuthatch, red-eyed vireo, and yellow warbler). Four species showed non-significant differences in abundance between on-leash and off-leash sites (Mann-Whitney $U \leq 237.5$, $df = 26$ to 42, $P \geq 0.33$). Comparable to song sparrows, red-eyed vireos were 33% more abundant in the off-leash sites than they were in on-leash sites (Mann-Whitney $U = 116.0$, $df = 38$, $P = 0.03$). However, after subjecting the data to a Bonferroni adjustment to account for the multiple comparisons made between species this difference was not significant (adjusted P required for significance (0.01).

Small mammals

Three species were detected in the small mammal census. In order of decreasing abundance these species were the deer mouse (*Peromyscus maniculatus*), red-backed vole (*Clethri-*

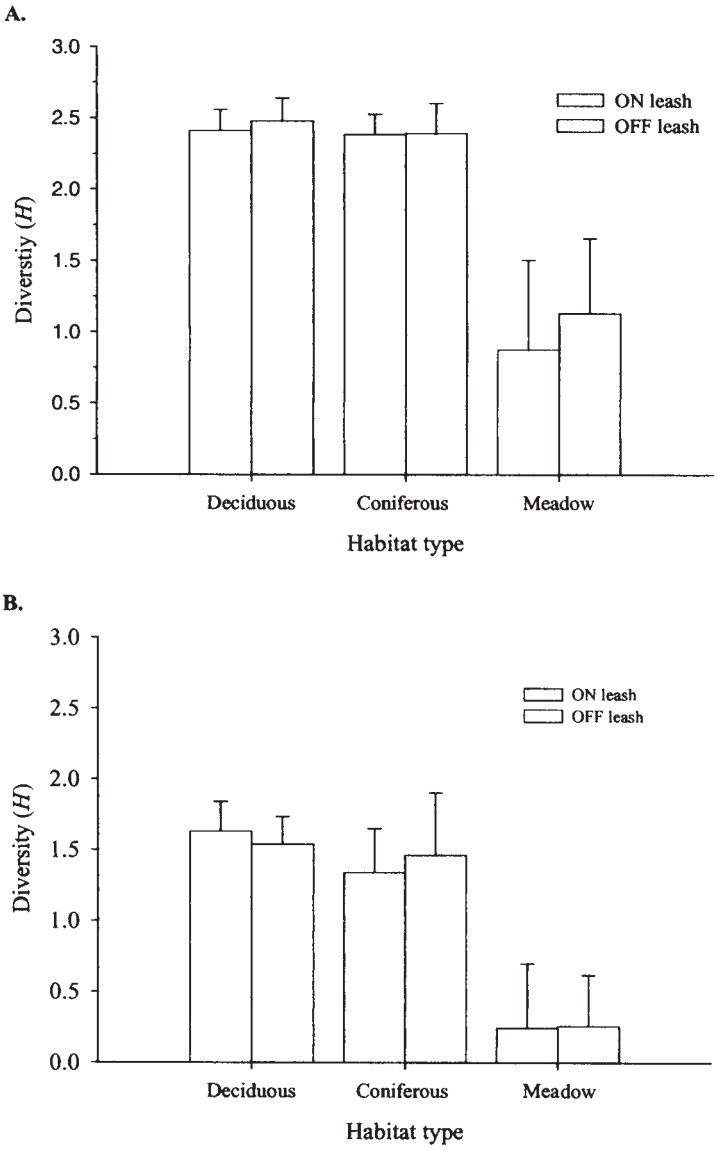

Fig. 1 Shannon-Wiener indices of bird diversity (mean ± SD) across dog treatment and habitat types observed in the Edmonton river valley parks for (A) all bird species recorded during survey period and (B) only those bird species considered to be breeding at a site

onomys gapperi), and meadow vole (*Microtus pennsylvanicus*), comprising a total of 287 individuals. Sixty-one individuals were recaptured on the second night of trapping, bringing the total number of captures to 348.

Abundance was compared using two sources of data; the highest counts per site based on the greatest number of individuals trapped in one night and population estimates derived for each site using the Petersen mark-recapture technique (as described by Sutherland, 1996).

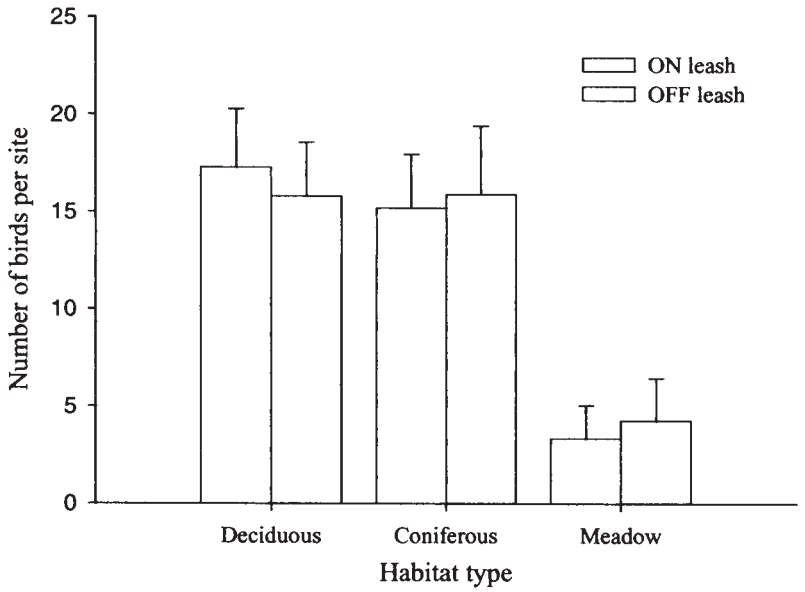

Fig. 2 Average number of birds detected per site (mean ± SD) across all species, treatment, and habitat types in the Edmonton River valley parks

Square-root transformation population estimates of each species were analyzed separately via two-way ANOVA (for deer mice and red-backed voles which occurred in both forested habitat types) and t-test (for meadow voles which occurred only in meadow habitat). For deer mice and red-backed voles, population estimates did not differ as a function of habitat (Figs. 3(A) and (B), $F = 0.003$ and 1.02 respectively, $df = 2,9$ and 2,7, $P = 0.96$ and 0.33), leash designation ($F = 0.04$ and 0.64, $df = 1,9$ and 1,7, $P = 0.85$ and 0.43) or the interaction between dog treatment and habitat type ($F = 0.63$ and 2.23, $df = 2,9$ and 2,7, $P = 0.44$ and 0.16). Meadow voles also displayed a clearly non-significant difference between on-leash and off-leash sites (Fig. 3(C), $t = -0.12$, $df = 2,3$, $P = 0.92$). Across all three species, these results were qualitatively unchanged when we made similar comparisons using the maximum one-night capture rate for each site as a measure of abundance.

Manicured vs. semi-natural comparisons

Because the apparent bird and small mammal diversity of meadow habitat differed so strikingly in the field as a function of horticultural practice, we examined these differences with an *a posteriori* analysis. Bird diversity was significantly greater in semi-natural sites than it was in manicured sites ($t = 2.42$, $df = 8,4$, $P = 0.04$). However, overall, bird abundance did not differ as a function of horticultural practice ($t = 1.20$, $df = 10,9$, $P = 0.26$), presumably because of changes in the composition of the bird community. Predictably, more typically-urban species (i.e. black-billed magpie, American crow, ring-billed gull, American robin, and house sparrow) were found in manicured sites compared to a more native composition of the bird community within semi-natural sites (i.e. savannah sparrow, Le Contes sparrow, vesper sparrow and clay-colored sparrow).

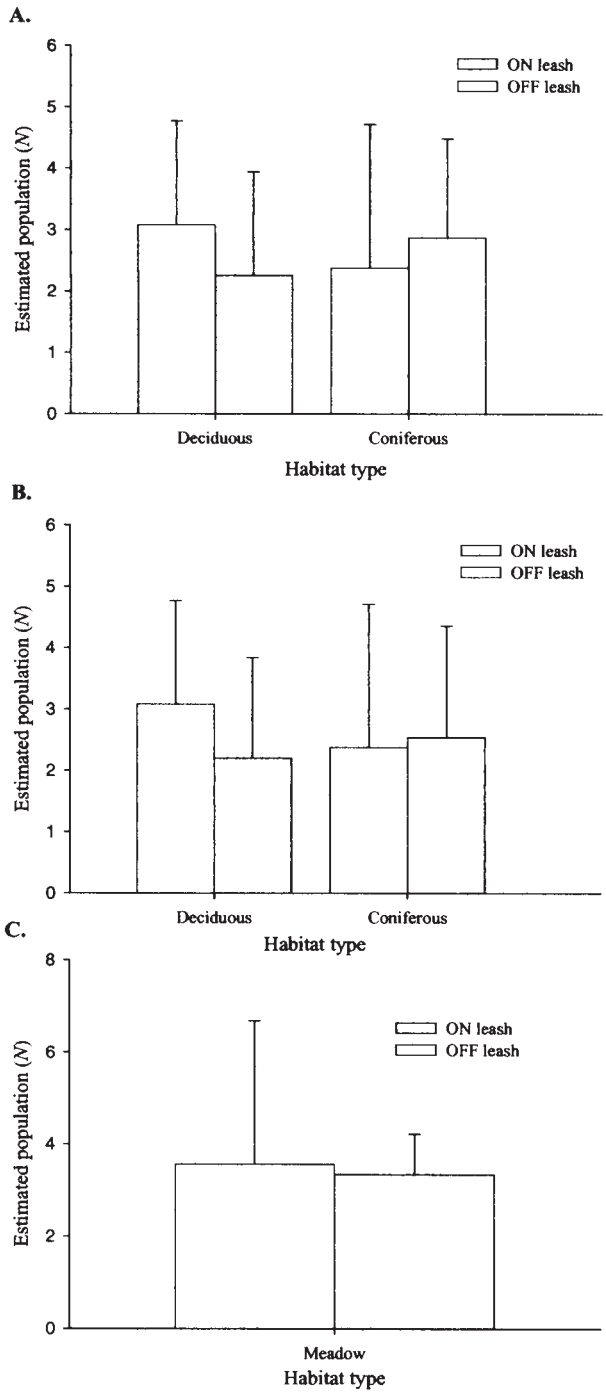

Fig. 3 Estimates of small mammal population sizes (mean ± SD) across treatment and habitat types observed in the Edmonton river valley parks for (A) deer mice and (B) red-backed voles and (C) meadow voles. Estimates were calculated with square root transformed data using the Petersen method of mark-recapture

Small mammal abundance was also higher in semi-natural sites. As many as 11 meadow voles were caught during one night in a single semi-natural meadow site, and the average one-night maximum capture rate was six (only meadow voles were trapped in meadow sites). This average value corresponds to an approximate and average population estimate of 11 individuals per semi-natural meadow site. In contrast, not one individual of any species was caught among all manicured sites during the entire survey period. The lack of variance in this category precludes statistical analysis.

Discussion

Designation of sites for dogs to be on- or off-leash had no measurable effect on the diversity or abundance of birds and small mammals within the sites that we surveyed in the Edmonton River valley. There was a similar lack of difference in bird abundance when we restricted analyses to only those species that appeared to be breeding, only those species that nest on the ground or in low shrubs, and only the most abundant species. These results contrast with some other studies, which reported that many species of wildlife are affected by free-running dogs (Sime, 1999; Lafferty, 2001). We expected that an effect on diversity of leash designation would be apparent at the scale of our censuses because comparable local scales appear more generally to influence the composition of urban bird communities (Clergeau et al., 1998, 2001; Melles et al., 2003). Given that our results did not support our hypothesis that leashing bylaws affect the diversity or abundance of birds and small mammals, there are two types of interpretations for them. In the first category, several factors make it is plausible that free-running dogs do not affect urban birds or wildlife, or not by the measures we employed (diversity and abundance). In a second category, our design may have precluded identifying effects of dogs that really exist.

Consistent with the first interpretation, free-running dogs may not affect birds and small mammals in the vicinity of human use trails because dog activity is restricted to such small temporal and spatial scales that its effects are negligible. Behavioral data suggests that off-leash dogs generally do not travel far off trail, and that when they do it is only for brief periods (Bekoff and Meaney, 1997). By our subjective and anecdotal assessment, dogs in our study area travelled off trail very little, especially in wooded sites, and only slightly more in semi-natural meadow sites. However, dogs did typically stray widely within the manicured meadow sites (AF, personal observation), but in those areas low habitat quality likely overwhelmed our ability to detect differences in diversity or abundance owing to dog activity.

A second biological reason that there was no apparent effect of leashing bylaws is that wildlife, particularly birds, in suburban and urban areas exist there because they are fairly tolerant of moderate levels of human activity (Cooke, 1980), including accompanying dogs. Fernandez-Juricic et al. (2001) have shown that birds can even become habituated to dogs in highly used urban parks. Bird tolerance appears to be highest once territories are established and nesting has begun (Tilghman, 1987) and this corresponds with the timing of our censuses. In fact, moderately perturbed habitats often have greater species richness than do the most natural habitats (Blair, 1996; Tilghman, 1987), perhaps as a function of greater habitat diversity. Thus, the tendency for song sparrows and red-eyed vireos to be more abundant in areas with off-leash dogs may mean that this disturbance somehow improves habitat quality for these species. This supports Mortberg's (2001) assertion that the effect of disturbance from recreation on densities of breeding birds is species-specific.

A third reason that leash designation may not affect birds and small mammals in Edmonton is because these communities may already have responded to the presence of wild coyotes (*Canis latrans*), which are abundant in Edmonton's North Saskatchewan River Valley (Mowat, 1993; Patriquin, 1992). Coyotes are a natural predator of both birds and small mammals (Pattie and Fisher, 1999) and historically occurred in the aspen parkland ecoregion that surrounds Edmonton. The presence of coyotes may reduce the novelty, and hence reaction to, free-running dogs and they may also enhance bird and small mammal communities by reducing the occurrence in ravine parks of domestic cats (Crooks and Soule, 1999).

A second category of explanation for our results is that free-running dogs had negative biological effects on wildlife in our study area, but we were not able to detect them. There are three main ways that this may have come about. The first is that the effect of leash laws was swamped by variation in one or more habitat or site characteristics that exerted greater influences on wildlife diversity or abundance. Among these potential characteristics are landscape structure adjacent to woodlands (Jokimaki, 1999; Melles et al., 2003), habitat structural complexity (e.g., Scott et al., 2003), distance to the nearest trail (Tilghman, 1987; Miller et al., 1998), distance to water (e.g., Tilghman, 1987), level of human activity (Fernandez-Juricic and Jokimaki, 2001), average canopy height (Tilghman, 1987), and the size of censused patches (Crooks et al., 2004). Trail proximity may have particular importance because trails can alter species composition in forest ecosystems (Miller et al., 1998) and both official and unofficial trails are ubiquitous in the Edmonton River Valley. Other studies have shown that bird diversity decreases along a gradient of increasing urbanization (Blair, 1996; Clergeau et al., 1998; Reynaud and Thioulouse, 2000), and such effects could obscure or contradict the potential negative effect of off-leash dogs. During site selection, we did not attempt to measure trail density, proximity to city center, patch size or any of the other habitat characteristics named above, and these may also be profitable subjects of further investigation.

A second reason that we may not have detected existing differences in the diversity or abundance of birds and small mammals is that this effect was confounded by variation in habitat quality between the two leashing designations. In contrast to the majority of the urban parks, it was our subjective impression that the designated off-leash areas within Edmonton were less developed. Parks personnel confirmed that off-leash areas are generally designated in areas where conflicts with a majority of other user types can be avoided (K. Moore and D. Frost, personal communications). Development levels may have an influence on wildlife because of its implications in both biotic and abiotic components of habitat quality. Biologically, less developed parks have increased amounts of vegetative cover (Jokimaki, 1999), and decreased occurrences of exotic species (Blair, 1996). Greater vegetation cover in particular is known to affect both birds (Jokimaki, 1999) and small mammals (Dickman, 1986). More specifically, increased cover can cause birds to show more tolerance towards human-related disturbances (Knight and Temple, 1995). Off-leash areas may also have occurred in areas with greater food availability, particularly for insectivorous species, which may generally be more sensitive to the effects of urbanization (Parsons et al., 2003; Lim and Sodhi, 2004). It would be worthwhile to subject this hypothesis, that off-leash areas occur in areas of higher habitat quality, to further investigation.

A final reason why we failed to detect an impact of leash designation within the urban parks of Edmonton may be that no difference existed in dog behaviour as a function of leashing bylaws. Via personal observation throughout the summer, and through personal communication with City of Edmonton Park Rangers, there is evidence that some people do not comply with leashing bylaws in city parks. Non-compliance may be a widespread problem as Lafferty (2001) also noted low levels of compliance with leash laws by dog

owners on a southern California beach. It is possible that the rate of non-compliance was high enough to nullify functional differences in our leash designation treatments and, consequently, differences in our response variables.

Whether or not there exist effects of off leash dogs on the diversity and abundance of birds and small mammals, dog activity may disrupt several more subtle aspects of wildlife communities that we did not measure. Most importantly, dogs may reduce nesting success (e.g., Gutzwiller et al., 1998), but not species abundance or the frequency of nesting attempts in habitats that ultimately function as sinks for regional populations (*sensu* Pulliam, 1988). For this reason, animal density and abundance may not be reliable indicators of habitat quality as we have implicitly assumed (Van Horne, 1983). In addition, domestic dogs have the potential to impose stress-related physiological effects on wildlife and may introduce diseases and parasites into populations of urban wildlife (Simes, 1999). Finally, dogs may exert greater effects on larger mammals that provide more visible targets for chase (e.g., white-tailed deer [Fuller, 1990; Ballard , 1999], red squirrel, snowshoe hare) that we did not census.

Manicured versus semi-natural meadow sites

Because our sample of meadow habitat included both manicured and semi-natural sites, we were able to show that meadow sites with manicured grass had significantly lower levels of avian diversity and small mammal abundance than did semi-natural sites with non-manicured grass. The abundance of birds at manicured sites also tended to be lower than it was at semi-natural sites, but not significantly so with our conservative multiple-comparison procedure. The lower diversity of birds in manicured sites is probably a function of their decreased habitat suitability as nesting or foraging sites. Because most birds do not forage far from vegetative cover, which they perceive as protection from predators (Giesbrecht and Ankney, 1998; Rodriguez et al., 2001), the lack of vegetative cover in these areas probably compromised both habitat quality and resource availability (Scheiman et al., 2003). Similar limitations of short grass would have afflicted the small mammal community (Jensen and Honess, 1995), explaining the complete lack of mammal detections in this area. Most of the native songbirds in the study area, which are insectivorous, granivorous, or fruitivorous, probably also lacked appropriate forage in the manicured sites. Instead, these sites would have contained the kind of human refuse (i.e. because they are the site of picnics, festivals, and organized sport) that is favoured by the scavenging and urbanized species we found there (e.g., ring-billed gulls, black-billed magpies, American crows, house sparrows and American robins; see also Fernandez-Juricic et al., 2002; Parsons et al., 2003). Our findings support a general expectation that more heavily modified areas are typically dominated by a few species that occur at high densities (Tilghman, 1987; Edgar and Kershaw, 1994; Melles *et al.*, 2003; Fraterrigo and Wiens, 2005), and also suggest that these practices exert far greater effects than the presence of off-leash dogs.

Conclusions

Although this study found no impact of dog leashing by-laws on the diversity and abundance of both birds and small mammals, it would be imprudent to conclude that dogs have no effect on wildlife for the several reasons described above. Among the results of this study, perhaps the most pertinent finding that relates directly to the management of urban parks that are assumed to have much value to resident wildlife (Fernandez-Juricic and Jokimaki, 2001) is

the issue of leash law compliance. The suspected lack of compliance indicates the need for investigation into the reasons why people ignore leashing bylaws so that steps can be taken to improve the situation. The striking effect of horticultural practices on the diversity (birds) and abundance (mammals) suggests an inexpensive solution for increasing biodiversity in urban areas. It is likely that cities could substantially increase biodiversity simply by letting existing green spaces revert to a more natural state (Crooks et al., 2004).

If future research finds that dogs do adversely affect wildlife, there are several measures that might reduce this impact. Increased enforcement and higher fines may increase the effect of leashing laws. Better visual delineation of sensitive areas might be effective to further restrict the spatial impact of dog activity. Finally, city planners might try to identify key habitat features that are elsewhere correlated with wildlife diversity (e.g., structural diversity: Linehan et al., 1967; Tilghman, 1987) and then assess and limit the impact of dogs and other recreational activity on these attributes.

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INTERACTIONS AMONG DOGS, PEOPLE, AND THE ENVIRONMENT IN BOULDER, COLORADO: A CASE STUDY

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> ***"The environment is not a luxury. When political movements have faded, when economic systems have changed, when ideologies have been superseded and forgotten, the environment will still be important." (Sylvan and Bennett 1994, p. 6)***
>
> ***"That recreational activities disturb wildlife is well appreciated but poorly understood. Most popular forms of recreation in wildlands have yet to receive detailed study." (Knight and Cole 1995, p. 61)***

ABSTRACT

From September 1995 to April 1996 we studied interactions among dogs, people, and the environment in Boulder, Colorado. Data on behavioral disturbances by off-leash dogs who were accompanied by a person were collected with respect to dog-dog and dog-human interactions, dog-wildlife encounters, dogs trampling vegetation, and dogs entering and disturbing bodies of water. A questionnaire also was administered. Behavioral data showed that off-leash dogs generally did not travel far off trail, that when they did it was for short periods of time, and that they rarely were observed to chase other dogs, disturb people, chase wildlife, destroy vegetation, or enter bodies of water. Results from analyses of the questionnaire (skewed toward non-dog owners) showed that dog owners and non-dog owners agreed that people were more disruptive to the environment than dogs and that unruly people were more problematic than unruly dogs. We conclude that the well-being and interests of dogs should not summarily and dismissively be compromised when dogs and people attempt to share limited space that can be used by all parties for recreational purposes. Indeed, a higher percentage of people reported that the quality of dogs' experience of the outdoors would be compromised more than their own enjoyment if dogs could not walk off-leash in areas where this is currently permitted. The methods used and the results from this case study can serve as a model for other locations in which dogs and people compete for limited spatial resources.

INTRODUCTION

Across the United States and in many other countries there is growing interest in how human and nonhuman animals (hereafter animals) can best share space that can be used by all parties for recreational purposes (see Knight and Gutzwiller 1995 for review). Although concern often focuses on the mutual well-being of humans and animals, when priorities have to be established, humans generally receive favorable treatment. Furthermore, when there are competing interests among humans, domestic dogs (*Canis familiaris*), wild animals, and "nature" in general, dogs' well-being and interests are often overridden (because they are "merely dogs" or "simply domesticated animals;" see Bekoff 1995, 1996a and Bekoff and Jamieson 1996 for discussion).

In the late 1800s, the people of Boulder, Colorado, had the foresight to set aside a large parcel of land backing into the foothills. Since then, additional land has been purchased under an Open Space program to create a greenbelt around the city, and to provide wildlife habitat and recreational opportunities. This program has been very successful and popular with the public.

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In recent years, there has been a large increase in the use of Open Space trails in Boulder. As emphasized by Roberts (1995), Boulderites who enjoy the outdoors "love their parks to death" as they pursue recreational activities. This community resource, which is shared by humans and animals, consists of about 25,000 acres and approximately 150 miles of trails. In 1993 there were about 1.3 million visits, an increase of 13% compared to previous years (Miller 1994). In one study, it was reported that 21.3% of groups visiting Boulder City Open Space participated in exercising their companion dogs (Zeller et al. 1994). In Boulder, as in other communities, companion animals such as dogs are very important to some people and problematic to others. The resulting conflicts between different groups (pro- and anti-dog factions) of people have placed the Boulder City Council in the position of having to consider various management decisions. Empirical data are necessary and can help to deal with controversial issues such as these in a more objective and straightforward manner. The development of sound management policies that attempt to maximize the well-being of all parties in recreational areas, including the possibility of placing restrictions on dogs, require detailed consideration of perceived and actual problems. Whereas there is a significant literature on human attitudes towards domestic and wild animals (e.g. Kellert 1994; Serpell 1995a,b, and references therein), there are very few data that can inform management decisions at the local level. As the number of humans and companion animals increases, existing land use problems continue to grow in Boulder (Roberts 1995; Zaslowsky 1995) and in other communities.

Among the major issues regarding land use in Boulder and other locales is the concern that off-leash dogs disturb other dogs, people, wildlife, and the environment. Some data support this claim (see Lowry and McArthur 1978, Gentry 1983, Mainini et al. 1993, Miller 1994, Knight & Gutzwiller 1995, and references therein), whereas other data suggest either that dogs have a minimal demonstrable effect on animals such as deer (e.g. Progulske and Baskett 1958; Sweeney et al. 1971; Scott and Causey 1973) or that human impacts are equally or more invasive (e.g. Yalden and Yalden 1990). Clearly, the issues concerning the impact of dogs on wildlife and habitat require further and more detailed attention.

METHODS

Data were collected from September 1995 through April 1996 at six different locations in and around Boulder (four Open Space locations and on the University of Colorado, Boulder, campus and on the Pearl Street Mall). To achieve our goals of learning more about the behavior of off-leash dogs and about people's attitudes and perceptions towards dogs, we devised an original questionnaire and also collected detailed information on behavior. We felt that a combination of these two approaches should help to clarify distinctions between perceived problems and actual areas of conflict among dogs, people, and the environment.

Questionnaires

Our questionnaire (Appendix A) characterized the respondents by place of residence, patterns of use of Open Space, whether or not they owned and had a dog with them, their attitudes toward dogs and people, their experiences with dogs and people on Open Space, their views of the impact of dogs and people on habitat and wildlife, and their concerns about Open Space in the future. The questionnaire was developed and implemented with the input of professional pollsters and administered at the same four locations on Open Space at which data were collected on behavioral disturbances (Mt. Sanitas, Bobolink Trail, Chautauqua, Doudy Draw) where dogs are allowed to be off-leash, and also at two other locations (University of Colorado, Boulder Campus and Pearl Street Mall) where dogs are required to be on a leash. (Two other areas [Sawhill and Walden Ponds] received too little use to be included in the present data set.) All visitors with and without dogs were asked to fill out the questionnaire while the researcher waited for its completion. The questionnaires were analyzed by Market Research Services, Longmont, Colorado and cross-tabulations were run so that responses to each question could be correlated with one another.

Behavioral Disturbances

In this part of our study we were concerned with the following short-term and direct behavioral disturbances (for discussion, see Knight and Cole 1995, p. 61) by off-leash, companion dogs who were accompanied by a person. Data consisted of (i) characterization of the patterns of space use by individually observed dogs; (ii) characterization of patterns of chasing and flushing wildlife and disturbing vegetation and bodies of water; (iii) the nature of dog-dog encounters, and (iv) the nature of dog-people encounters.

Behavioral data were collected at six locations (see above). Observations were made "on trail" or from a stable vantage point, and efforts were made to minimize the effects of

researchers' presence. For example, observers sat in the same place quietly and dogs generally paid little overt attention to them. At each location, beginning at the trailhead and extending for 500 meters (m), the trail was partitioned with flagging into five linear 100m sections. Other 100m sections further along a trail were randomly sampled to see if there was any "trailhead effect."

Seven different people collected field data and administered the questionnaires. Regular meetings were held to make sure that there was consistency among the different researchers. Focal animal sampling (Altmann 1974), in which individual dogs were followed during their travels within each of the 100-meter sections, was used. All of the dog's activities and its location were recorded on prepared score sheets or read into a voice-activated tape recorder. A continuous time-base was maintained using stop watches. For each 100-meter section, we recorded the frequencies and rates with which dogs were "off trail" and "on trail," the distances from the trail that dogs travelled, and whether or not leaving the trail was owner-induced (e.g. by throwing a Frisbee or a stick). We recorded all events of flushing and chasing, including and independent of the focal animal. We recorded observed instances when a dog did not appear to flush or to chase wildlife (recognizing that unobservable physiological changes can be caused by the presence of dogs; for discussion, see Gabrielson and Smith 1995). The mammalian species with which we were concerned included mule deer (*Odocoileus hemionus*), yellow-bellied marmots (*Marmota flaviventris*), black-tailed prairie dogs (*Cynomys ludovicianus*), rock squirrels (*Spermophilus variegatus*), jackrabbits (*Lepus* spp.), cottontails (*Sylvilagus* spp.), coyotes (*Canis latrans*), and red foxes (*Vulpes vulpes*). Avian species included black-billed magpies (*Pica pica*), robins (*Turdus migratorius*), dark-eyed juncos (*Junco hyemalis*), mallard ducks (*Anas platyrhynchos*), steller's jays (*Cyanocitta stelleri*), and mountain (*Parus gambeli*) and black-capped chickadees (*Parus atricapillus*).

Data were analyzed using proportions tests (Bruning and Kintz 1977, p. 222ff) which generate the z statistic. We used $p<0.05$ (two-tailed test; $z_{crit}>1.96$) to indicate significant differences between two percentages. The phrase "no significant difference" or similar terms mean that $z\leq1.96$ and $p>0.05$. Critical values of z for other levels of statistical significance are 2.58 ($p<0.010$) and 3.30 ($p<0.001$).

RESULTS

Behavioral Disturbances

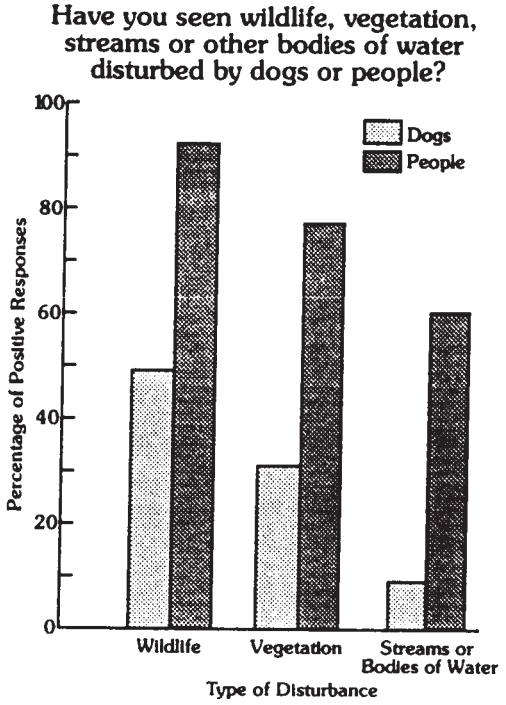
Approximately 800 different dogs were observed for about a total of 150 hours. The behavior of dogs at different locations and at the same locale did not vary significantly (detailed analyses for the different locations are presented in Bekoff 1996b). Off-leash dogs generally travelled less than 2-5 m off trail for fewer than 1-2 minutes (min). For example, in one study (n=100 dogs) at Mt. Sanitas, 30 (=30%) dogs remained on the trail and 45 (=45%) dogs went off trail between 1-5m for less than 1 min. In a second study at Mt. Sanitas (n=80 dogs), 80% of dogs remained within 1-3m of the trail (15% remained on trail and 40% went less than 1m off trail) and in a third study at Mt. Sanitas (n=100 dogs), 93 (=93%) of dogs remained within 5m of the trail. The general impression of observers was that when dogs went far off trail, they were lured off by the people who were responsible for them (e.g. people threw sticks, Frisbees, or went off trail and then called their dogs). It is also notable that only 2 "earnest chases" of wildlife (1 deer and 1 unidentified squirrel) were observed in which it was unambiguously concluded that it was the dog who initiated and maintained the chase. Dogs also only rarely entered bodies of water. Similar behavioral data were collected at Chautauqua (n=272 dogs). In addition, information on dog-dog interactions showed that 20/26 (81%) were friendly (dogs greeted, sniffed, or played with one another) or neutral (dogs passed one another with no physical contact) and 6 (19%; $p<0.001$) had aggressive (threat) components. All observers noted that dogs off leash were friendlier than dogs on leash, although no detailed data were collected on this aspect of behavior. We also observed 172 dog-people interactions of which 146 (85%) were neutral and the rest (n=26, 15%; $p<0.001$) were friendly. When sufficient data could be collected, they indicated that there were no differences in the behavior of dogs in different segments of the trail (1st 100m, 2nd 100m, 3rd 100m).

Questionnaires

Four hundred and fifty (n=450) questionnaires were completed. More non-dog owners (53.2%) than dog owners (46.8%) were polled. Of all respondents, 96.4% were comfortable with dogs, and there were no significant differences ($p>0.05$) among different locations or between dog owners and non-dog owners. Most people ($p<0.01$) thought it would lessen the quality of their own (68.3%) and their dog's (82.2%) out-

door experience if dogs had to be leashed. In general, people were more disturbed by large dogs; breeds singled out as threatening (n=35 respondents) included: Rottweilers (35.3%), Doberman Pinschers (20%), Pit Bull Terriers (17.1%), and Chows (14.3%). Many more people reported seeing other people disturb wildlife (92.2%), vegetation (78.0%), and bodies of water (60.5%) significantly more often ($p<0.001$ for all comparisons) than dogs (49.7%, 31.4%, and 9.0%, respectively; Figure 1).

Figure 1.



The percentage of positive ("yes") responses to the question "Have you seen wildlife, vegetation, streams, or other bodies of water disturbed by dogs or people?" (Questions 18-23, see Appendix A)

While we did not detect any seasonal differences in water use by dogs, it is possible that in the hottest months of the year (when we were not in the field; June-August) they would disturb water more than at other times of the year.

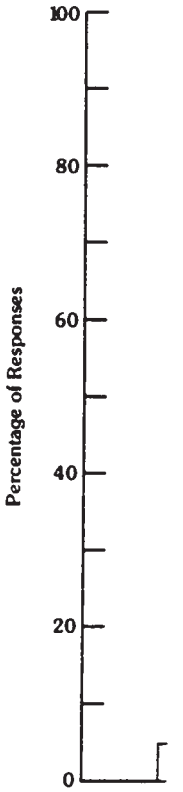
Overall responses to the question "What do you think is the biggest problem facing those who use parks and open space?" are presented in Figure 2. This question was also analyzed separately for dog owners and non-dog owners. A small, but significantly higher percentage of non-dog owners thought that there were too many dogs (10.6%) when compared to dog owners (2.9%; $p<0.01$), and a significantly higher proportion of non-dog owners (28.5%) thought that there were too many piles of dog feces left on or near trails when compared to dog-owners (19.5; $p<0.05$). Similar percentages ($p>0.05$) of non-dog owners and dog owners reported that there were too many people (non-dog owners: 47.3%; dog owners: 53.4%), too many unruly dogs (15.5%; 8.0%), and too many unruly people (32.4%; 28.2%). Both groups agreed that people, and not dogs, were the major problem. Regardless of location, respondents indicated that there were far too many people when compared to the number of dogs ($p<0.001$) and too many unruly people when compared to the number of unruly dogs ($p<0.001$). Disturbance by people included talking loudly, trampling vegetation, and littering.

Non-dog owners and dog owners were also asked what they thought about a number of different issues centering on purported problems with off-leash dogs. Similar proportions ($p>0.05$) indicated that there should be standardized obedience tests for dogs (non-dog owners: 48.2%; dog owners: 42.7%), that dogs should not be banned from Open Space (93.3; 98.2%), and that additional areas where dogs could run free should be established (72.3%; 64.3%). A significantly higher percentage of non-dog owners (55.0%) when compared to dog owners (37.3%) believed that there should be an annual fee for dogs using Open Space, that dogs should be on leashes at all times (30.5%; 19.0%), and that there should be stricter enforcement of voice and sight control (76.6%; 66.0%).

DISCUSSION

The present study was concerned with interactions among domestic dogs, people, and the environment in Boulder, Colorado. There were few noteworthy differences when data were analyzed by location. While some of the results may be specific to this area, there seems to be a more general message that deserves serious attention from those who live in other environs. There is no doubt that *some* dogs go off trail for various amounts of time and that *some* dogs do occasionally disturb people, wildlife, and habitat. However, compared to people, dogs did not seem to do much damage to vegetation or bodies of water, and they only rarely chased wildlife. Dog-wildlife encounters are very important to study; however, it is often very difficult to identify precisely what factors directly cause wildlife disturbances (Gentry 1983). People were more disruptive than were dogs, and when dogs did go far off trails they often were lured off by people. There was no trailhead effect and dogs' behavior

Figure 2.



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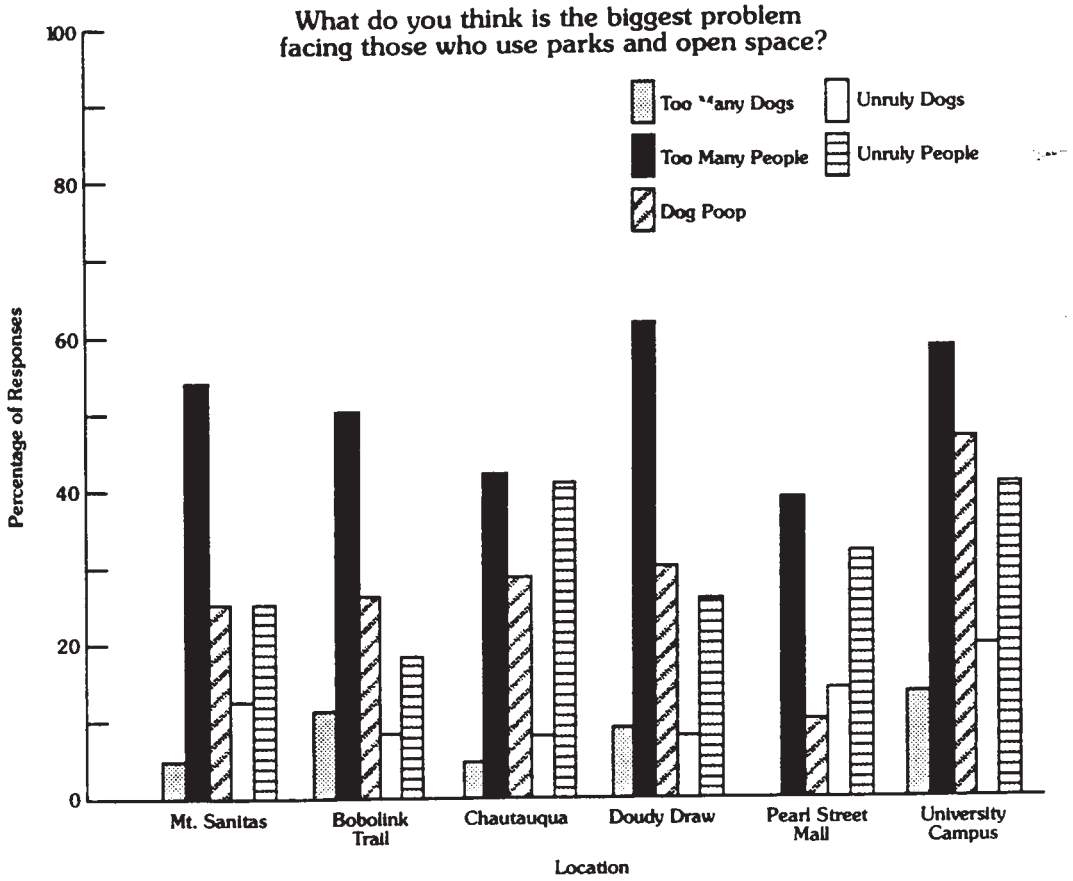

Responses to the question "What do you think is the biggest problem facing those who use parks and open space?" (Question 24, see Appendix A) Numbers total more than 100 because of some multiple responses.

differed little when they first were let free, during their travels in intermediate segments of a trail, and when they completed their walks.

The results of the questionnaire support the behavioral data. In fact, the results of the questionnaire show clearly that dog owners and non-dog owners do not differ in their perceptions of major problems—essentially, too many people and too many unruly people using Open Space in Boulder. Almost 97% of people polled felt comfortable with dogs off-leash. People also reported (and direct observations confirmed the fact) that people disrupt wildlife more frequently than dogs, and people cause more damage to vegetation and to bodies of water. Less than one-third of the respondents reported that feces were a problem. There are many reasons why feces can cause problems (e.g. hygienic, environmental, aesthetic; Beck 1979) and perhaps they are more of a problem in urban areas (Dumont 1996) than in open recreational areas. Boulder is dealing with this problem by placing plastic bags and trash cans near trailheads and along trails. Interestingly, non-threatening barking by dogs was not an issue for either group. Also, all observers noted that dogs off leash were friendlier than dogs on leash, although no detailed data were collected on this aspect of behavior (see also Thomas 1996).

The relationship between people and dogs has changed greatly in Boulder over the past 25 years. In the early 1970s many uncastrated dogs ran free without their owners. Dogs occasionally formed packs, chased deer and, on at least one occasion, attacked a child. Since then, there appears to have been an increased interest in having well-behaved dogs. In 1980, the Boulder Humane Society regularly offered one obedience class, and in 1996 there are 20 concurrent classes (Nana Wills, personal communication). Dog owners have become more responsible (having their dogs castrated and watching over them more conscientiously), and rarely is a dog seen without their owner or another person in attendance.

We conclude that little needs to be done to manage dogs directly in the areas where we conducted our studies. There are always going to be "problem" dogs and "problem" people. In Boulder and perhaps in other areas, reports of unruly dogs seem to attract a lot of attention, but of course, people do not report when dogs are well-behaved. Additional enforcement may solve some problems but there really are few problems that could not largely be solved by continuing serious efforts to educate people about dog behavior and matters of etiquette and responsibility (see also Beck 1996 and Dumont 1996), and by requiring people to learn more about dog behavior and control of their companions, for people and their companions essentially are a cooperative social unit (Sanders 1990).

The fact that dog owners and non-dog owners did not disagree on important issues (that standardized obedience tests should be required and that banning dogs is not a viable option) also needs to be addressed. Although standardized obedience testing is possible and equally attractive to non-dog owners and dog-owners alike, the implementation of such a practice has not been given serious attention. While the details still need to be worked out for different locations, some possibilities would entail having people attend classes, hire a professional trainer, or train their dogs themselves and then go to their local humane society for testing. A set fee would be established to cover the cost of testing and licensing; the fee might also include a donation to the society.

Further concerns could be addressed by having various stipulations that could cover different sorts of violations. The following suggestions might be helpful for implementing obedience certification. People who were first-time offenders who did not have a license would be given a certain amount of time to complete the standardized test and pay a small fine. First-time offenders who had already received their licenses would have to pay for, and repeat, the standardized test within a certain period of time, but there would be no fine. However the obedience certification process is implemented, there seems to be little doubt that dogs and people would benefit.

It seems clear to us that the well-being and interests of dogs should not summarily be compromised when dogs and people attempt to share limited space that can be used by all parties for recreational purposes. The methods used and the results from this case study can serve as a model for other locations in which dogs and people compete for limited spatial resources.

POSTSCRIPT

A recent study of dogs on the University of Colorado (Boulder) campus (Dwyer and Bekoff, unpublished data) showed that leashed dogs initiated contact with humans 5.5 times more than did unleashed dogs, and that people initiated contact with leashed dogs 3.8 times more than with unleashed dogs. Generally, unleashed dogs ignored humans and choose other unleashed dogs with whom to interact when they were not exploring their surroundings.

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APPENDIX A: QUESTIONNAIRE

Perceptions of the Impact of Dogs on Open Space

We are interested in learning more about how dogs and people use open space so that dogs and people can maximize the pleasure that can be had by being outdoors in the limited available space. We hope that you will take the time to answer these questions.

Date: Location: Time: Sex: Age: Children?

(1) Do you live in Boulder? City____
County_____ For how long?____ No_____

(2) How often do you use open space? (a) daily, (b) 5 times per week, (c) 2-4 times per week, (d) 2-4 times per month, (e) less than 1 time per month, (f) 2-4 times per year or less, (g) never

(3) How long have you used this portion of open space?_____

(4) Why do you come to open space? (a) to exercise myself, (b) to exercise my dog, (c) to see wildlife, (d) to be alone, (e) to enjoy nature, (f) other
Please rank your top three (3) choices by writing down the appropriate letter:

_____ _____ _____

(5) In what type of activity do you usually engage? (you can choose more than 1) (a) walk/hike, (b) jog/run, (c) bicycle, (d) equestrian, (e) exercise dog)

(6) Are you a dog owner? Yes:_____ No:_____

(7) Are you comfortable with dogs?
Yes:_____ No:_____

(8) Do you have a dog with you now?
Yes:_____ No:_____
On leash:_____ Off Leash:_____
Under excellent voice control:_____
Under control most of the time:_____
Not well-controlled:_____

(9) Do you think dogs should be (a) on leash always, (b) off leash always if dog not a threat to people, (c) off leash in certain areas and at certain times, (d) other?

(10) Would it lessen the quality of your open space experience if your dog had to be on a leash? Yes:_____ No:_____
How: _____
_____

(11) Would it lessen the quality of your dog's experience if your dog had to be on a leash?
leash? Yes:_____ No:_____
How: _____
_____

(12) Have you ever been attacked by a dog on open space? (a) two or more times, (b) once, (c) never. What were extent of injuries?

_____

(13) Have you ever felt uneasy when passing someone else's dog? (a) two or more times, (b) once, (c) never.

(14) In what ways did you feel uneasy? (a) disturbs me, (b) disturbs children,(c) disturbs my dog, (d) disturbs wildlife, (e) too many dogs, (f) dog out of control

(15) Do certain types of dogs bother you more than others? Yes:_____ No:_____
If YES, why: Please provide more details next to your choices

(a) breed _____

(b) size _____

(c) color _____

(d) behavior _____

(e) sex _____

(f) the behavior of the person with the dog?

_____

(16) Have you ever felt uneasy in the presence of other people on open space? (a) two or more times, (b) once, (c) never.

(17) Have you seen other people bothered by dogs? (a) two or more times, (b) once, (c) never.

(18) Have you seen wildlife disturbed by dogs?
Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(19) Have you seen wildlife disturbed by people?
Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(20) Have you seen vegetation disturbed by dogs in a harmful way?
Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(21) Have you seen vegetation disturbed by people in a harmful way?
Yes:_____
If YES, (a)

(22) Have you
water distu
Yes:_____
If YES, (a)

(23) Have you
water distu
way?
Yes:_____
If YES, (a)

(24) What do
facing the

Too many
Too many
Too many
Too many
Too much
Other: _

Commer

_____

_____

_____

Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(22) Have you seen streams or other bodies of water disturbed by dogs in a harmful way?
Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(23) Have you seen streams or other bodies of water disturbed by humans in a harmful way?
Yes:_____ No:_____
If YES, (a) often, (b) occasionally, (c) never

(24) What do you think is the biggest problem facing those who use open space?

Too many dogs: _____
Too many unruly dogs: _____
Too many people :_____
Too many unruly people: _____
Too much dog poop: _____
Other: _____

Comments:_____

_____

_____

_____

(25) If findings suggest that dogs are problematic, do you agree with:

(a) requiring standardized obedience testing for dogs off leash: Yes:_____ No:_____

(b) requiring annual fee and tags for dogs using open space: Yes:_____ No:_____

(c) requiring all dogs to be on a leash at all times: Yes:_____ No:_____

(d) requiring stricter enforcement for voice and sight control: Yes:_____ No:_____

(e) banning all dogs: Yes:_____ No:_____

(f) providing areas for dogs on leash and other areas for dogs off leash?
Yes:_____ No:_____

(g) other _____

General Comments

_____

_____

_____

_____

_____

_____

Recreation Disturbance Does Not Change Feeding Behavior of the Western Snowy Plover

Megan Warren

Abstract The Western Snowy Plover (*Charadrius alexandrinus nivosus*) is a small shorebird that has many scattered wintering populations along the Pacific Coast of the United States, including several in the Bay Area. This species has been listed as threatened since 1993 under the federal Endangered Species Act of 1973. For this study I measured disturbance rates, types, plover responses and feeding time in three different sites in the San Francisco Bay Area to explore the link between recreation disturbance and feeding behavior. I predicted that as frequency of disturbance increased, the birds would spend less time actively foraging and more time alert. However, data showed no significant relationship between feeding behavior and direct disturbance by human recreators. Instead, I now predict that recreation has a more indirect effect on the western snowy plover feeding behavior. Future research should focus on indirect effects of recreation, such as habitat disturbance and food source quality.

Introduction

Outdoor recreation has increased in popularity over the years, resulting in expansion and development of designated outdoor recreation areas (Flather and Cordell 1995). Non-motorized recreation, such as hiking, nature viewing, horseback riding, beach bathing and dog-walking have increased the most in popularity (Flather and Cordell 1995). As these activities become more popular, they often disturb and displace wildlife populations, causing them to change specific behaviors and habits. Once-popular breeding sites located in popular recreation areas may be abandoned for less hospitable sites simply due to the amount of disturbance (Knight and Cole 1995).

Shorebirds are especially vulnerable to recreation, which can disrupt available habitat for nesting and foraging (Burger 1995). Recreation can be especially harmful for species already struggling to make a living in a specific area. One such species is the western snowy plover, a small shorebird found along the Pacific Coast. This species has been listed as threatened since 1993 under the Endangered Species Act of 1973 (Smith 1993). Ruhlen et al. (2003) found that on average, more snowy plover (*Charadrius alexandrinus*) chicks died or wandered away on weekends at two beaches in the Point Reyes National Seashore, possibly due to increased recreation on those days. Many other studies on plover species (*C. alexandrinus, C. melodus*) have shown that human disturbance leads to changes in habitat use and foraging—both when and how long birds forage, as well as decreased nest success (Lafferty 2001b, Burger 1991, Burger 1994, Lafferty et al. 2006).

Foraging success is a good indicator of nesting success. Shorebirds with habitats more prone to high levels of disturbance spend more time fleeing from and watching for potential predators, depleting fat reserves and time spent caring for their broods (Burger 1991). The western snowy plover forages for both marine and terrestrial invertebrates by visually scanning then probing with its beak in the sand, washed-up seaweed, and low vegetation. Western snowy plover are often found foraging together in small groups (Page et al. 1995). Newly-hatched chicks are precocial, and can walk around and forage for themselves shortly after hatching (Tucker and Powell 1999). Recreational use of plover foraging areas is especially harmful to these newly-hatched chicks (Ruhlen et al. 2003). This study addresses how recreation affects wintering populations of the western snowy plover by examining its feeding behavior at several more

heavily used sites in the San Francisco Bay Area, where the relationship between shorebird feeding behavior and recreation has yet to be fully explored.

Since its inception in 1972, the Golden Gate National Recreation Area (GGNRA) has become one of the most popular and heavily used urban national parks, with more than 10 million visitors per year (NPS 2006). Even before the formation of the park the area was heavily used by recreationists. Many locations within the park are prime breeding habitat for the threatened sub-species western snowy plover (*Charadrius alexandrinus nivosus*), but within the park only wintering populations can be found (Merkle 2006, pers. comm.). Western snowy plover stopped breeding on the beaches in the GGNRA, most likely due to an increase in disturbances from recreation. One of the largest disturbances to western snowy plover, as well as other shorebirds, is dog-walking, especially those off-leash (Lafferty 2001a). In 2002 GGNRA began considering changes to its dog policy. Currently, off-leash pets are allowed in many areas of the park including those important to the western snowy plover—Crissy Field and Ocean Beach (US Department of the Interior 1979). An advisory committee was formed to take place in the negotiated rulemaking, which encompasses the many interest groups with stakes in the rule changes (NPS 2006). Changes in these policies could positively impact populations of the western snowy plover currently wintering in GGNRA, and is important to understand how recreation affects all matters of their biology before making any permanent changes.

It is also important to understand what kinds of disturbances adversely affect foraging behavior. Determining these and other answers are important when deciding how western snowy plover habitat, such as that in GGNRA, should be managed in the future. The main objective of this study is to see how recreation and direct disturbance impacts western snowy plover feeding behavior, which can then be used to create appropriate wildlife management plans. I predict that western snowy plover populations in more heavily-disturbed areas will devote more of their feeding time towards avoiding disturbances than to actively searching for and eating their food.

Methods

For this study, two different kinds of direct observational surveys were developed and carried out weekly for five weeks at three different study sites during February and March 2007.

Study Sites Three study sites were used in this research. The first study site was at Crissy Field in San Francisco, California, which is part of the Golden Gate National Recreation Area

(Fig. 1). The stretch of beach where the western snowy plover is found is 100 meters east of the Gulf of the Farallones Visitors' Center (Fig. 2). The beach is 80 meters long and its habitat is characterized by sand dunes with low vegetation. This site supports a population of four to six birds. Crissy Field is readily accessible by car, foot, bike and public transit. This site has also recently (October 2006) changed from an off-leash to on-leash dog area. For this study, Crissy Field was classified as a high-use recreational site. The second study site was the spit at Limantour Beach in the Point Reyes National Seashore (PRNS), located about 56 kilometers north of San Francisco in Marin County, California (Fig. 3).

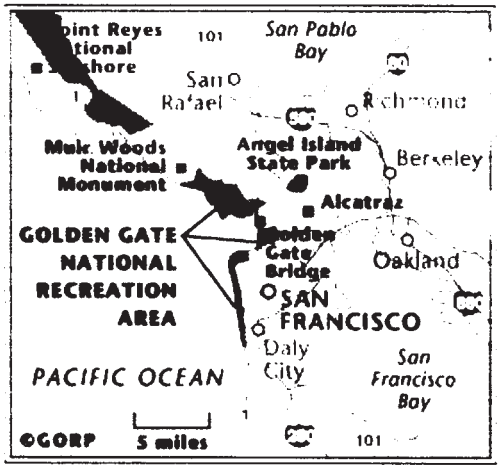

Figure 1: Golden Gate National Recreation Area, California

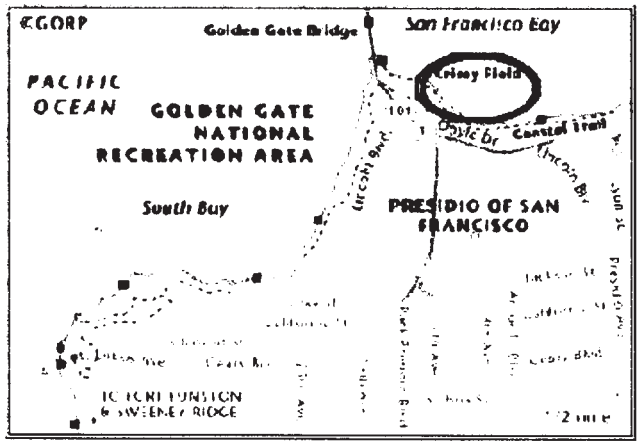

Figure 2: Crissy Field Study Site, in Golden Gate National Recreation Area, CA

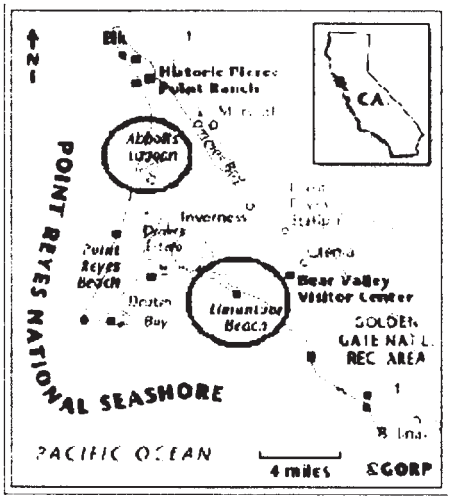

Figure 3: Limantour Beach and Abbott's Lagoon Study Sites, Point Reyes National Seashore, CA

Limantour Spit juts into Drake's Bay and is about four kilometers long, and is characterized by long stretches of beach with little vegetative cover. This site supports a population of 80-100 birds. Limantour Beach is relatively busy, as it is accessible just off a main road near the entrance of PRNS. Any type of recreation is permitted; however, dogs are restricted to the area of the beach away from the plovers. Limantour Beach was classified as a medium-use recreational site. The third study site was also located in the Point Reyes National Seashore at Abbott's Lagoon, which is 16 kilometers

northwest of Limantour Spit on the Pacific Ocean (Fig. 3). Abbott's Lagoon is characterized by low sand dunes with little vegetation, and supports a population of 45-50 birds on a two kilometer stretch of beach at the foot of the lagoon. This site is the most isolated and least accessible of the three sites, and was classified as a low-use recreational site.

Disturbance Surveys Disturbance surveys were conducted over a one-hour period just before dusk at each study site. The minimum population size for each survey sample period was four birds. Upon locating the population, date, time of day, general weather patterns and study site were noted at the top of the data sheet. For each instance of disturbance (defined as a recreational activity that could change behavior of the western snowy plover), time, type (individual or group), activity, distance from birds, number of birds disturbed and their response was recorded. The birds' responses were divided into four categories: no response, mild response (causing a resting plover to stand), moderate response (causing a plover to stand up and/or walk away), and major response (causing the plover to flush). The data gathered from these studies were used to create graphs showing frequency of certain types of recreation at each site.

Feeding Behavior Surveys Feeding behavior surveys quantified how the plovers budgeted their time during the dusk feeding period. The purpose of these surveys was to observe the percent breakdown of the plover behavior (based on time) and link behavioral changes to nearby recreational disturbances. Over the 30 minutes following the recreation disturbance surveys four different focus-animal surveys were carried out, each time on a different bird. Focus animal surveys were two minutes long. An Olympus digital voice recorder, model VN-3100, was used to measure the total amount of time the bird spent in each of three feeding behaviors. These behaviors were observed and defined during preliminary observation periods. The western snowy plover was seen (1) searching for food, defined as movement along the shoreline with its head down visually scanning for prey; (2) actively foraging, defined as head down with its beak in the sand eating the prey; and (3) time spent alert, defined as a bird standing still with its head up visually scanning the beach. Once transferred to the computer, the recorder shows exactly how many seconds were spent on each activity. A linear regression was used to test the relationship between frequency of disturbance and foraging, alert and searching time.

Results

Recreation and foraging data were collected at the Abbott's Lagoon, Limantour Beach and Crissy Field study sites over four observation days on a Thursday, Friday or Saturday between February 1, 2007 and March 8, 2007. Western snowy plover do not feed at Crissy Field, so data on recreation disturbance and feeding behavior comes from the two Point Reyes National Seashore sites.

Recreational Use Accessibility is the main factor distinguishing recreational use among the three beaches. Not surprisingly, the urban study site, Crissy Field, showed the highest and most varied recreational use of all the sites (Fig. 4). Limantour Beach, the next most accessible site had the second highest recreational use, though only walkers used the site. Finally, Abbott's Lagoon, the most isolated of the three sites, had the lowest recreational use. Again, this site was only frequented by walkers. Both PRNS sites were comparable in terms of type of recreation and foraging data.

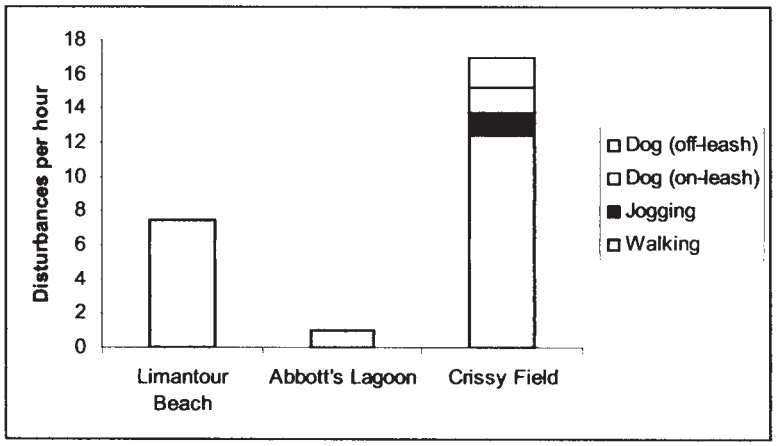

Figure 4: Recreation level and type per hour at each study site

Disturbance Data The disturbance surveys were used to determine two things. First, they were used to see how strongly resting birds responded in the presence of human recreators. Secondly, they were used in conjunction with feeding behavior surveys to infer changes in foraging, searching and alert time based on how heavily the site was used. Protocol dictated that western snowy plover response to recreators be classified as mild, causing a resting bird to stand; moderate, causing a resting bird to stand and walk away; or major, causing a resting bird to flush. The first part of the disturbance surveys showed by and large that resting plovers do not react strongly to the presence of recreators (Table 1). Since feeding behavior was not observed during any of the observation periods at Crissy Field, useful data came only from Limantour Beach and Abbott's Lagoon. A linear regression with these data shows no relationship between disturbance level and foraging time (Fig 5) (R^2=0.0011, p=0.86). Similarly, no relationship exists between

disturbance level and alert time (Fig 6) (R^2=0.0039, p=0.73). A slightly stronger positive linear relationship is found between disturbance level and searching time (Fig 7) (R^2=0.046, p=0.24); however, this is still an incredibly weak relationship, and cannot be considered significant.

Table 1: Proportion of plover mild, moderate or major response to recreation, by site

		% Plover Response to Recreation				
		None	Mild	Moderate	Major	Sample Size
Crissy Field						190
	Walking	45	9	7	0	
	Jogging	10	2	0	0	
	Dog (off-leash)	7	3	6	0	
	Dog (on-leash)	6	3	2	0	
Limantour Beach						81
	Walking	59	11	15	15	
Abbott's Lagoon						8
	Walking	25	37.5	37.5	0	

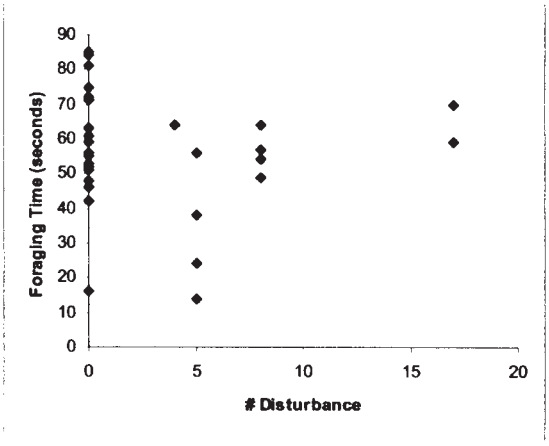

Figure 6: Disturbance level vs. alert time

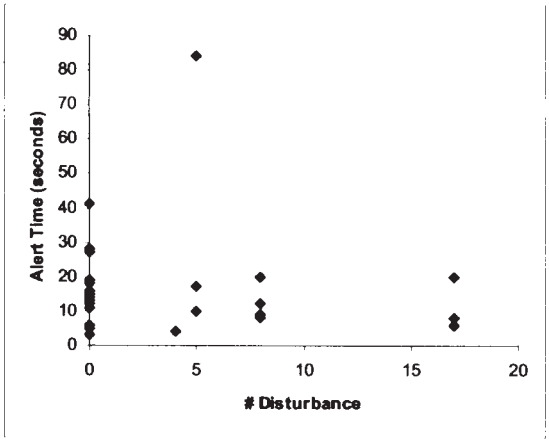

Figure 5: Disturbance level vs. foraging time

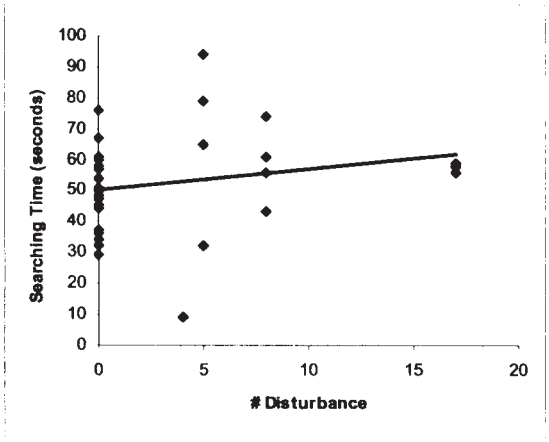

Figure 7: Disturbance level vs. searching time

Feeding Behavior Data Crissy Field is the only site at which the birds were not found foraging in the evening, and they are not always at the site. Of six survey dates, they were only on the beach for four of them, and not once were they foraging. When the birds are at this site, they begin to get restless around 5:45 p.m. and soon fly away, presumably to go forage in a different area. Data from Limantour Beach and Abbott's Lagoon suggest that no significant relationship exists between disturbance level and foraging behavior. Therefore, it can be assumed that the absence of foraging western snowy plover at Crissy Field is due to other factors, such as quality of the food source available at the site.

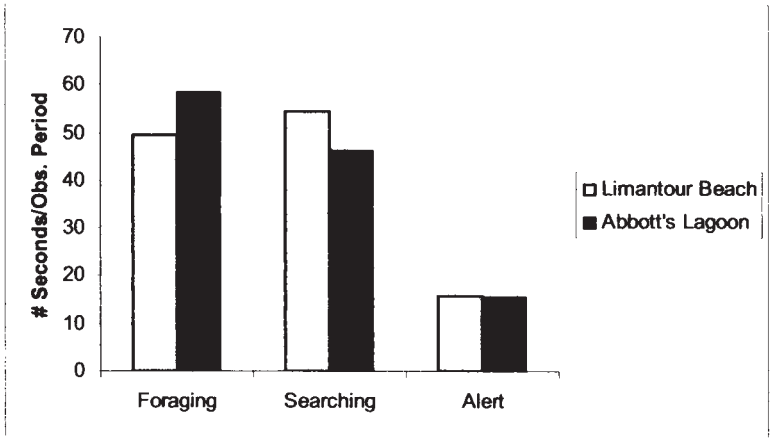

Figure 8: Average distribution of three feeding behaviors by over 2-minute focus-animal surveys

Average times for the three observed feeding behaviors are consistent between the Abbott's Lagoon and Limantour Beach data (Fig. 8), which also suggests no relationship between disturbance level and feeding behavior. Limantour Beach was a site with medium disturbance levels, and Abbott's Lagoon

was a site with low disturbance levels. Both sites had between 10 and 20 birds on each observation day.

Discussion

This study looked at links between disturbance level and foraging behavior of the western snowy plover at three different beaches in the San Francisco Bay Area. The Crissy Field study site did not provide any relevant results, however, the data from the two Point Reyes study sites do not support the hypothesis that western snowy plovers in more heavily disturbed areas devote less time to actively foraging and more time to being alert.

Data show no significant correlation between number of disturbances and time spent actively searching or foraging, or being alert while feeding at dusk. These results suggest that direct recreation disturbance is not as significant as earlier thought, and that links between recreation and western snowy plover feeding behavior are more subtle. Several possible explanations exist for explaining these relationships. The data suggest that as more disturbances occur, more time is spent on searching than on being alert or foraging. Though not significant, this relationship does bring to mind other possible explanations of the trend indirectly related to recreational use at certain sites.

Accessibility and disturbance are two possible explanations for increased searching time at more heavily used sites. At Limantour Beach, recreational use tends to be right at the shoreline, which is also where the western snowy plover forage. With an overall higher recreation use than Abbott's Lagoon, Limantour Beach may have a more disturbed habitat at the shoreline, which could make less overall food available, or just make it harder to find. Another explanation could be absence of biological debris, such as seaweed, kelp, and dead or decaying sea birds and mammals. Since Limantour Beach is used by more people, biological debris is either displaced or removed. This debris has been proven to be an important food source for shorebird communities in southern California (Dugan et al. 2003), and its removal could force the western snowy plover to spend more time searching for food along the disturbed shoreline. Finally, poor food source quality has been linked with failed hatching of western snowy plover eggs due to high mercury levels at Point Reyes Beach (Schwarzbach et al. 2005). Pollution may be an indirect result of recreation that may cause western snowy plover to spend more time seeking out

suitable food. Quality of the food source itself is very important for the continued success of this species.

The western snowy plover is affected by recreation, albeit indirectly (such as with shoreline disturbance). Future studies should focus on both the quality of the food source and the habitat disturbance at important breeding and wintering sites for the western snowy plover. More vigorous methods should also be developed for monitoring feeding behavior in order to take into account not only the time spent doing each activity, but also where the western snowy plover choose to forage, and what they choose to eat. Studies should also focus on the relative disturbance of foraging habitats. A more careful selection of study sites must take place. It is important to find habitats with varying levels of recreation and habitat disturbance where the birds are known to spend time feeding. Though this study had a range of disturbance levels at each site, feeding habitat was not suitable at Crissy Field and therefore not observed. Furthermore, the data from Limantour Beach and Abbott's Lagoon showed extremely weak to non-existent correlations that cannot be extended to Crissy Field. It is important to keep monitoring western snowy plover populations to detect any changes in their behavior (foraging or otherwise).

This research project is perhaps more useful as an education tool. If anything, increased monitoring of bird populations will make people more aware of their presence. The snowy plovers can be difficult to see, but are really interesting to watch. If recreationists are aware of their presence, they can conduct their activities in a way that still allows them to have fun, but to decrease their affect on wintering populations of the western snowy plover.

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I would like to thank John Latto and the entire ES 196 crew for their support and input throughout the entire length of the project. I would also like to thank Sarah Reed, Bill Merkle from the National Park Service and Samantha Murray and Matthew Zlatunich from the Golden Gate Audubon Society for their help in putting the project together.

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Group Hotline: 415-977-5578 Fax: 415-977-5799

May 26, 2009

Bill Wycko
Planning Dept.
1650 Mission St., suite #400
San Francisco, CA 94117
Fax: 558-6409
RE: Case Number 1912E Natural Areas Management Plan

Dear Mr. Wycko.

The Sierra Club is in general very supportive of the current iteration of the Significant Natural Areas Management Plan, and we are pleased that the process of environmental review is finally underway. The following are some technical comments regarding the scope of the review work which we feel should be addressed.

With regard to the significant natural areas located in San Francisco, we note that the plan itself adopts a hierarchical approach by dividing the natural areas into three separate categories (MA1's, MA2's and MA3's). While such an approach is useful for establishing priorities, it creates a patchwork situation which is less than ideal for planning purposes. In general, we would like to see a maximum restoration alternative studied for each of the city's natural areas. Of special concern are those areas, generally designated as MA3's, which contain stands of non-native trees. The study should address the effects of allowing unchecked growth of these non-native forests on the significant natural resources, as well as alternative scenarios for management of these sections, for instance by managing the understory for biodiversity, thinning, and allowing for a natural succession with the goal of eventual re-establishment of native plant communities.

For the treatment of Sharp Park and the Laguna Salada Enhancement plan, our understanding is that the DEIR will include the three alternatives (no-golf, 18-hole and 9-hole) approved by the city's Board of Supervisors. We believe that in each of these alternatives, the lead criterion should be the protection of habitat for the listed species. It is especially important that elaboration of these scenarios proceed according to the best available science, with the end of maximizing critical habitat for these species.

We look forward to the release of the DEIR, which we hope happens in a timely manner.

Yours truly,

Steven Chapman (for the San Francisco Group)

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CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

TO: Bill Wycko, SF Planning Dept, Natural Areas Management Plan,
1650 Mission St., Suite 400, San Francisco, CA 94103

May 22, 2009

RE: Neighborhood comments and Criticism and Protest of Environmental review of Project title: Natural Areas Management Plan
Case No. 2005.1912E

Project size: 1, 105 acres.

Attached is a General comment on the general flaws and misconceptions of the plan.

In this section we will comment on Specific Details of the plan which are false, misleading, have no scientific merit, and have potential for great harm to our City.

The Natural Areas Program , instigated by zealots who regard native plants as 'good' and non-native as 'bad', has no scientific basis. For some reason they refer to eucalyptus trees as 'weeds' and the underlying motive of this project is to kill and destroy these beautiful trees.

FIRE: The threat of fire is a transparent ruse, used to generate fear in attempt to justify killing of healthy trees.
There has not been a serious fire in Sutro forest for over a hundred years.
The commonly repeated myth that eucalyptus is prone to fire and 'native trees are fire resistant is just that, a myth. All wood is flammable. There is NO evidence of significant advantage benefit of native trees, in fact there is no good definition of which trees are native. Try to burn a dry eucalyptus log in your fireplace and you will find it very difficult .

The forest is damp to wet most of the time and the winds predominantly from the West. The forest pulls moisture from the fog in vast amounts. Tree removal has potential to dry out the area. If dry native grasses replace trees, the threat of fire may Increase.

WIND PATTERNS:

Cutting down trees must alter the wind patterns. Most of the homes close to the forest are protected from winds by the forest, Tree removal has potential to INCREASE fire hazard by removing this protection.

Micro climates: Belgrave Ave is a good example. The street is generally calm with mild breezes. On Tank Hill at the East end, farther from the forest and at higher altitude, the winds are often 40 knots and more as there is no wind

protection. The same situation applies up to the top of Twin Peaks and to all the neighborhoods in the lee of the forest. These strong winds would only INCREASE the risk of fire.

Effects on WATER COLLECTION, DRAINAGE:

The forest pulls down thousands of gallons of water from the fog bank. Without tree roots to hold the ground what might happen to run off?

Without tree roots what is the potential for landslides and earth movement ? (let us not forget earthquakes). Earth movement has potential for people and property damage.

CARBON DIOXIDE EFFECT:
The program dismisses the beneficial effect of the forest in carbon dioxide removal and suggests that the small native plants will do as well.
This is preposterous pseudo science at its worst. Environmentalists bristle at the destruction of the Brazilian rain forest, and here there is intent to destroy an exquiste forest in the centre of our City! To suggest that native plants would be more effective than the forest is absolute nonsense.

AN IMMEDIATELY ADJACENT PROJECT currently intends to remove trees on 14 of 61 acres, about 25% of the forest owned by UC. The natural Areas program also wants to remove trees on the portion owned by the city, so that 1/3 of the forest would be stripped. The forest does not recognize a UCSF/city boundary line. Each affects the other and is not addressed in the plan.

HERBICIDES:
They indicate all the cut trees and brush will be 'painted' with herbicides. This would be thousands of gallons of herbicide, which will eventually wash away and contaminate. Numerous underground springs underly these areas.

WATER USE: Any native plantings require extensive irrigation systems, costly, and consuming water which may be in limited suppy. The previously planted areas with native plants required installation of expensive irrigation systems and increases water consumption.

MOST IMPORTANT:

The law requires a full Environmental Impact Report before huge projects like this be undertaken. The EIR requires response to 18 (eighteen) items of concern.

This project as outlined at the public meeting, chooses to arbitrarily ignore many of the 18 items. It does not require 'experts' to see the potential harm and unforseeable risks here. It just takes residents of the neighborhood who walk the

areas daily. This leads one to question the qualifications and the motives of the "consultants' . I am told they do not have a certified arborist on their staff.
I believe that no consultant has actually walked though Sutro forest or the neighborhood!
Many in the neighborhood have a profound distrust of those involved in this project. There are of course well meaning people who have been misled by the propaganda of the native plant zealots and accomplished bureaucrats.

The native plant advocates are intent on destroying eucalyptus trees, and experimenting with plants that may not survive in a modern setting.

In their zealousness they are promoting misinformation and attempting to circumvent the intent of the law, ie EIR reporting of 18 issues.

The neighborhood will be watching very closely to see the Intent of EIR laws is met.
What is proposed here is an experiment, with unpredictable results and little or nothing to be gained.

ECONOMICS:

Our Country, our City and our State are in the midst of unprecendented severe economic crisis. Our National leaders have asked us to help and take some personal responsibility.

When the Mayor indicates we may fire 1000 employees, cut back on essential services, when the State has billions of deficit, when people are still homeless in New Orleans, when the University announces need to increase student fees, does it seem 'right' to spend vast amounts on a purely elective project, that is ill conceived at the start? I repeat, Purely Elective and potentially disastrous.

Addendum:

We, the neighborhhod support the more detailed objections and criticisms submitted by Nancy Weurful and Mary McAllister
. We are in the process of consolidating lists of neighbors but submit this now because of time constraints imposed with short notice.

Morley Singer M.D.
177 Belgrave Ave.
San Francisco, CA 94117

Morley M. Singer

SAN FRANCISCO
SPCA

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May 26, 2009

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
San Francisco, CA 94103
RE: Significant Natural Resource Area Management Plan (SNRAMP), Environmental Impact Report, Case No. 2005.0912E

Dear Mr. Wycko:

As the largest animal protection organization in San Francisco, The San Francisco SPCA (SF/SPCA) has a vested interest in the Significant Natural Resource Area Management Plan and we appreciate the opportunity to offer our recommendations regarding the scoping for the Environmental Impact Report.

Our Concerns:

GR-7: Predators: In section 5 "GENERAL RECOMMENDATIONS" of the 2006 SNRAMP the need for feral cat control is described as 'urgent'. However, there have been no scientific studies to determine the impact of feral cats or any other predator in San Francisco's Natural Areas. We do know that the Natural Areas Program website tells us that "Pollution, habitat loss and fragmentation, and invasive species all make it difficult for native plants and animals to survive in the city." Therefore, we do not accept that predators including feral cats play a major, much less an "urgent," role impacting wildlife in our parks and open spaces.

GR-7a: Refers to the Quail Recovery Plan: While this organization is in agreement with the general premise of the Quail Recovery Plan, the Plan does not define the circumstances that would require removal of a predator, how those circumstances would be proved, and what impact removal of a predator from the location would have on the rest of the environment , prior to ordering its removal.

SAN FRANCISCO
SPCA

GR-7b: While The SF/SPCA agrees that feral cat populations are initially generated by irresponsible breeding, the proposal to eliminate the release of cats into the wild is unrealistic and ineffective. On the contrary, Trap-Neuter- Return programs (TNR), when coupled with the adoption of tame cats and kittens, can maintain and will eventually decrease the population of feral cats (*Journal of the American Veterinary Medical Association. 01/02/200302/2003;222(1):42-6. ISSN: 0003-1488).*

GR-7c: "To the extent possible, all predator control shall be performed in a humane manner, such that harm and suffering to the animals is minimal."
The SF/SPCA continues to oppose the premise that "minimal suffering and harm" to animals is acceptable. There is no way to determine what this phrase means, what is minimal and what is not, and who is evaluating the level of suffering. Unfortunately, this language is too subjective to be protective of animals.

Our Recommendations:

1. GR-7a: Feral cats should not be assumed to be the predator in question without clear evidence.

2. GR-7a: The SF/SPCA deeply appreciates the Recreation and Park Commission's amendment to the Management Plan that elevates the recommendation of feral cat relocation to require their review and approval. For the record, this amendment was made on August 21, 2006 to Resolution Number 0608-012 which states; *"That where appropriate in the plan that feral cat relocation shall be implemented only upon a determination by the Commission that other methods of population reduction failed to adequately reduce cat populations in natural areas."*
We request that the SNRAMP reflect this additional language in GR-7a.

3. GR-7a: Clarify what scientific measures will be used to determine if a predator is negatively impacting a Natural Area and require those measures to be proven prior to considering a removal plan.

2500 - 16th St., San Francisco, CA 94103-4213 • (415) 554-3000 • Fax: (415) 552-7041 • www.sfspca.org • e-mail: publicinfo@sfspca.org

SAN FRANCISCO
SPCA

4. Please remove GR-7b. Acknowledge that eliminating the release of cats in San Francisco is an impractical objective and instead support the positive impact the SF/SPCA Feral Fix Program has had on Natural Areas and all parks and open spaces since 1993. During this time, the SF/SPCA has subsidized the sterilization, adoption, release of thousands of felines and has seen a reduction in feral cat populations throughout this community.

5. GR- 7c: This must be rewritten to remove the subjective language that allows suffering. Humane measures exercised under the control of San Francisco Animal Care and Control should be stressed.

The SF/SPCA would like to see in the future a well designed, long term, scientific, and objective study to evaluate both the positive and negative impacts of feral cats in the urban environment of San Francisco. Only then will we have a basis for a dialogue about feral cats based on facts. We recognize that the EIR process is not in a position to provide the resources and time for this study, but we do acknowledge the need for this information. The SF/SPCA continues to pledge itself to providing support for the TNR program that has contributed so greatly to the control of feral cats in San Francisco.

Sincerely,

Jan McHugh-Smith
President

2500 - 16th St., San Francisco, CA 94103-4213 • (415) 554-3000 • Fax: (415) 552-7041 • www.sfspca.org • e-mail: publicinfo@sfspca.org

To:

Mr. Bill Wycko
San Francisco Planning Dept
Natural Areas Management PLan
1650 Mission St, Suite 400
San Francisco, CA 94103

From:

Lisa Vittori
P.O. Box 31897
San Francisco, Ca. 94131
(415) 931-3075
lisavittori@yahoo.com

RE:

Natural Areas Management Plan

Dear Mr. Wycko--

I am writing to express concern about the Natural Areas Management Plan as now written. Although I could discuss each site in as much detail as the plan itself, I will spare you. In short, the plan severely limits access to, and recreation in, areas now commonly used by a wide variety of citizens. It makes inaccurate and misleading assumptions about the level of present and future use, and the impact of those uses upon natural systems. It uses the excuse of "endangered" species to restrict access to many areas in which those species either do not exist or in which they are currently co-existing peacefully with other uses.

As background, I have worked professionally as a naturalist and restorationist for the last 35+ years. I worked with the National Park Service on their restoration programs as both a crew supervisor (with the California Conservation Corps) and a field biologist. I began my career as a planner and permit appeals analyst with the California Coastal Commission, specializing in access and wildlands issues . Over the years I've volunteered on many restoration projects, usually with my dog(s) and various children in tow. I've supported both restoration and public access over my career, and am dismayed to now see restoration used as a weapon to keep people out of public lands.

Over the last 10-15 years, I've watched as one site after another was either closed to public use or severely restricted. I've also seen agreements made and broken, most notably with the dog-walking community, but with others (horse-riders, cyclists, bird-watchers, golfers, day-camps) as well. Even if access was supposed to be restricted temporarily, the restrictions almost always became permanent. In turn, recreational pressure increased in other areas, producing more calls for restrictions.

A good example is the closure of many areas for dog-walking (assume this means walking with one's well-behaved off-leash canine companion). In the early to mid 1990's many popular dog-walking places on the Penninsula were abruptly closed, obstensibly for "environmental reasons". More people started coming to Fort Funston, some from as far away as Palo Alto. At the same time the GGNRA wanted to "restore" Fort Funston, and fenced many acres off for what was supposed to be a five year period (that was 15 years ago!). Similarly, battles in many local parks led to restrictions on neighborhood dog-walking. Suddenly Bernal Heights, Glen Park, and McLaren Park became more heavily used by citizens who needed to **walk** (not just stand) daily with their dogs.

Rec and Park's solution has been to build what they call DPA's. Some are walkable; most are not. Now the Natural Areas Program wants to restrict or eliminate these, too. There are many

problems with this; I will name just five: 1) This is not in the Natural Areas Program's jurisdiction, in part because (2) there have been agreements made over time through the Dog Advisory Committee and the Dog Policy to add more DPAs. 3) The Natural Areas Program ***assured*** us when a management plan first came out that they would work with the dog community and ensure that we could continue to utilize these areas for dog-walking. 4) The management plan also stipulates that before new "DPA"s are added extensive environmental studies would have to be performed. Historically, this means that they will ignore the existing heavy use of an area for dog-walking and pretend that they are starting with a pristine area that would be impacted by a new use. 5) Instead of finding ways to integrate native species into public areas, they plan to instead introduce threatened species and deny access.

Thank you for your time and attention. Lisa Vittori

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Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission
San Francisco, CA 94103

May 25, 2009

RE: Significant Natural Resource Area Management Plan (SRAMP), Environmental Impact Report # 2005,0912E

Dear Mr. Wycko:

I have been involved with working to humanely reduce feral cat populations since the late 1990s both in San Francisco and in Italy. I have participated in trapping and sterilizing feral or community cats in San Francisco for the last 9 years and during that time have witnessed a marked reduction in the number of cats in the colonies with which I have been involved. When adult cats are spayed and neutered and kittens taken for adoption a group of feral cats can be immediately reduced by 50%.

There are fewer and fewer feral cats in the areas of the city that come under the jurisdiction of the Natural Resource Area Plan. The cats that there are sterilized, fed and monitored. Any new cat that shows up is taken to be spayed/neutered. Often these are recently abandoned cats that have not yet become wary of people and they find new homes.

In San Francisco the need to remove feral cats becomes less pressing every year, yet there are numbers of people who think cats are increasing in population rather than dramatically decreasing. The SF/SPCA has been offering free feral fix since the early 1990s. As a result of this program, thousands of cats have been spayed/neutered and hundreds of thousands of cats have never been born.

I believe that because of the cat's relationship to people as a companion animal, a relationship not shared with other wild animals such as crows, skunks, possums, foxes and raccoons, feral cats have become a stand-in for humans and the problems we have caused to the environment. Feral cats are not a significant problem and should not be singled out. There is no 'urgent' need to remove them as is stated in G.R. 7a, G.R 7b and G.R. 7c.

The G.R. section in the Environmental Impact Report needs to be removed. It is made up of unproven suppositions not based on what has been happening in San Francisco over the last 15 years.

Thank you.

Susan Wheeler
President, Friends of Roman Cats
Member of CAT that deals with feral cats issues in conjunction with the SF/SPCA

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May 26, 2009

L-Danyielle Yacobucci
845 McAllister Street, #C
San Francisco CA 94102

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
San Francisco Ca 94103

Dear Mr. Wycko:

RE: RE: Significant Natural Resource Area Management Plan (SNRAMP), Environmental Impact Report, Case# 2005.0912E

The Initial Study states, "Topics are included in the EIR if there is not sufficient information available at this time on the potentially affected resources or site conditions."

I have considerable expertise on issues regarding feral cats. Presently no one knows what their impact is on San Francisco's environment and are only using speculation based on a lack of knowledge and expertise.

I believe that the General Recommendations for Predators G.R.7a, G.R.7b and G.R.7c as they stand are extremely flawed. The Natural Areas Program states under G.R.7 that feral cats are an urgent matter. This statement is from Ms. Huntsinger and Mr. Bartolome's review and their scientific expertise does not include feral cats.

The facts are that there are only a few feral cats in the Natural Areas in San Francisco. These feral cats are all fixed, fed, monitored and not hungry. Since 2006 because of San Francisco SPCA's Feral Cat Program there are fewer feral cats in the Natural Areas and in all of San Francisco.

What is the justification for feral cats to be described as an "urgent" matter? What exactly does this mean? What studies have been done *in San Francisco* that show and prove this? Studies that are done in other areas of the United States do not prove that feral cats are an "urgent" matter in San Francisco.

Why is the feral cat the only predator that is called an urgent matter? There is no evidence, observational material or scientific studies done in San Francisco proving that. Other predators greatly outnumber feral cats in San Francisco. Feral cats are not the primary reason for losses due to preying. Feral Cats are being singled out for no legitimate reason and possibly just for ideological bias.

Here is a list of other predators in these same natural areas as listed in The Presidio Implementation Plan, Golden Gate Audubon Society; and Save The Quail Campaign, Setting and Site Assessment, LSA Associates, Inc.:
Western Scrub-Jay, Common Raven, American Crow, Cooper, Sharp Shinned Red-Tailed Hawk, owl, gray fox, striped skunk, northern raccoon, domestic cat, California ground squirrel, and red fox.

Then there are other predators in the NAP areas such as coyotes, feral pigs, frogs, snakes, cormorants, herons, turtles, badger (potential), mice, rats, bats, bobcats and of course Humans.

To give you a few specific examples--Raccoons eat bird eggs and young and adult animals. . .Skunks will eat bird eggs and young animals. . . Possums will eat bird eggs and young animals. . .Ground squirrels will eat bird eggs and young. . .Jays, ravens and crows will kill and eat anything, including bird eggs. . . Herons will eat anything that fits in their mouth. . .Raptors and owls will kill and eat anything they can catch. . .Coyotes and fox will kill and eat anything they can catch. . . Mice and rats will eat anything, etc, etc., etc....

My point is that there are many more predators than feral cats in the natural areas of San Francisco. Feral cats are being inappropriately singled out as the most dangerous predator, the one that does the most harm and kills more than any other predator. There is no scientific basis for this conclusion and the impact of feral cats is not accurately understood. Their predation could even be quite limited. Keep in mind that predators also have positive impacts such as rodent control and maintaining balance in the environment. *A clear definition of what a predator is must be put in the Glossary.*

In the Initial Study under G.R.7a, it states "implement the feral cat control policy from the Quail Recovery Plan" (QRP) passed in 2004 by the Board of Supervisors. There is no feral cat control policy mentioned in the QRP. The QRP only uses the word "predator" and states that quail recovery must be done *without killing other animals.*

The control of any predator should be undertaken only in situations where it is clearly demonstrated with hard proof that they are having a negative effect on an area. Any control program must be developed with the expertise and humane practices of San Francisco Animal Care and Control and the San Francisco SPCA.

All of G.R.7 as it stands is unacceptable. It must either be removed or completely revised in cooperation with San Francisco Animal Care & Control and the San Francisco SPCA.

Thank you and sincerely,
L-Danyielle Yacobucci

L-Danyielle Yacobucci
Feral Cat Expert
Bachelor of Arts Degree, Psychology,
San Francisco Resident

Comments Re Initial Study for the SNRAMP - May 18, 2009

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My comments are in reference to my experience in the Oak Woodlands - GG Park Natural Area.
I suggest that the EIR of NAP Management Plan take seriously the boots on the ground experience of local habitat restoration volunteers.
My view is that Oak Woodlands are about 3 % of GG P and represent a fraction of what remains of original Coast Scrub and Oak Woodland habitat that predates the Park.
Our experience with very large introduced tree canopy (blue gum eucalyptus and monterey pine/cypress) and varieties of smaller but pervasive and invasive tree species indicates that the Natural Areas mandate to protect these remnant habitats must trump the often misguided attempts to " protect " trees.
In the Oak Woodlands, very few, if any of the large canopy trees have been cut but they are very problematic and in some places should be removed.
A lot of the invasive ' monocultural ' shrubs and trees have been cut to enable healthy growth of original natural habitat and in fact we replant more than an equivalent amount of native forbs, shrubs and trees to restore aesthetic and habitat balance.
We also have cut invasive monocultures to reduce the danger of fire (the Oak Woodland has suffered fires caused by vagrant campers) and also to clear overgrown areas that provide cover for illegal camping and trash accumulation.
For this reason, among others, I strongly urge extra penalties (at least a misdemeanor arrest) for those who camp in Natural Areas.
The overlapping GG P jurisdiction (RPD - GG P management is not always on board with Natural Areas staff due to turf and bureaucratic squabbling) produces a less than satisfactory record in coping with these issues .
This indicates to me that Natural Areas must have the clear mandate to completely regulate the core of the natural area, MA-1 , AND adjacent zones, MA-2 , MA-3.
I think that these current ' tri - level ' natural area designations are a recipe for fragmented management and undermines the mandate of Natural Areas to regulate, restore and steward these places based on science, factual evidence and common sense.
In regard to dogs - as of now everyone is free to use such restored places as Oak Woodlands' Coon Hollow - but if it becomes obvious that dogs digging, pooping and peeing in this place produce significant impact then Natural Areas must have the absolute right to require limits to dog use.
Overall, the Natural Areas mandate to restore and steward the tiny remnants of our ' original' natural habitats in this regional urban environment require some sacrifice on the part of narrow interests that don't put sustainable natural habitat front and center.
I think it is quite obvious that we continue to lose planetary biodiversity - we must do better.

ROBERT BAKEWELL <rcbakewell@yahoo.com>
Volunteer Steward for SFRPD Natural Areas Program
Oak Woodlands Restoration - GG Park
863 Arguello Blvd. # 5 , SF CA 94118
SF CA 94118
415-710-9617



May 25, 2009

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MAY 27 2009

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

To: Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

From: Denise Lapins
15 Belgrave Avenue
San Francisco, CA 94117

Re: Project title: Natural Areas Management Plan
Case No. 2005.1912E

Dear Mr. Wycko:

I and my family have lived immediately adjacent to Tank Hill, a so-called 'natural area', for nearly twenty years. At the opposite end of our small street lies another so-designated site, the interior greenbelt of Sutro forest, managed under the auspices of the RPD Natural Areas Program (NAP), and the subject of comments herein because of the proposed Management Plan involving clear cutting of 140 or more mature trees in that specific area. This decision to convert existing forest adjacent to neighboring homes to a sensitive plant museum has been made without proper scientific study or input from residents.

I am writing to request that the Planning Department demand more studies – assessments with forest-specific expertise on the part of the consultants, unlike the Initial Study provided by Tetra Tech. Such studies are needed in order to fully evaluate the substantial impacts that would result from the loss of the trees noted in the NAP Management Plan.

The history of this neighborhood and the NAP is rich with conflict, stemming primarily from documented clandestine clear-cutting of trees atop Tank Hill. One only need regard this site to witness an unfortunate example of the effects of wholesale tree removal. Winds blow with extreme force without the buffer of mature trees and of the native flora planted there (with the help of neighbors, I among them) few plants survive today. The total area of the site is far smaller than the interior greenbelt just 2/10s of a mile away, and the evidence from the Tank Hill experience bodes poorly for the greenbelt proposal.

While the reasons to require more studies are legion, I will focus my remarks and questions on a few key points:

Geology: How do we know that erosion problems resulting from the loss of trees will not be incurred upon the neighboring homes? What will be the effects of herbicides to immediate neighbors, animal and insect denizens of the forest, and others?

While the forest is managed under two jurisdictions it nonetheless exists as a single entity, with the university and the NAP overseeing a combined total of 61 acres of Sutro forest. The university currently proposes clear-cutting a total of 14 +/- acres of trees, which is more than 20% of total forest acreage. How have the combined effects of such significant deforestation been evaluated? How have the risks to both people and property been evaluated in light of the fact that deforestation will be upslope from residential areas adjacent to the greenbelt? How has the City evaluated the cumulative effects of the UC/FEMA grant proposal along with the NAP Management Plan?

This EIR must evaluate this cumulative effect on the entire Sutro forest of both management proposals.

Biology: What is known of the effects of removing established trees as proposed? What will be the effects of the health of the forest in its entirety with this type of periodic and spotty tree removal?

Recreation/Land Use: One of the reasons this management plan is so controversial is because of the restriction of access to the public of their own public land. The interior greenbelt contains the Belgrave trailhead into the forest from the east. Neighbors and visitors use this greenbelt area on a year-round basis. Sensitive habitat plantings will restrict use to a degree unknown. The impact of these plantings on our use has not been quantified.

As your charge to implement CEQA, which defines *'environment'* as the *'existing setting'*, I respectfully request that the Planning Department provide for a comprehensive scientific Environmental Review to evaluate the above-stated concerns on our current environment. Such a report will address the deficiencies in the Initial Study and allow the effects of the scope of the Management Plan to be fully and scientifically evaluated.

Thank you for your attention to these important concerns. I appreciate the opportunity to contribute to this important Management Plan.

Sincerely,

Denise Lapins

cc: SF Recreation & Park Commission
Supervisor Ross Mirkarimi, Dist. 5
Belgrave Neighbors
Twin Peaks Improvement Association

San Mateo County
Mosquito and Vector Control District
1351 Rollins Rd
Burlingame CA 94010
(650) 344-8592 Fax (650) 344-3843
www.smcmad.org

RECEIVED
MAY 27 2009
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M.E.A.

Date: 5/26/09 Time: _____

Deliver to: Bill Wycko

Fax Number: (415) 558-6409

From: Chindi Peavey

Number of pages including coversheet: 3

Subject or Message: Natural Areas Management Plan EIR

If this transmission is incomplete or you have any questions,
Please contact sender at (650) 344-8592

05/26/2009 18:18 650-344-3843 SAN MATEO CO. MVCD PAGE 01/03

San Mateo County
Mosquito and Vector Control District

1351 Rollins Rd
Burlingame CA 94010
(650) 344-8592 Fax (650) 344-3843
www.smcmad.org

To: Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission St, Suite 400
San Francisco, CA 94103

RE: Scope and Content of Environmental Impact Report and Environmental Review of the San Francisco Natural Areas Management Plan.

The San Mateo County Mosquito and Vector Control District would like to ensure that two things are considered in any future environmental documents for the Natural Areas Management Plan

1) The impact of changes at Sharp Park on mosquito development there.

The San Mateo County Mosquito and Vector Control District has been conducting mosquito control at Laguna Salada in the Sharp Park Golf course in Pacifica for several years. Substantial populations of vector mosquitoes develop on this property. Over the past several years, sediment has accumulated in the Laguna and encouraged the growth of cattails. The cattail stands provide ideal habitat for tule mosquitoes. Because of the broad extent of these stands, they must be treated by helicopter, a very expensive operation. If left uncontrolled, mosquitoes from this site present a significant threat to the health and safety of the residents in surrounding neighborhoods and visitors to the golf course and surrounding area. Therefore, the impact of changes to the site on mosquito development there should be one of the issues addressed in environmental documents prepared for the property. Changes to the shape, depth, and vegetation will have immediate and long term consequences on the necessity for pesticide applications, the method by which they are applied, and even the types of materials that must be used at this site. There are ways in which physical changes to the site could greatly alleviate mosquito production and reduce the need for pesticide applications. Conversely, the extent of mosquito development could be increased, if larger areas of marsh become populated with thick vegetation. District staff can offer expertise on the impact of proposed changes on mosquito production at the site. Our staff would like to work with the Planning Department during the design phase to ensure that changes at the Laguna minimize the potential for mosquito development rather than exacerbating the problem.

2) Continued access for inspection and treatment activities.

The SMCMVCD is responsible to the citizens and taxpayers of San Mateo County to provide vector control services. Because mosquito development is currently occurring at this site and may continue, the environmental review should clearly state the need for access to all mosquito development areas for inspection and control operations.

The District would like to work closely with the Planning Department in the future and can provide information on the current state of mosquito development in Sharp Park and the potential impact of any changes to the landscape there.

Thank you,

Chindi Peavey, PhD
Vector Ecologist
San Mateo County Mosquito and Vector Control
(650) 344-8592
(650) 642-4845

JOB STATUS REPORT

TIME : 05/26/2009 16:06
NAME : SAN MATEO CO. MVCD
FAX# : 650-344-3843
TEL# :
SER.# : 008100930

DATE,TIME	05/26 16:06
FAX NO./NAME	14155586378
DURATION	00:00:00
PAGE(S)	00
RESULT	BUSY
MODE	STANDARD

BUSY: BUSY/NO RESPONSE



San Mateo County
Mosquito and Vector Control District
1351 Rollins Rd
Burlingame CA 94010
(650) 344-8592 Fax (650) 344-3843
www.smcmad.org

Date: 5/26/09 Time: _____

Deliver to: Bill Wycko

Fax Number: (415) ~~55 6 378~~ 558-6409

From: Chindi Peavey

Number of pages including coversheet: 3

Subject or Message: Natural Areas Management Plan EIR

05/26/2009 18:17 650-344-3843 SAN MATEO CO. MVCD PAGE 01/03

San Mateo County
Mosquito and Vector Control District

1351 Rollins Rd
Burlingame CA 94010
(650) 344-8592 Fax (650) 344-3843
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To: Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission St, Suite 400
San Francisco, CA 94103

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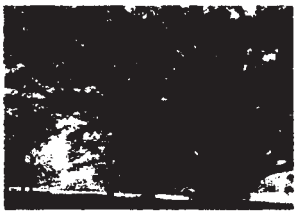
Thank you,

Chindi Peavey, PhD
Vector Ecologist
San Mateo County Mosquito and Vector Control
(650) 344-8592
(650) 642-4845



The San Francisco Tree Council

May 23, 2009

RECEIVED

MAY 27 2009

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Re: Initial Study of the Natural Areas Management Plan

Dear Mr. Wycko,

Please require a **full Environmental Impact Report of the Natural Areas Management Plan**. As director and founder of the SF Tree Council and an appointed founding member of the city's Urban Forest Council, and after attending 5 years of Natural Areas meetings -- I am greatly concerned about the past 10 years of the Natural Areas Program destroying healthy mature trees, and ignoring the tremendous loss and outrage of the majority of San Franciscans.

San Francisco's large, mature trees are truly an endangered species and need to be preserved. Only 5% of trees of the total 669,000 trees in San Francisco have diameters greater than 30 inches, according USDA 2007 report (UFORE) on the state of the urban forest in San Francisco.

I concur with Mary McAllister, Karin Hu, and Nancy Wuerfel's assessment of The Initial Study of the SNRAMP. It is flawed, incomplete, and does not provide the much needed proof that SNRAMP is sustainable, cost effective or will benefit the greater good of our citizens. The scientific communities in the United State question the value of native plants and its citizens have rejected it when requiring the removal of healthy trees.

The Initial Study of the environmental impacts of SNRAMP is inadequate in many respects:

- It dismisses as "insignificant" environmental impacts that have been experienced in the past and that caused considerable damage as well as public concern.
- It makes sweeping statements, dismissing environmental and safety issues without providing any basis for these dismissals
- It demonstrates that the author has either not read SNRAMP or has not understood important portions of it
- It demonstrates that the author has ignored basic scientific principles needed to analyze potential impacts, such as carbon sequestration and release
- It demonstrates that the author has not visited the natural areas and is unaware of the 10-year history of environmental and safety problems and public concern since the Natural Areas Program began

For the long-term health of our environment and that of the citizens of San Francisco, please require a full EIR of SNRAMP.

Sincerely yours,

Carolyn Blair, Executive Director
San Francisco Tree Council
Member SF Urban Forest Council
2310 Powell Street, Suite 305
San Francisco, CA 94133
sftreecouncil@dslextreme.com
415-982-8793

Working Together To Preserve & Protect Our Community Urban Forest,
For Nourishment for the Soul, Consolation for the Heart
And Inspiration for the Mind

Brent Plater
<bplater@ggnrabig
year.org>

To
<jessica.range@sfgov.org>,
<bill.wycko@sfgov.org>

06/16/2009 01:38 PM

cc

Subject
Re: Scoping Comments on NAP EIR

Hi Jessica,

Thanks for talking to me about the Natural Areas Program/Laguna Salada Enhancement CEQA process last month. As I mentioned to you on the phone, the main purpose of the Laguna Salada Enhancement Plan is to "restore the Laguna Salad wetlands to provide suitable habitat for the San Francisco garter snake and the California red-legged frog." p. 1-1. To do so, the purposes and objectives section expressly states that San Francisco and/or its consultants must consider restoring vegetative conditions, water quality, migration corridors, etc. in "the lagoon and the surrounding area." Id. Thus, it seems that RPD must consider full restoration of Sharp Park through the CEQA process, and that the City may not simply presume that the golf course will continue to exist indefinitely.

I also previously sent you a copy of my comments, along with a website where you could download the comments and all the exhibits. Please let me know if you have any trouble accessing the documents. The link is posted again below.

Thank you,

Brent Plater
415-572-6989

SAN FRANCISCO
PUBLIC GOLF ALLIANCE
FAR & SURE

RECEIVED
JUN 24 2009
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

220 MONTGOMERY ST., #303
SAN FRANCISCO, CA. 94104
(415) 392-5431, ext. 203
E-MAIL: RICHARD@ERSKINETULLEY.COM

June 22, 2009

By U.S. mail and e-mail

Mr. Phil Ginsburg, Director
Ms. Dawn Kamalanathan, Planning Director
Recreation & Parks Department
City of San Francisco
McLaren Lodge
501 Stanyan St.
San Francisco, CA. 94117

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103-2479

Re: Sharp Park Golf Course

Alternate Use Study
Park Code, Article 3, Section 320
File No. 090329

Sensitive Natural Resource Areas Management Plan EIR
Case No. 2005.1912E

Dear Mr. Ginsburg, Ms. Kamalanathan, and Mr. Wycko,

In connection with your respective planning processes with regard to the Sharp Park Golf Course, the San Francisco Public Golf Alliance submits the following comments and suggestions.

(1) Sharp Park Golf Course is an historic public landscape of local, national and international significance, one of the few public golf courses, and the only surviving seaside public links, designed by the historically preeminent golf architect Alister MacKenzie.

(2) The golf course is culturally significant as a popular recreational asset used and enjoyed by men, women, and children of all ages, backgrounds, races, and cultures.

(3) The golf course is also a work landscape architecture of the highest aesthetic value, by an internationally-renowned master, and is enjoyed not only by the golfers, but also by the thousands of strollers, hikers, and bikers who pass by on the seawall that overlooks the golf course.

(4) Practical, cost-effective measures are readily available to preserve the full 18-hole golf course, in its current configuration, retaining all of MacKenzie's remaining original golf holes, while simultaneously protecting and enhancing the habitat for the red-legged frog and San Francisco garter snake at the ponds and waterways on the golf course.

(5) Simultaneously preserving the golf course and protecting the frog and snake can be accomplished more quickly, and at lower cost to the city in both money and administrative time, than eliminating the golf course or reducing it to 9 holes.

(6) Because of the golf course's international status as a public seaside Alister MacKenzie course, preservation of the golf course offers the city the opportunity for significantly greater revenue, than destruction or diminution of the golf course.

I. HISTORICAL, AESTHETIC, AND CULTURAL SIGNIFICANCE OF SHARP PARK GOLF COURSE.

1. Sharp Park Golf Course, opened in 1932, is the work of the internationally preeminent golf architect, Dr. Alister MacKenzie, who was hired for the job by John McLaren, a kindred Scottish gardener and the father of Golden Gate Park. McLaren was head of the San Francisco Recreation and Park Department, and personally planted the trees on the golf course.

2. Sharp Park Golf Course is a nationally and internationally-significant cultural landscape, and has been formally recognized as worthy of preservation by public entities and non-governmental organizations, including the City of Pacifica, County of San Mateo, and the Cultural Landscape Foundation of Washington, D.C.

3. Golf architecture is a branch of landscape architecture, and MacKenzie was a naturalist, in the tradition of Capability Brown, the 18th Century father of the English school of landscape design, which turned away from the formal geometry of French and Italian gardens. "The chief object of every golf course architect worth his salt," MacKenzie famously said, "is to imitate the beauties of nature so closely as to make his work indistinguishable from nature itself."

4. The great aesthetic value of MacKenzie's landscape architecture is enjoyed not only by golfers, but by the thousands of walkers and hikers who pass by daily on the trail atop the seawall that adjoins the golf course to the west.

5. MacKenzie was a native Englishman and Bay Area resident, and the designer of several of the world's best-known and most beloved golf courses, including Cypress Point and Augusta National, the site of the annual Master's Tournament. Sharp Park is one of only a very few public courses designed by MacKenzie, and his only remaining public seaside links. As such, Sharp Park is a world cultural resource, the only place in the world where current and future generations of the general public can experience in person the seaside work of this master artist.

6. As Sharp Park's owner, San Francisco has an obligation of stewardship, which accompanies international masterworks.

7. In its current condition and configuration, the Sharp Park Golf Course has 12 of MacKenzie's original holes, complete with their greens complexes (numbers 1, 2, 3, 9, 10, 11, 13, 14, 15, 17, and 18), parts of two other holes (numbers 12 and 16), and another original green complex at the 8th hole. Although four ocean side holes were lost to the sea years ago, and other holes have lost original bunkers and consequently some of their original strategy (which could be restored), and

although the seawall now blocks ocean views, the course retains its seaside links character and the air, wind, sounds, and smells of the sea.

8. Sharp Park Golf Course also retains the artistry and ingenuity of Dr. MacKenzie's original design. Sharp Park's picturesque routing, the architect's trademark optical illusions, and his false-fronted, heaving and tumbling greens simultaneously entertain and challenge golfers as they walk the linksland. For example, MacKenzie's famous use of camouflage is displayed at the current 14th hole, where a large mound 30 yards in front of the right side of green creates an optical illusion that the green is closer to the player standing in the fairway than it is in fact.

9. "A golf course should be made interesting and a good test of golf," MacKenzie said, "by the tilt of the greens and the character of the undulations." (*The Spirit of St. Andrews,* 1934, at p. 75.) MacKenzie designed dramatic mounds in Sharp Park's greens and surrounds to deflect all but the very best shots away from the holes. He built "false fronts" at the greens on holes 2, 9, 13, 14, 17, and 18, to reject shots that land on the front of the greens. Likewise, MacKenzie used steep slopes off the sides of greens (for example, at the 17th green), to deflect the inexpertly-struck approach shot down an embankment to a very difficult short-side pitch.

10. Because the master's artistry can be seen and directly experienced by the public, Sharp Park has great value to the local, regional, national, and international golf communities, all of which look to San Francisco to act as a responsible caretaker of this internationally-known and beloved asset.

11. This unpretentious, old-fashioned, golf course provides golf at modest cost to the general public, and as a result the course closely resembles in spirit the seaside links of the sport's homeland, Scotland. In 2006-2007 and 2007-2008, the most recent years for which official figures are available, 56,000 and 51,000 annual rounds of golf were played at Sharp Park, according to the December 17, 2008 Report of Controller Ben Rosenfield to the San Francisco Board of Supervisors.

12. The City of San Francisco's recreational consultant Leon Younger and PROS Consulting, in its August, 2008

Recreational Opportunities Study Summary Report, urged the city to preserve the golf course: "A historic golf course designed by the most celebrated golf architect.... It is much like having a park designed by Olmstead or a Frank Lloyd Wright building.... The golf community around the world is aware of this golf course, its past and future potential... to be one of the best public golf courses in the United States.... Because of its heritage it has the potential for private fund raising or an endowment for restoration and remodel. Probably one of the few in America.... It provides the average golfer access to design greatness.... It should be a crown jewel of the Recreation and Park Department and the city of San Francisco, a prominent fixture extolling the quality of life in this area. A proud heritage of some of the best golf in the world and its relationship to the sea.... It would also become a great revenue source (especially with private funds for restoration/remodel) for the Recreation and Park Department, as it would be a great local golf course but also a destination golf course for golfers all over America." (PROS Report, August, 2008, at p. 44.)

13. Destruction of the Sharp Park Golf Course, or its disfigurement or diminution to 9 holes, as some have suggested, would be a great loss to San Francisco, and would be fatal to the international significance and appeal of the course. The world golf and landscape architectural communities would mourn and recriminate, and would regard the city as irresponsible and folly.

14. For these reasons, San Francisco should make every effort to maintain all of the remaining MacKenzie golf holes at Sharp Park.

II. THE GOLF COURSE CAN BE RETAINED AND PRESERVED, WHILE SIMULTANEOUSLY ENHANCING THE ENVIRONMENT.

1. We recognize that the Sharp Park Golf Course has over the years--and precisely because the golf course has fostered a freshwater pond ecology in place of the brackish water ecology that preexisted the golf course and the seawall--become home to the federally-protected red-legged frog and the endangered San Francisco garter snake, and that the city is under state and federal mandate to protect these species.

2. Golf courses can be, and commonly are, operated in a manner that protects and enhances habitat for threatened and endangered species. In fact, this is done right now at the San Francisco Public Utilities Commission-owned Crystal Springs Golf Course, located on public watershed lands in Hillsborough. The golf course is leased by the city long-term to an environmental award-winning golf management company that specializes in operating municipally-owned courses. Since the lease began about 15 years ago, Crystal Springs has simultaneously provided public golf, enhanced habitat for native species including the red-legged frog and San Francisco garter snake, annually returned over $1 Million in net lease payments to the city, while also making nearly $5 Million in capital improvements to the property.

3. We understand from the description of the "Recommended Management Actions" at pages 43-44 of the Tetra-Tech Natural Areas Management Plan Initial Study, that the city intends to dredge Laguna Salada, and to remove some amount of the bulrushes that now fill that marsh, to create ponds of open water together with upland habitat islands. However, we have not seen any details of this dredging and tule-removal plan. How deep will the ponds be after dredging, and what will be their new dimensions and water-holding capacities? Will permits be required for such dredging and/or tule-removal operations? As between the City and County of San Francisco, the City of Pacifica, County of San Mateo, the Coastal Zone Commission, and the Corps of Engineers, where does the permitting authority for this work lie?

4. We also understand that the city's "Recommended Management Actions" include the creation of "a buffer zone between the Laguna Salada wetlands and the golf course fairways." We are unaware of any description of this buffer zone, or its dimensions or mechanics. And we have the same questions as to permit requirements and permitting authority, as described above at the end of paragraph II.3.

5. We have several questions about the drainage from Horse Stable Pond to the beach: (1) what is the water level of the outflow pipe(s); (2) what is the capacity of the pump(s); (3) what is the working condition of the pump(s); (4) what is the water level and the capacity of the gravity outflow line; and (5) what is the operational status of the gravity outflow line? We need a better understanding of how the gravity and the pump-

assisted outflows work together, and the reasons why there have in the past been problems. We understand that the gravity outflow pipe had been clogged for many years, but that it has recently been unclogged. When was that accomplished, and who was the project officer, and what is the contact information for that project officer? Who has the best understanding of these pond hydrology issues, and has there been a comprehensive written report on these issues? Can we get a copy of such a report? We need full understanding of these issues to address the fairway drainage issues discussed below in paragraph II.7(8).

6. We also understand the Golden Gate National Recreation Area's Mori Point property, immediately to the south of Horse Stable Pond, to be upland habitat for the San Francisco Garter Snake and the red-legged frog, and that the GGNRA has encouraged the city to manage Sharp Park compatibly with the species' migration between Mori Point Mori Point, Horse Stable Pond, and Laguna Salada.

7. Subject to our need for additional site information, we suggest a combination of measures, including but not limited to the following, at what appear to be the most environmentally-sensitive areas on the course--holes Nos. 12, 13, 14, and 15.

(1) create a native plant/no-golf area surrounding an "island" green complex in the vicinity of the current 12th green;

(2) alternately, relocate the 12th green complex (which is not a MacKenzie original) to the west, closer to the seawall;

(3) alternately relocate both the tee and green complex for the 12th hole to west and north of 12th green and 13th tee, which appears to be the site of an abandoned golf hole, currently overgrown with iceplant;

(4) create an "island tee" complex at the 13th tee, also surrounded by a native plant/no-golf area;

(5) connect the 12th tee and green, the 12th green and 13th tee, and the 13th tee and 13th fairway by raised boardwalk causeways, which would be the only access to these playing areas, and reduce golf maintenance at the 12th green and 13th tee complexes to hand-mowing;

(6) make these raised causeways at the 12th and 13th holes walking-only for both golfers and maintenance workers, and require golfers to park golf carts behind the 11th green, and retrieve them only after returning to the 13th fairway;

(7) restrict golf cart usage on the 13th, 14th, 15th, and 17th fairways to cart paths only, and move the cart paths away from Laguna Salada;

(8) raise the 14th fairway at its lowest points, and separate the fairway from the wetland area by some combination of mounds and/or low railroad-tie walls, and then follow the drainage overflow around the Laguna Salada, and contain the overflow with similar mounds and/or low walls;

(9) alternately, at times of high water at the 14th fairway, temporarily close that fairway to play, and utilize instead a new short 4-par hole that might be located running south to north alongside the seawall, behind the current 12th green and 13th tee; and

(10) connect the 15th tee and green complex with another causeway.

Similar measures to the foregoing have been taken at other courses with sensitive amphibian species, in the Bay Area and elsewhere, including at Bodega Bay and Crystal Springs.

8. The foregoing and similar measures could be accomplished consistent with and as part of the currently-ongoing Sensitive Natural Resource Areas Environmental Impact Report process. By comparison, we believe that destruction of the golf course, or significant reconfiguration with new holes in virgin areas, or reduction of the golf course from 18 to 9 holes, would require a separate, lengthy and expensive environmental review process, that would raise many complex and controversial environmental and social issues outside the scope of the current EIR process.

9. We have reviewed the Recreation and Park Department's recently-adopted Environmental Species Compliance Plan for Sharp Park. Employed in conjunction with the Recommended Management Actions listed for the Laguna Salada and Horse Stable Pond area in the Tetra Tech Initial Study, the

measures outlined in the Compliance Plan provide for continuation of the MacKenzie golf course, in harmony with protection of the frog and snake and enhancement of their habitat.

10. We understand that the city's contract for the Harding Park project requires the Professional Golfers Association ("PGA") to provide golf design at Sharp Park and/or Lincoln Park up to $1 Million. (See Management Audit of Recreation and Park Department, by San Francisco Budget Analyst's Office, January 12, 2006, at Section 6.) The sensitive ecology and hydrology issues at Sharp Park necessarily imply environmental and engineering study as part of golf course design, so that now would be a good time for the city to invoke the PGA's obligation to provide design at Sharp Park.

We anticipate consulting with a team including a species biologist, hydrologist, and golf architect, and we further anticipate that we may have additional or alternative suggestions aimed at finding creative, minimalist, nature-friendly solutions that will simultaneously preserve and enhance the habitats for the listed species, and preserve the legacy MacKenzie golf course at Sharp Park. And we look forward to working cooperatively with the Recreation and Park Department, Fish and Game, the Fish and Wildlife Service, and the relevant political entities and administrative agencies to this end.

We ask you to advise us as soon as possible of the details of the city's dredging plans at Laguna Salada, Horse Stable Pond, and the connecting waterway and Sanchez Creek. These plans will affect the hydrological issues of the above-discussed drainage measures. We also ask that, as soon as possible, we be allowed to meet with the city's biologist and golf architect so that we can fully understand their scientific and topographic concerns at the site.

If working cooperatively we can simultaneously save the golf course and protect the frog and snake and enhance their habitat--and we are confident this can be done--then San Francisco will have an asset that will be valuable to the environment, to the citizens of San Francisco and its neighboring communities, to the local and international golf and cultural landscape communities, and to the treasury of the Recreation and Park Department. Such an environmentally-friendly golf course

will be a revenue-generator for the city, and an example to other communities with sensitive species issues in their parklands.

Because we would be preserving an asset of the broader golf community, we are endeavoring to obtain the support, financial and otherwise, of that community to make this possible. Initial responses to our inquiries in this regard have been very positive, on the assumption that the interrelated environmental and golf restorations, and golf at Sharp Park going forward, will require the very highest levels of biological science, engineering, stewardship, and golf operations.

We look forward to working closely with you and all of the interested political bodies and administrative agencies, and all persons of good will, on this important project.

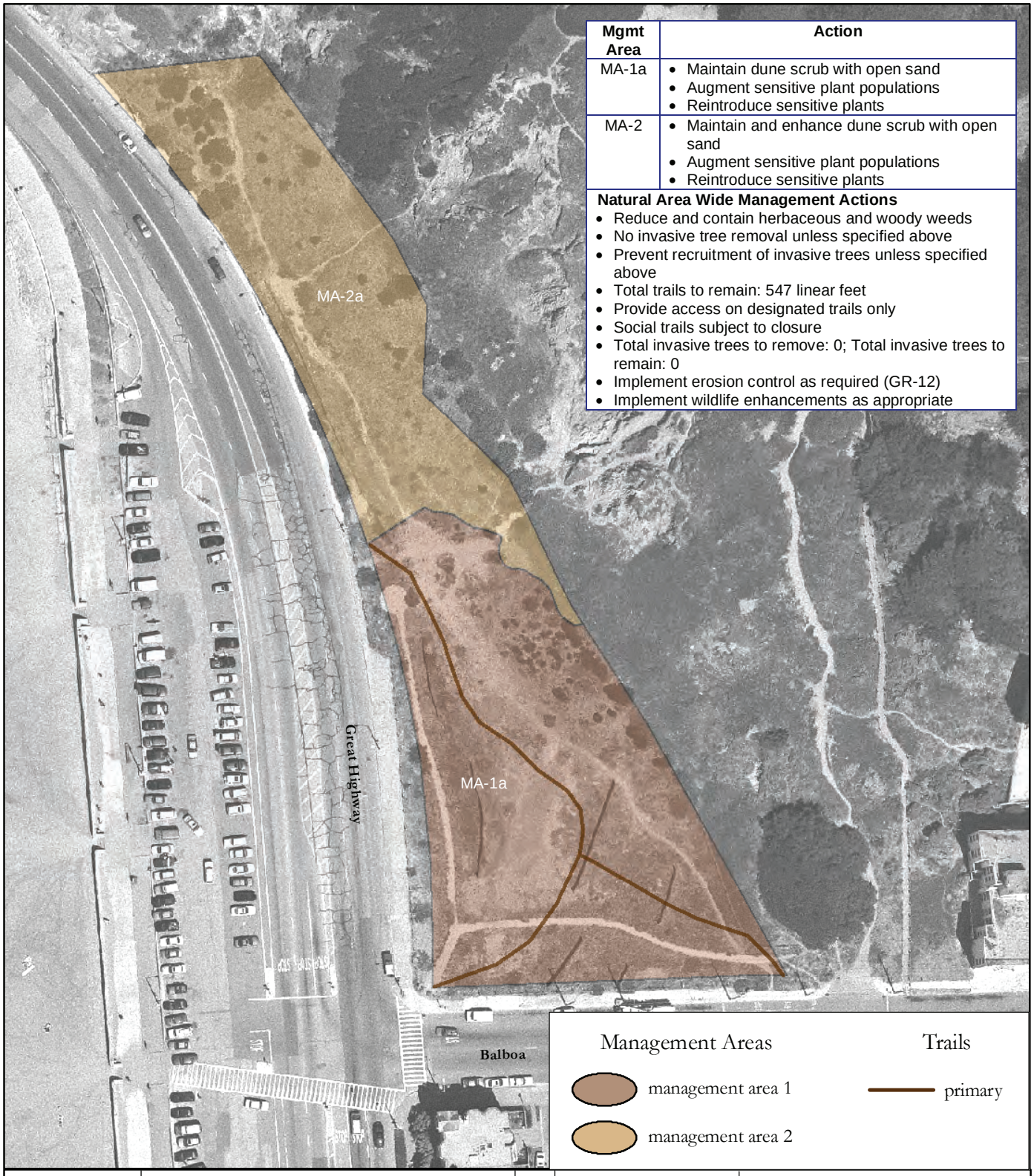
Very truly yours,

Richard Harris
San Francisco Public Golf Alliance

cc: Mayor Gavin Newsom
Mayor Julie Lancelle
Supervisor Sean Elsbernd
Supervisor Ross Mirkarimi
Golden Gate National Recreation Area
George Mozingo
Ken King
Lennie Roberts
Cultural Landscape Foundation
Tim Finchem, Commissioner, PGA of America
David Diller, President, Sharp Park Golf Club
Lyn Nelson, CEO, Northern California Golf Association
San Francisco Parks Trust
Alister MacKenzie Society
American Society of Golf Course Architects
Sean Sweeney
John Bock, Tetra-Tech, Inc.
Laborers Union Local 261
San Francisco Golf Task Force Members
Directors, San Francisco Public Golf Alliance

APPENDIX B

Maps of the Natural Areas



Mgmt Area	Action
MA-1a	• Maintain dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2	• Maintain and enhance dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 547 linear feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100
Feet

FIGURE 6.22 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Balboa Natural Area

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland
MA-1b	• Remove approximately 5 invasive trees • Maintain diverse native grassland • Augment sensitive plant populations
MA-1c	• Remove approximately 30 invasive trees • Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Discourage motorcycle use. Install fences if necessary
MA-1d	• Remove approximately 140 invasive trees • Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Discourage motorcycle use. Install fences if necessary • Consider development of a new trail
MA-1e	• Maintain diverse native grassland • Augment Mission blue butterfly habitat • Augment sensitive plant populations
MA-1f	• Remove approximately 10 invasive trees • Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1g	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Discourage motorcycle use. Install fences if necessary • Limit dog use to on-leash only • Monitor potential impacts to endangered Mission blue butterfly habitat and install trailside fencing if required (south of radio tower only)
MA-1h	• Maintain diverse native grassland • Augment sensitive plant populations
MA-2a	• Remove approximately 70 invasive trees • Maintain and enhance a mixed native oak-grassland mosaic • Augment sensitive plant populations
MA-2b	• Remove approximately 100 invasive trees • Maintain and enhance oak woodland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2c	• Maintain and enhance willow riparian, scrub and grassland mosaic • Augment sensitive plant populations

Mgmt Area	Action
MA-2d	• Remove 1 invasive tree • Maintain and enhance scrub-grassland mosaic • Augment sensitive plant populations • Augment Mission blue butterfly habitat
MA-2e	• Remove approximately 150 invasive trees • Maintain and enhance cherry tree woodland, scrub, and grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat
MA-2f	• Maintain and enhance grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat
MA-2g	• Remove approximately 5 invasive trees • Maintain and enhance scrub-grassland mosaic • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Augment wrentit habitat • Reintroduce sensitive plants • Limit dog use to on-leash only
MA-3a	• Maintain and enhance urban forest
MA-3b	• Maintain and enhance existing forest-grassland-scrub mosaic • Maintain showy native landscaped park entrance • Allow important nectar/larval/seed invasive plants to persist for wildlife • Stabilize eroding slope

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 8,077 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 511; Total invasive trees to remain: 5,489
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

- management area 1
- management area 2
- management area 3

Trails

- primary
- secondary
- proposed

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised December 11, 2005.

N

0 100 200 400

Feet

FIGURE 6.17 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Bayview Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Reroute lowest trail • Create designated trails and access points. Install low fencing if necessary • Partially modify existing Dog Play Areas to on-leash
MA-1b	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1c	• Maintain diverse native grassland
MA-2a	• Maintain and enhance grassland • Reintroduce sensitive plants
MA-3a	• Maintain and enhance native grassland • Allow important nectar/larval/seed invasive plants to persist for wildlife

Mgmt Area	Action
MA-3b	• Maintain and enhance scrub-grassland-urban forest mosaic

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 8,159 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 100
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate
- No change to existing Dog Play Area unless specified above

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University, Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science. Revised August 23, 2005.

N

0 125 250 500

Feet

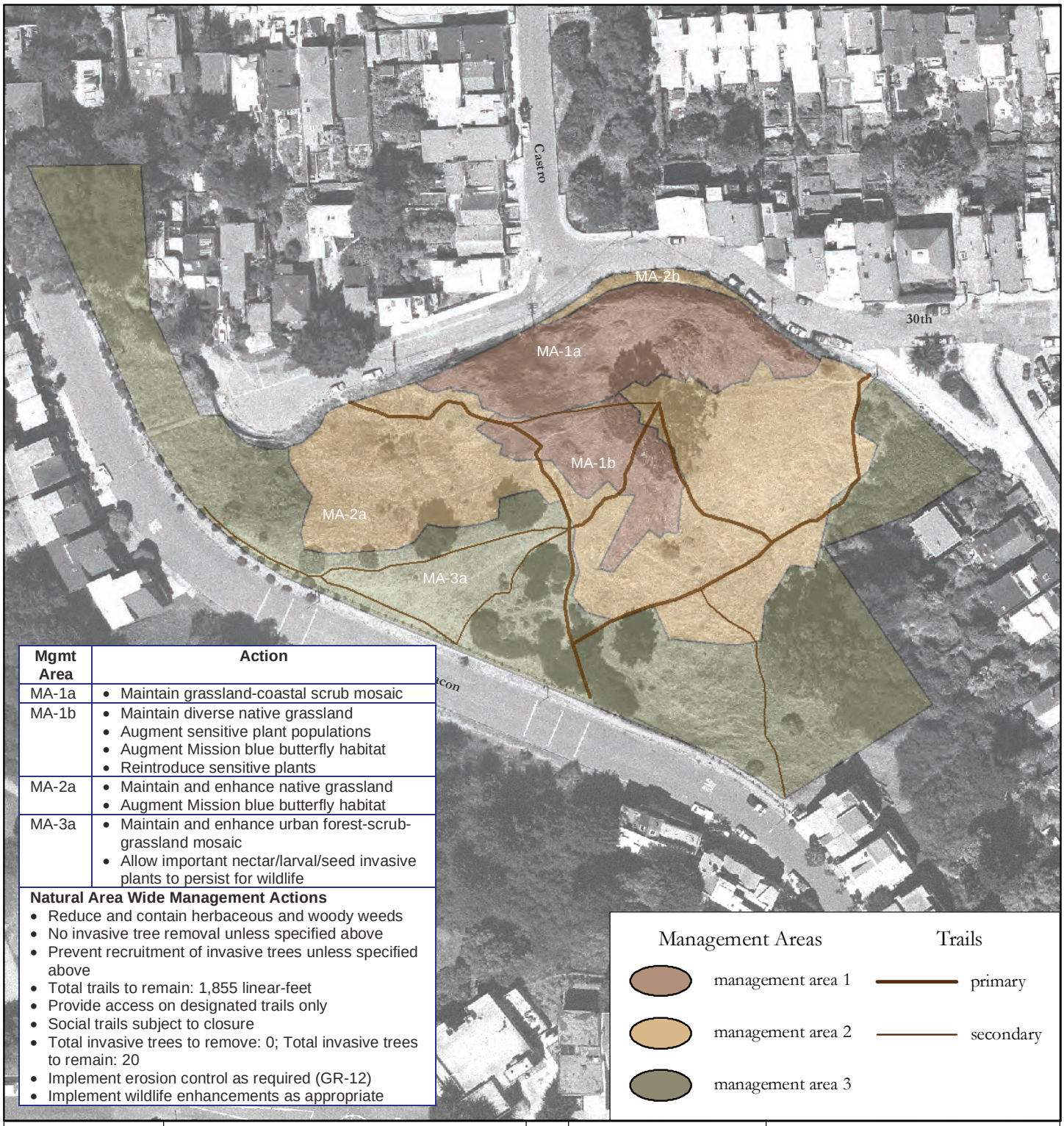
FIGURE 6.21 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Bernal Hill

Significant Natural Resource Areas Management Plan

San Francisco



Mgmt Area	Action
MA-1a	• Maintain grassland-coastal scrub mosaic
MA-1b	• Maintain diverse native grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Reintroduce sensitive plants
MA-2a	• Maintain and enhance native grassland • Augment Mission blue butterfly habitat
MA-3a	• Maintain and enhance urban forest-scrub-grassland mosaic • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 1,855 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 20
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100
Feet

FIGURE 6.9 - 4

MANAGEMENT AREAS AND TRAIL PLAN

Billy Goat

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Remove 3 invasive trees • Maintain diverse native grassland
MA-2a	• Maintain and enhance oak-scrub mosaic
MA-2b	• Maintain and enhance dune scrub • Reintroduce sensitive plants
MA-2c	• Maintain and enhance grassland
MA-3a	• Maintain cypress-grassland mosaic with scattered oaks • Allow important nectar/larval/seed invasive plants to persist for wildlife
MA-3b	• Maintain and enhance grassland • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 884 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 3; Total invasive trees to remain: 17
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Mgmt Area	Action
LV MA-1a	• Maintain grassland • Augment sensitive plant populations
LV MA-2a	• Maintain and enhance diverse native grassland
LV MA-2b	• Maintain and enhance coastal scrub
LV MA-2c	• Maintain and enhance a landscaped native scrub
LV MA-3a	• Maintain and enhance grassland-coastal scrub mosaic • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 651 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to re move: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University, Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001: City of San Francisco Department of Public Works, San Francisco; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 30, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 100 200 400
Feet

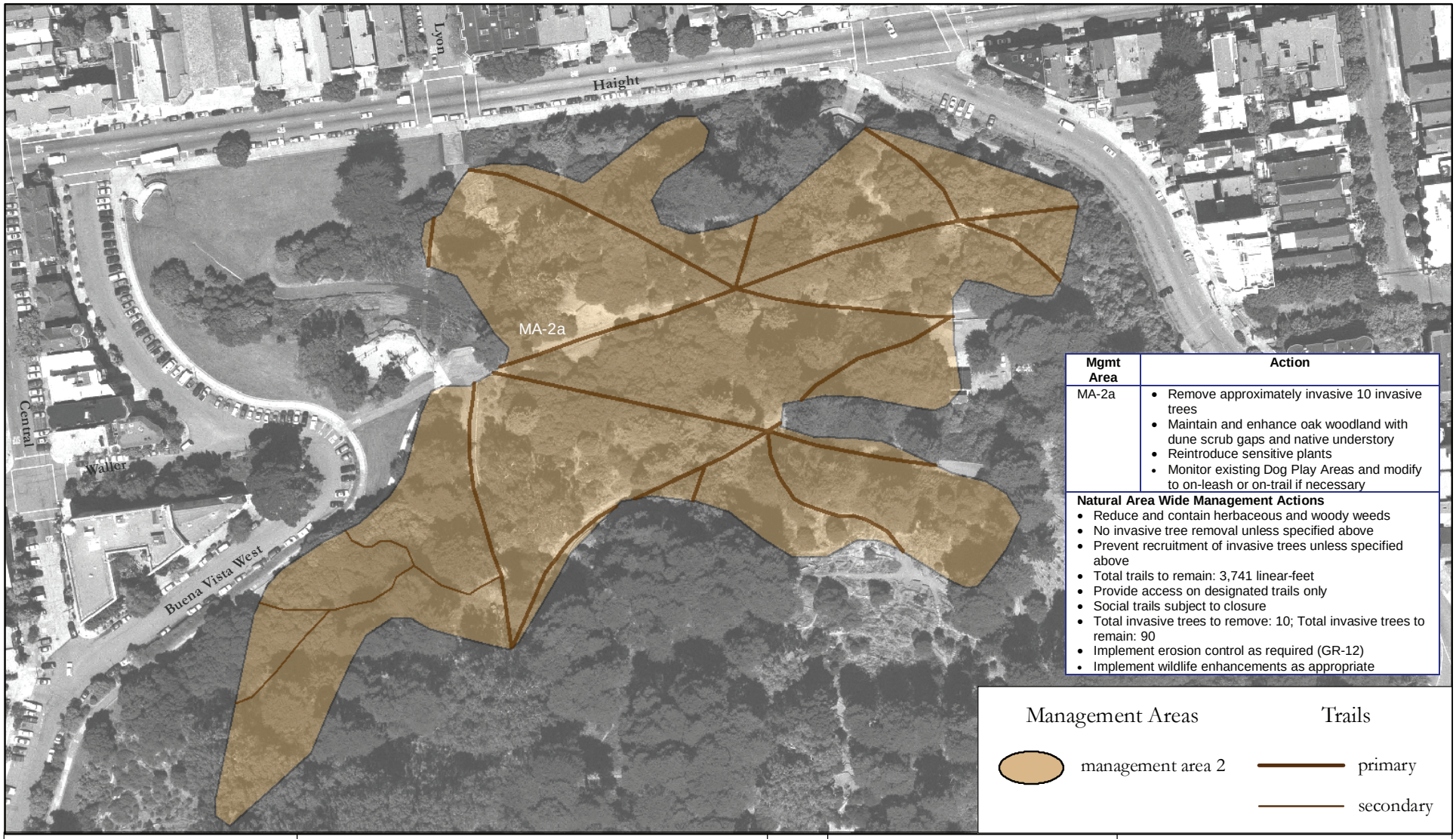
FIGURE 6.6 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Brooks Park and Lakeview/Ashton Mini Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-2a	• Remove approximately invasive 10 invasive trees • Maintain and enhance oak woodland with dune scrub gaps and native understory • Reintroduce sensitive plants • Monitor existing Dog Play Areas and modify to on-leash or on-trail if necessary

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 3,741 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 10; Total invasive trees to remain: 90
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 62.5 125 250

Feet

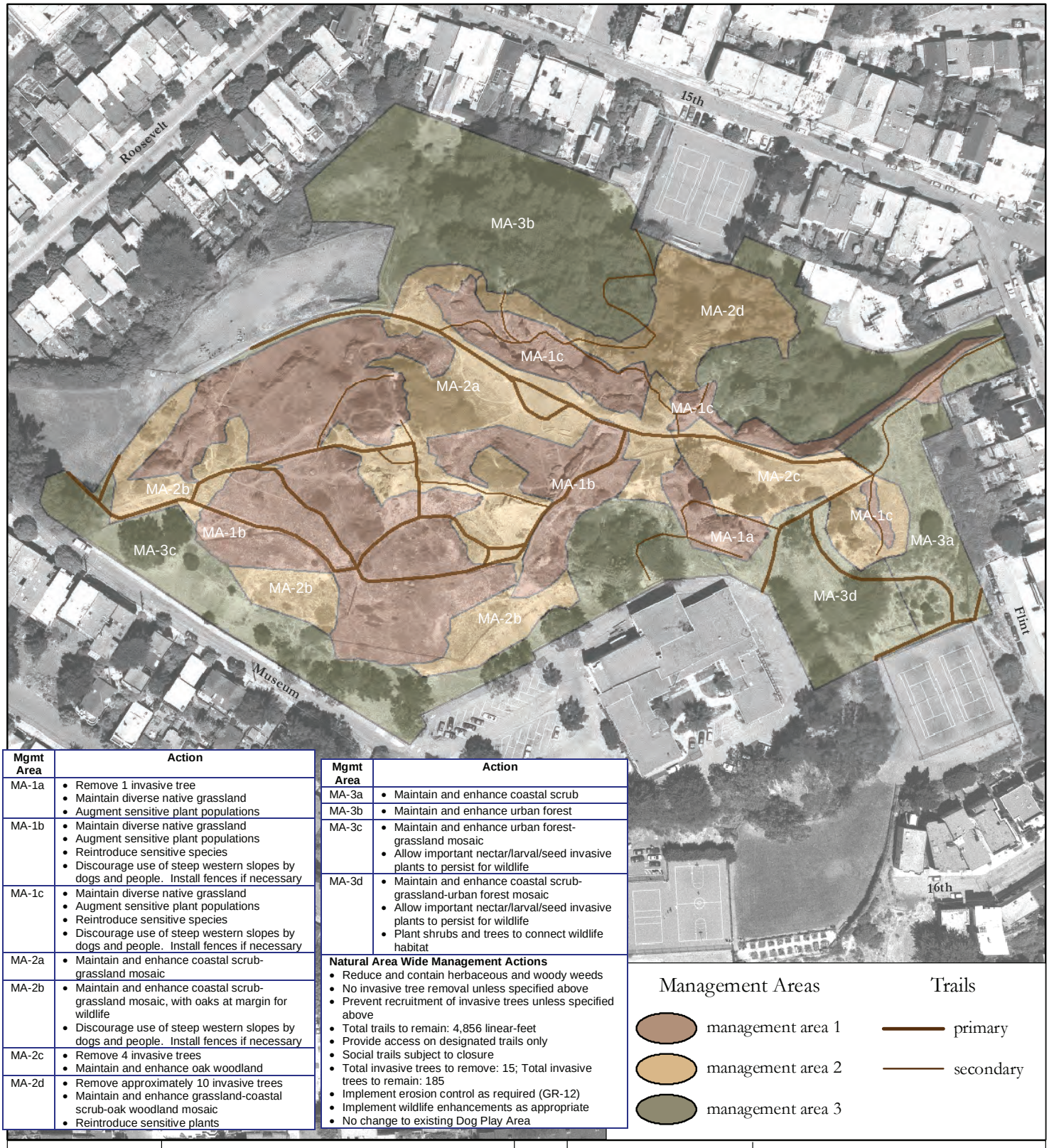
FIGURE 6.10 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Buena Vista Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Remove 1 invasive tree • Maintain diverse native grassland • Augment sensitive plant populations
MA-1b	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive species • Discourage use of steep western slopes by dogs and people. Install fences if necessary
MA-1c	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive species • Discourage use of steep western slopes by dogs and people. Install fences if necessary
MA-2a	• Maintain and enhance coastal scrub-grassland mosaic
MA-2b	• Maintain and enhance coastal scrub-grassland mosaic, with oaks at margin for wildlife • Discourage use of steep western slopes by dogs and people. Install fences if necessary
MA-2c	• Remove 4 invasive trees • Maintain and enhance oak woodland
MA-2d	• Remove approximately 10 invasive trees • Maintain and enhance grassland-coastal scrub-oak woodland mosaic • Reintroduce sensitive plants

Mgmt Area	Action
MA-3a	• Maintain and enhance coastal scrub
MA-3b	• Maintain and enhance urban forest
MA-3c	• Maintain and enhance urban forest-grassland mosaic • Allow important nectar/larval/seed invasive plants to persist for wildlife
MA-3d	• Maintain and enhance coastal scrub-grassland-urban forest mosaic • Allow important nectar/larval/seed invasive plants to persist for wildlife • Plant shrubs and trees to connect wildlife habitat

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 4,856 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 15; Total invasive trees to remain: 185
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate
- No change to existing Dog Play Area

Management Areas

- management area 1
- management area 2
- management area 3

Trails

- primary
- secondary

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 37.5 75 150

Feet

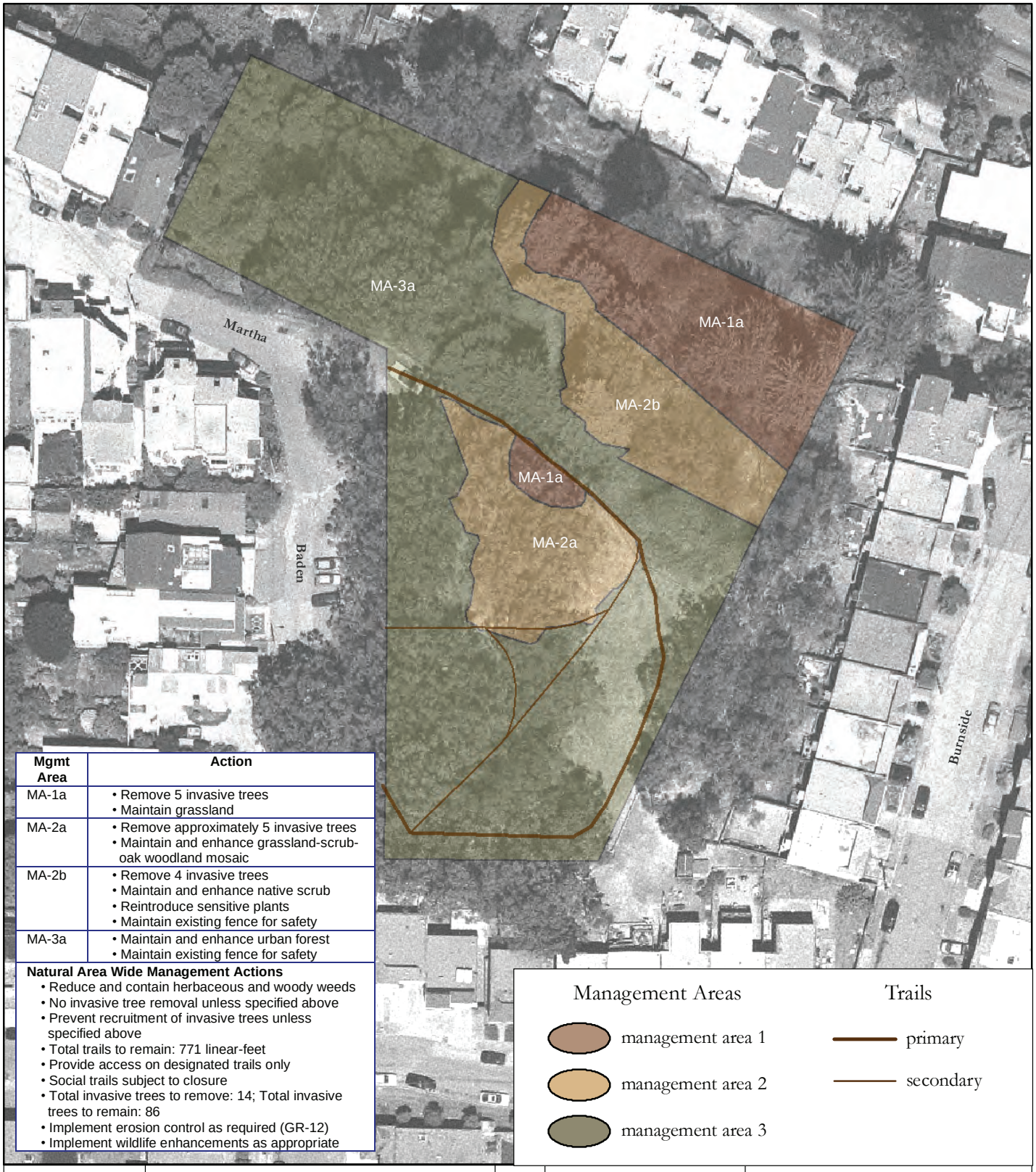
FIGURE 6.11 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Corona Heights

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Remove 5 invasive trees • Maintain grassland
MA-2a	• Remove approximately 5 invasive trees • Maintain and enhance grassland-scrub-oak woodland mosaic
MA-2b	• Remove 4 invasive trees • Maintain and enhance native scrub • Reintroduce sensitive plants • Maintain existing fence for safety
MA-3a	• Maintain and enhance urban forest • Maintain existing fence for safety

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 771 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 14; Total invasive trees to remain: 86
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 1

management area 2

management area 3

Trails

primary

secondary

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s Street-Map 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 15 30 60

Feet

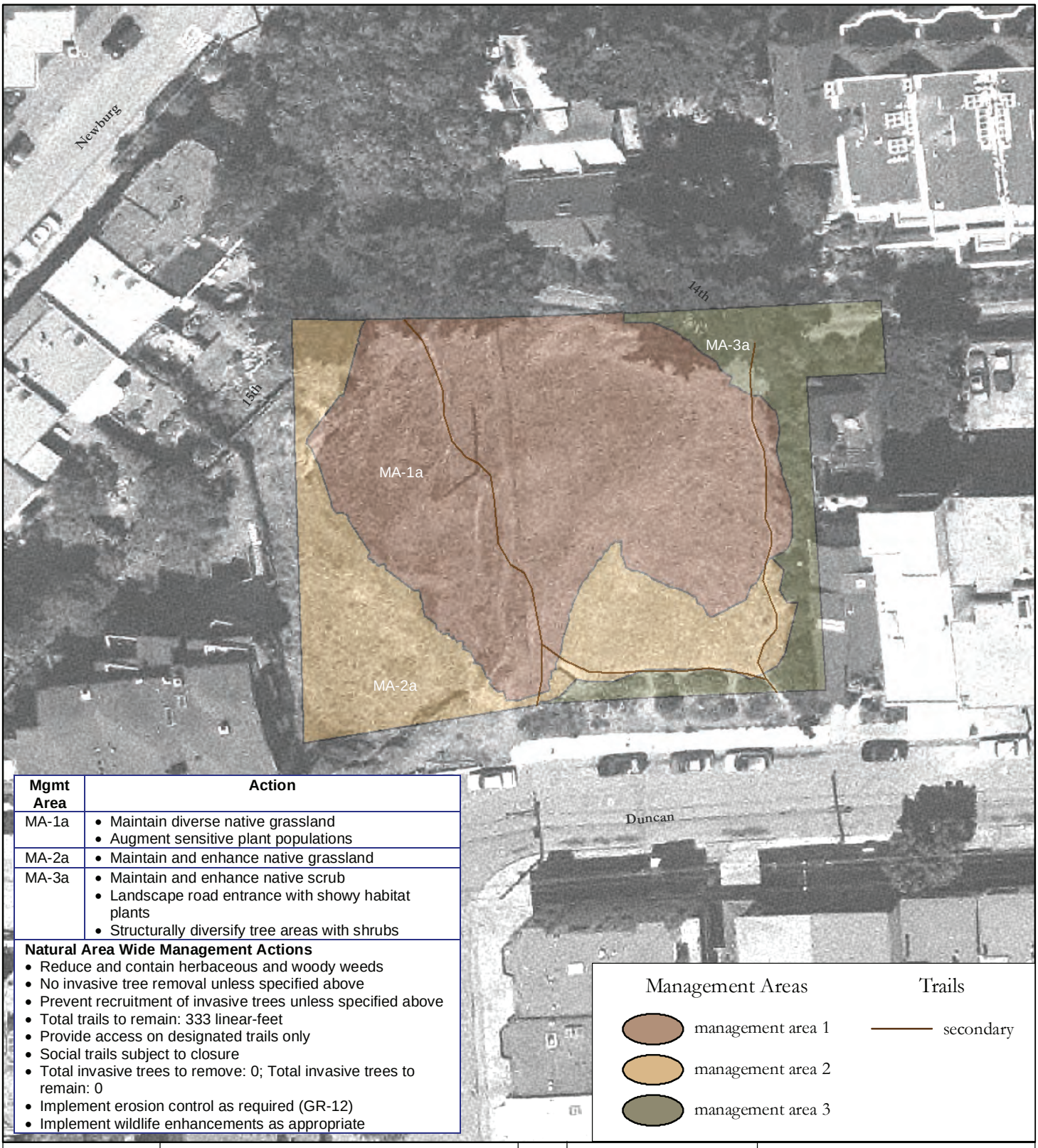
FIGURE 6.24 - 4

MANAGEMENT AREAS AND TRAIL PLAN

Dorothy Erskine

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations
MA-2a	• Maintain and enhance native grassland
MA-3a	• Maintain and enhance native scrub • Landscape road entrance with showy habitat plants • Structurally diversify tree areas with shrubs

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 333 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; August 23, 2005.

N

0 12.5 25 50
Feet

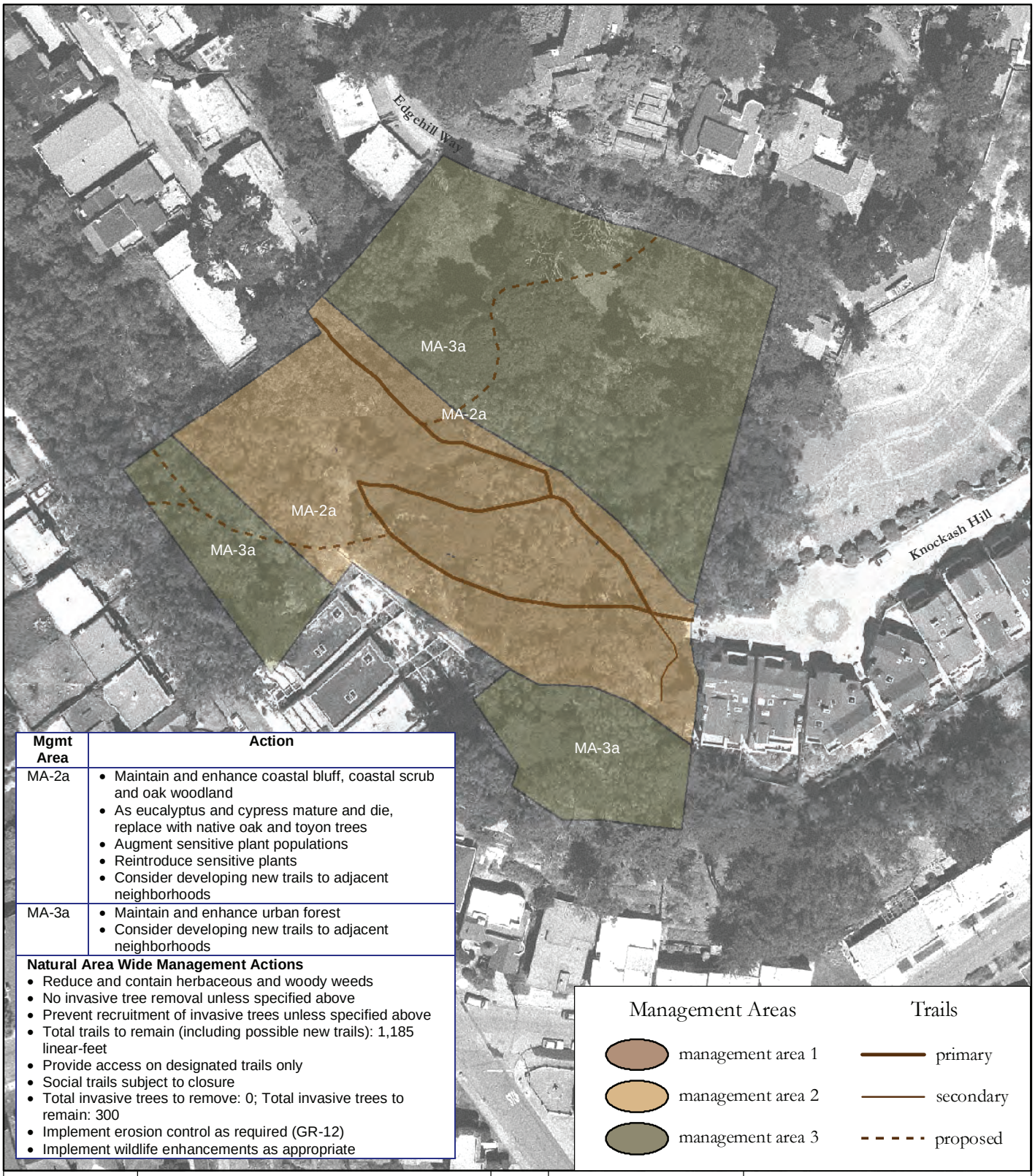
FIGURE 6.12 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Duncan-Castro

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-2a	• Maintain and enhance coastal bluff, coastal scrub and oak woodland • As eucalyptus and cypress mature and die, replace with native oak and toyon trees • Augment sensitive plant populations • Reintroduce sensitive plants • Consider developing new trails to adjacent neighborhoods
MA-3a	• Maintain and enhance urban forest • Consider developing new trails to adjacent neighborhoods

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 1,185 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 300
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100

Feet

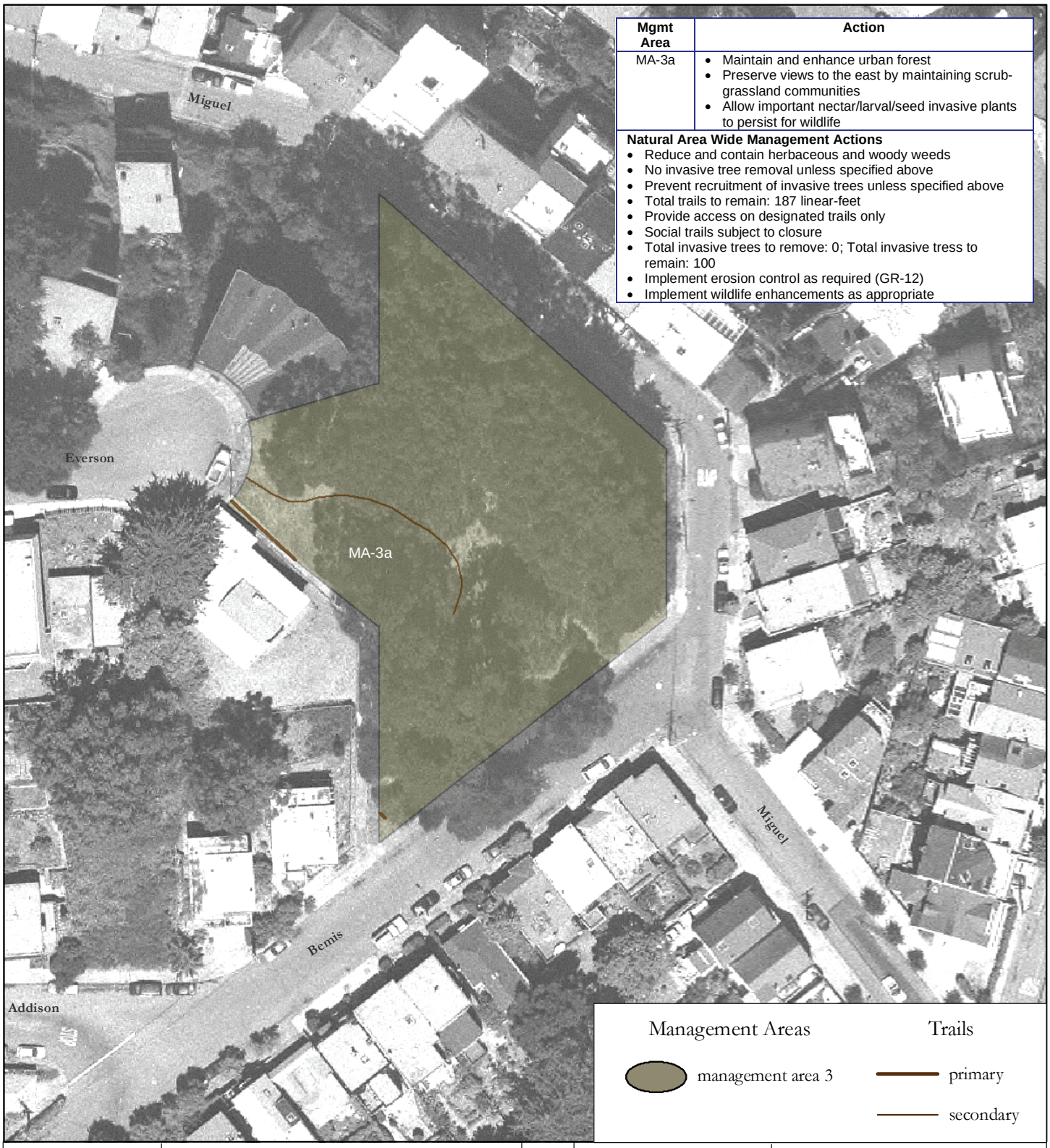
FIGURE 6.25 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Edgehill Mountain

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-3a	• Maintain and enhance urban forest • Preserve views to the east by maintaining scrub-grassland communities • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 187 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive tress to remain: 100
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 20 40 80
Feet

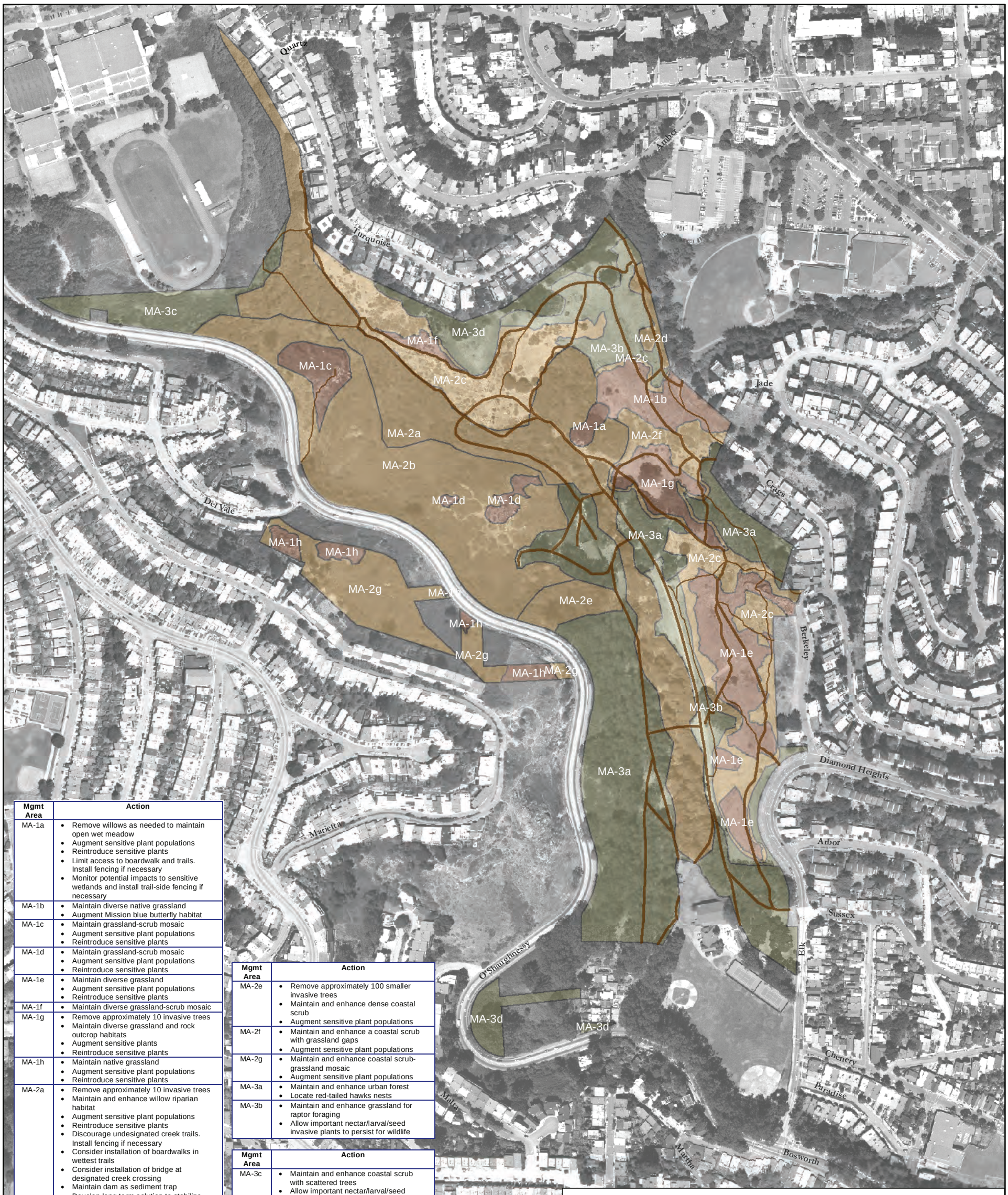
FIGURE 6.26 - 4

MANAGEMENT AREAS AND TRAIL PLAN

Fairmount Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Remove willows as needed to maintain open wet meadow • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access to boardwalk and trails. Install fencing if necessary • Monitor potential impacts to sensitive wetlands and install trail-side fencing if necessary
MA-1b	• Maintain diverse native grassland • Augment Mission blue butterfly habitat
MA-1c	• Maintain grassland-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1d	• Maintain grassland-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1e	• Maintain diverse grassland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1f	• Maintain diverse grassland-scrub mosaic
MA-1g	• Remove approximately 10 invasive trees • Maintain diverse grassland and rock outcrop habitats • Augment sensitive plants • Reintroduce sensitive plants
MA-1h	• Maintain native grassland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2a	• Remove approximately 10 invasive trees • Maintain and enhance willow riparian habitat • Augment sensitive plant populations • Reintroduce sensitive plants • Discourage undesignated creek trails. Install fencing if necessary • Consider installation of boardwalks in wettest trails • Consider installation of bridge at designated creek crossing • Maintain dam as sediment trap • Develop long term solution to stabilize slope • Monitor potential impacts to sensitive creek channel and install trailside fencing if necessary
MA-2b	• Maintain and enhance coastal scrub • Augment sensitive plant populations
MA-2c	• Maintain and enhance a diverse grassland habitat with scattered shrubs • Augment sensitive plant populations
MA-2d	• Remove willows as needed to improve drainage • Maintain and enhance willow scrub with open water for wildlife • Monitor potential impacts to sensitive wetlands and install trailside fencing if necessary

Mgmt Area	Action
MA-2e	• Remove approximately 100 smaller invasive trees • Maintain and enhance dense coastal scrub • Augment sensitive plant populations
MA-2f	• Maintain and enhance a coastal scrub with grassland gaps • Augment sensitive plant populations
MA-2g	• Maintain and enhance coastal scrub-grassland mosaic • Augment sensitive plant populations
MA-3a	• Maintain and enhance urban forest • Locate red-tailed hawks nests
MA-3b	• Maintain and enhance grassland for raptor foraging • Allow important nectar/larval/seed invasive plants to persist for wildlife

Mgmt Area	Action
MA-3c	• Maintain and enhance coastal scrub with scattered trees • Allow important nectar/larval/seed invasive plants to persist for wildlife
MA-3d	• Maintain and enhance urban forest • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 19,589 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 120; Total invasive trees to remain: 5,880
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 125 250 500
Feet

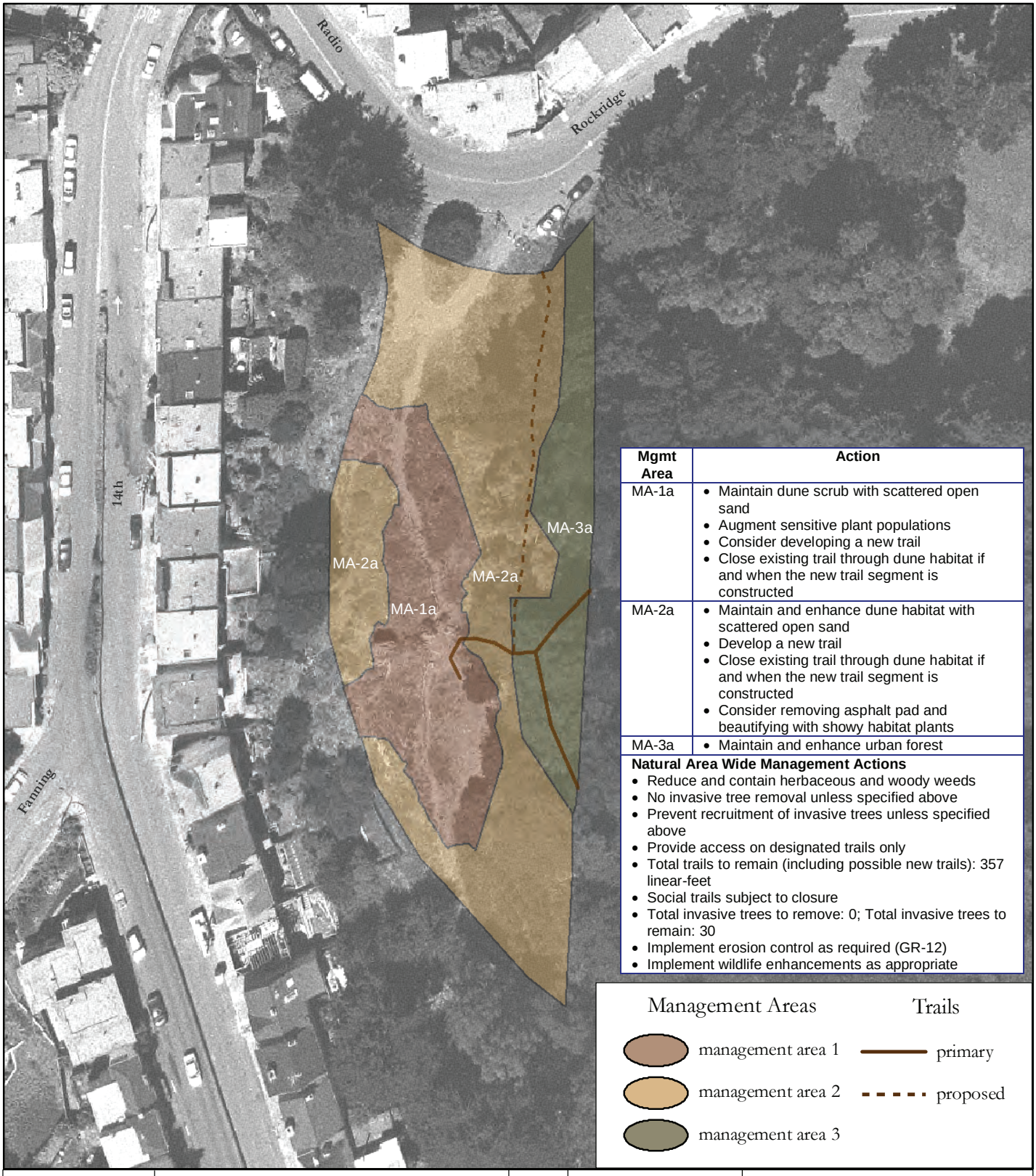
FIGURE 6.3 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Glen Canyon and O'Shaughnessy Hollow

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain dune scrub with scattered open sand • Augment sensitive plant populations • Consider developing a new trail • Close existing trail through dune habitat if and when the new trail segment is constructed
MA-2a	• Maintain and enhance dune habitat with scattered open sand • Develop a new trail • Close existing trail through dune habitat if and when the new trail segment is constructed • Consider removing asphalt pad and beautifying with showy habitat plants
MA-3a	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Provide access on designated trails only
- Total trails to remain (including possible new trails): 357 linear-feet
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 30
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 1

management area 2

management area 3

Trails

primary

proposed

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 15 30 60

Feet

FIGURE 6.5 - 19

MANAGEMENT AREAS AND TRAIL PLAN

Golden Gate Heights

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain dune scrub with scattered open sand • Augment sensitive plant populations • Reintroduce sensitive plants • Route users to designated trails
MA-2a	• Maintain and enhance dune scrub with scattered sand • Augment sensitive plant populations
MA-2b	• Remove approximately 5 invasive trees • Maintain and enhance dune scrub
MA-3a	• Maintain and enhance cypress tree-scrub mosaic

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 1,313 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 5; Total invasive trees to remain: 20
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100
Feet

FIGURE 6.5 - 17

MANAGEMENT AREAS AND TRAIL PLAN

Grandview

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain dune scrub with scattered open sand • Augment sensitive plant populations • Reintroduce sensitive plants • Consider installing a sand ladder on secondary trails • Limit access to designated trails, fence if necessary
MA-2a	• Maintain and enhance dune scrub with scattered open sand • Augment sensitive plant populations • Limit access to designated trails, fence if necessary

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Provide access on designated trails
- Total trails to remain: 917 linear-feet
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 10
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

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Feet

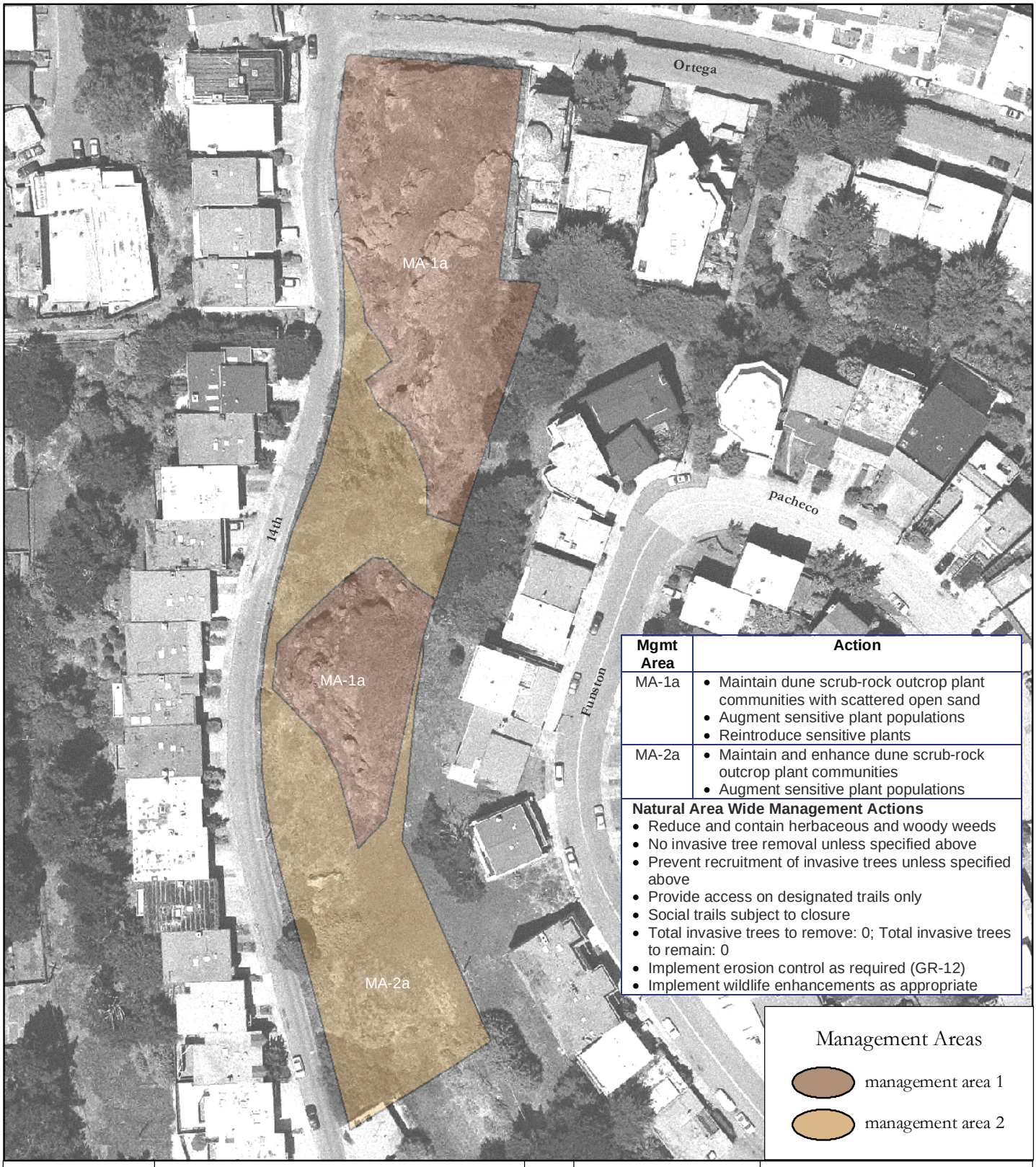
FIGURE 6.5 - 20

MANAGEMENT AREAS AND TRAIL PLAN

Hawk Hill

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain dune scrub-rock outcrop plant communities with scattered open sand • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2a	• Maintain and enhance dune scrub-rock outcrop plant communities • Augment sensitive plant populations

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 1

management area 2

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100

Feet

FINAL DRAFT

FIGURE 6.5 - 18

MANAGEMENT AREAS AND TRAIL PLAN

Rock Outcrop

Significant Natural Resource Areas Management Plan

San Francisco, California

Mgmt Area	Action
MA-1a	• Maintain coastal scrub with open sand gaps • Augment sensitive plant populations
MA-1b	• Maintain oak woodland with dune scrub gaps • Augment sensitive plant populations
MA-2a	• Maintain and enhance oak woodland with diverse native understory • No change to existing DPA
MA-2b	• Remove 12 medium sized invasive trees • Maintain and enhance oak woodland with diverse native understory and dune scrub gaps
MA-2c	• Maintain and enhance oak woodland with diverse native understory and dune scrub gaps
MA-2d	• Maintain and enhance oak woodland with dune scrub gaps • Augment sensitive plant populations • Reintroduce sensitive plants • Maintain visual screen to traffic along Fulton
MA-2e	• Maintain and enhance native oak woodland with diverse native understory
MA-2f	• Remove approximately 10 invasive trees • Maintain and enhance oak woodland with diverse native understory and dune scrub gaps • Install barricades at organic dump to protect oak trees
MA-2g	• Remove 4 leptospermum trees • Maintain and enhance oak woodland with diverse native understory and dune scrub in gaps • Monitor existing Dog Play Areas and modify to on-leash or on-trail if necessary
MA-2h	• Remove 6 invasive trees • Maintain and enhance oak woodland with diverse native understory and dune scrub gaps

Mgmt Area	Action
MA-2i	• Maintain and enhance oak woodland with dune scrub gaps
MA-2j	• Remove approximately 50 invasive trees • Maintain and enhance oak woodland with diverse native understory and dune scrub gaps • Augment sensitive plant populations • Limit mountain bike use with signs and, if necessary, temporary barrier fences
MA-2k	• Maintain and enhance a native oak-toyon woodland with dune scrub gaps • Augment sensitive plant populations

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 12,463 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 82; Total invasive trees to remain: 818
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate



Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001: City of San Francisco Department of Public Works, San Francisco; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

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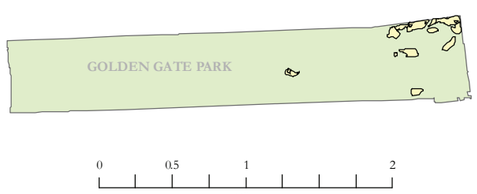


0 200 400 800
Feet

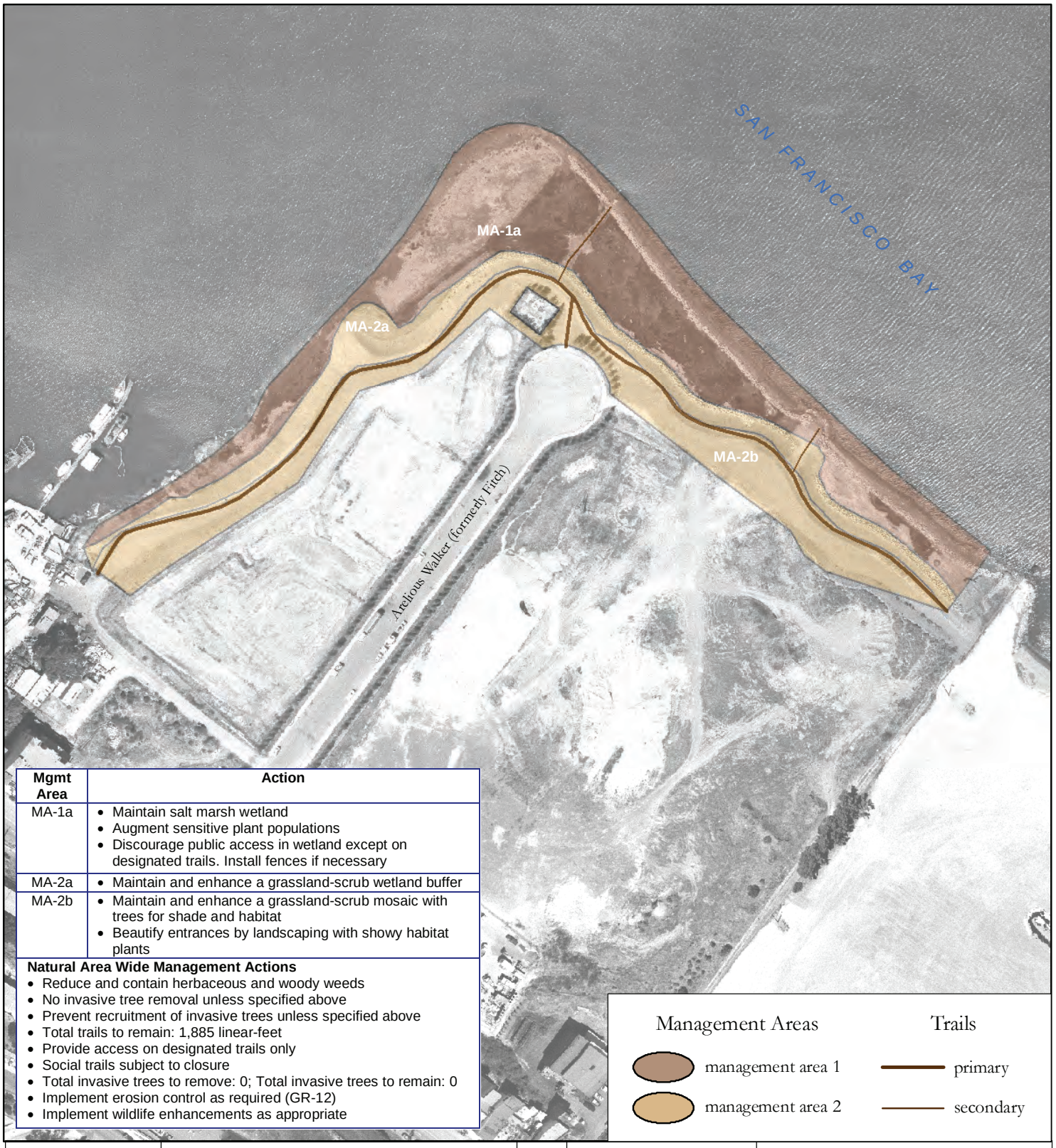
FIGURE 6.15 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Oak Woodlands, Whiskey Hill, Lily Pond, and Strawberry Hill in Golden Gate Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain salt marsh wetland • Augment sensitive plant populations • Discourage public access in wetland except on designated trails. Install fences if necessary
MA-2a	• Maintain and enhance a grassland-scrub wetland buffer
MA-2b	• Maintain and enhance a grassland-scrub mosaic with trees for shade and habitat • Beautify entrances by landscaping with showy habitat plants

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 1,885 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science, revised August 21, 2005.

N

0 50 100 200
Feet

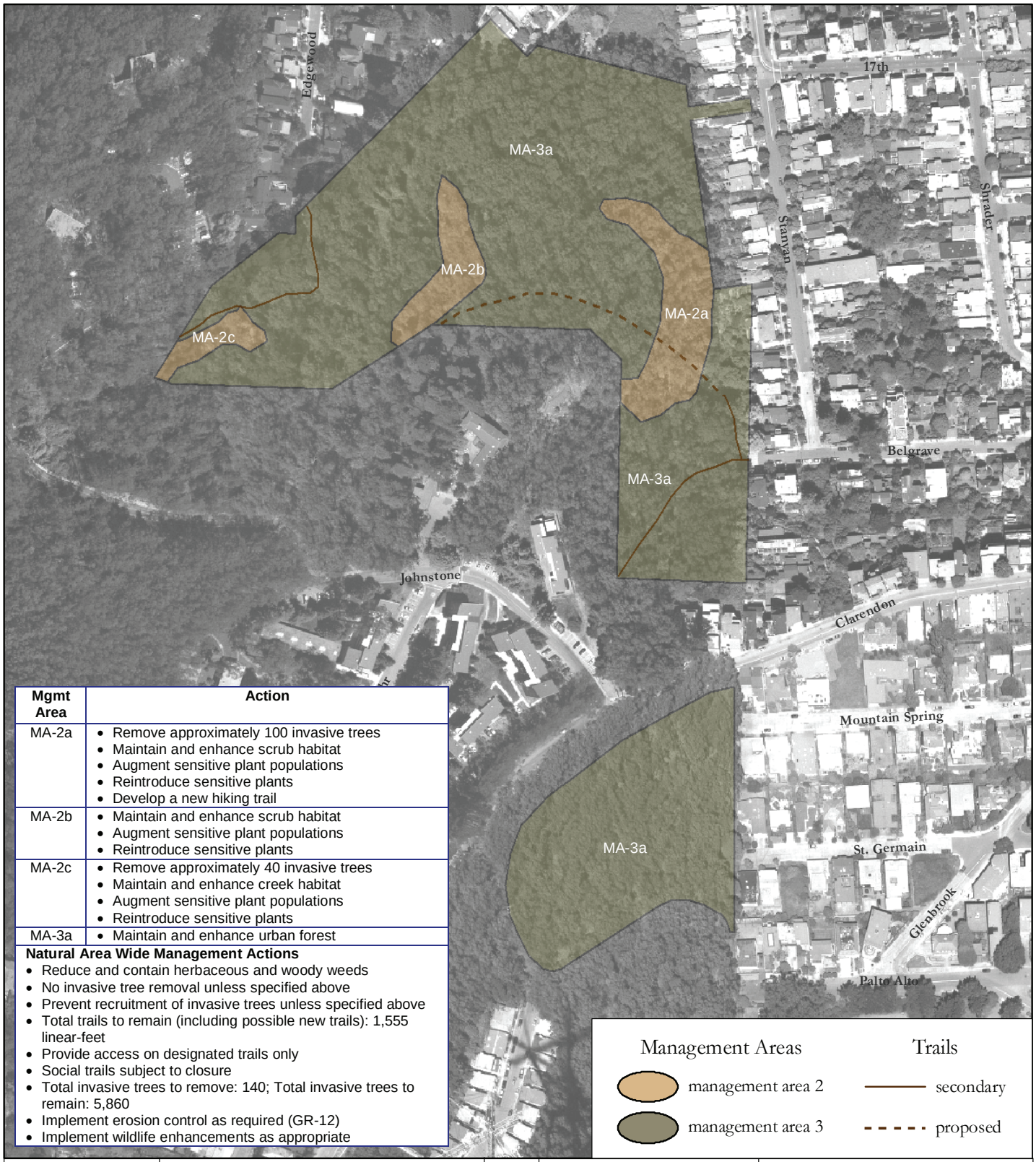
FIGURE 6.18 - 5

MANAGEMENT AREAS AND TRAIL PLAN

India Basin Shoreline Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-2a	• Remove approximately 100 invasive trees • Maintain and enhance scrub habitat • Augment sensitive plant populations • Reintroduce sensitive plants • Develop a new hiking trail
MA-2b	• Maintain and enhance scrub habitat • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2c	• Remove approximately 40 invasive trees • Maintain and enhance creek habitat • Augment sensitive plant populations • Reintroduce sensitive plants
MA-3a	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 1,555 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 140; Total invasive trees to remain: 5,860
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised November 15, 2005.

N

0 87.5 175 350
Feet

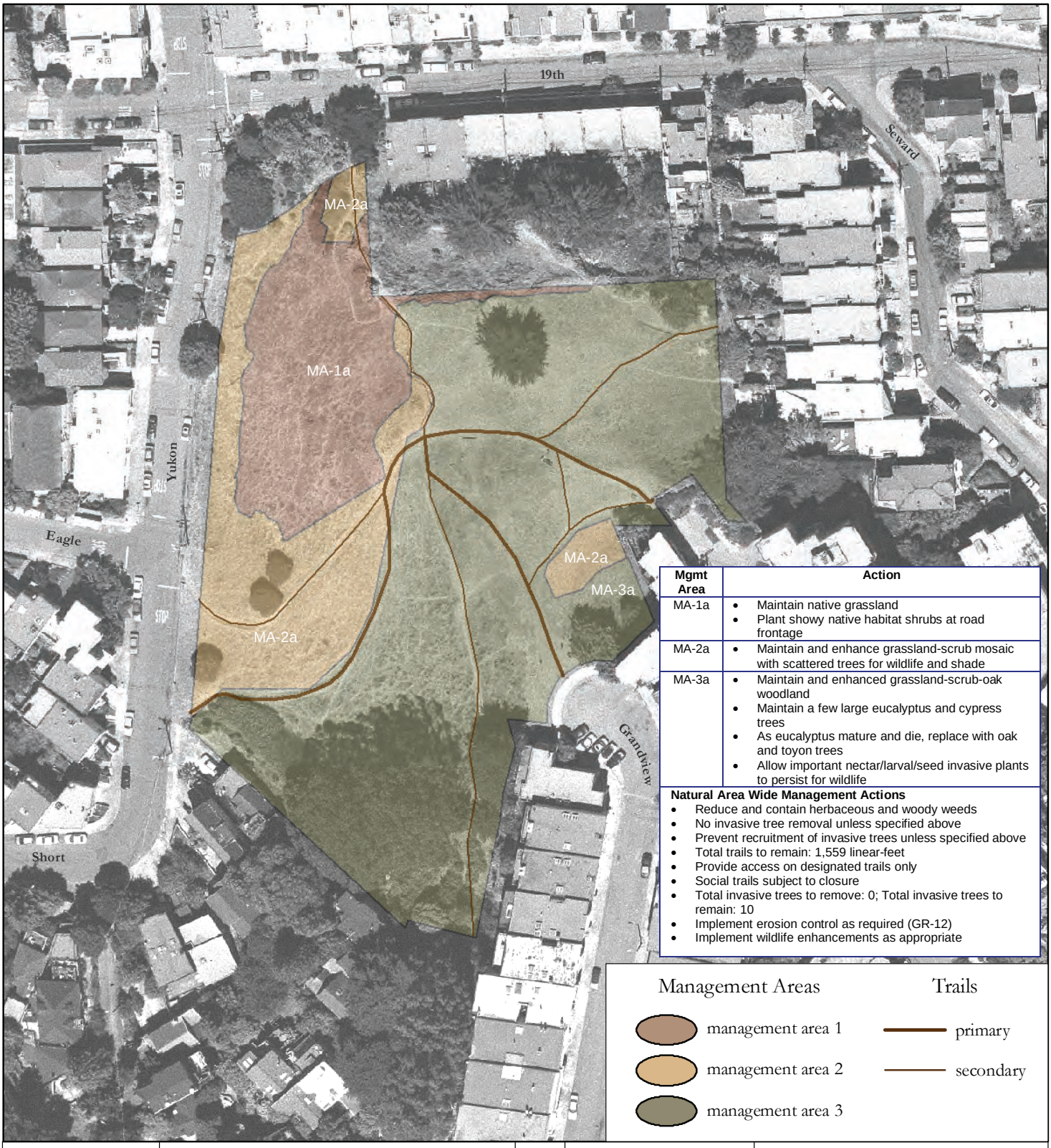
FIGURE 6.23 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Interior Greenbelt

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain native grassland • Plant showy native habitat shrubs at road frontage
MA-2a	• Maintain and enhance grassland-scrub mosaic with scattered trees for wildlife and shade
MA-3a	• Maintain and enhanced grassland-scrub-oak woodland • Maintain a few large eucalyptus and cypress trees • As eucalyptus mature and die, replace with oak and toyon trees • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 1,559 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 10
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 1

management area 2

management area 3

Trails

primary

secondary

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100

Feet

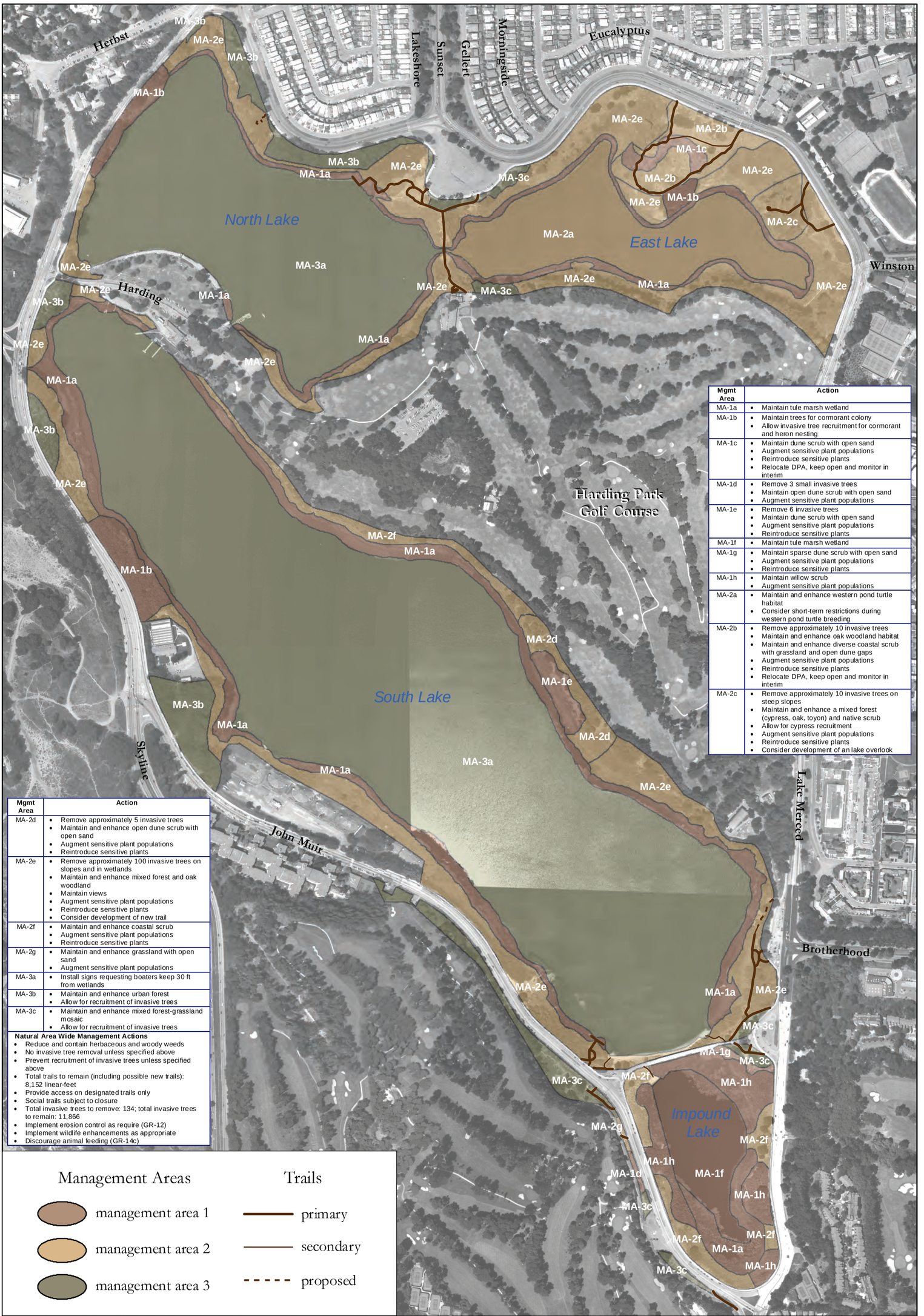
FIGURE 6.13 - 4

MANAGEMENT AREAS AND TRAIL PLAN

Kite Hill

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain tule marsh wetland
MA-1b	• Maintain trees for cormorant colony • Allow invasive tree recruitment for cormorant and heron nesting
MA-1c	• Maintain dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants • Relocate DPA, keep open and monitor in interim
MA-1d	• Remove 3 small invasive trees • Maintain open dune scrub with open sand • Augment sensitive plant populations
MA-1e	• Remove 6 invasive trees • Maintain dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1f	• Maintain tule marsh wetland
MA-1g	• Maintain sparse dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1h	• Maintain willow scrub • Augment sensitive plant populations
MA-2a	• Maintain and enhance western pond turtle habitat • Consider short-term restrictions during western pond turtle breeding
MA-2b	• Remove approximately 10 invasive trees • Maintain and enhance oak woodland habitat • Maintain and enhance diverse coastal scrub with grassland and open dune gaps • Augment sensitive plant populations • Reintroduce sensitive plants • Relocate DPA, keep open and monitor in interim
MA-2c	• Remove approximately 10 invasive trees on steep slopes • Maintain and enhance a mixed forest (cypress, oak, toyon) and native scrub • Allow for cypress recruitment • Augment sensitive plant populations • Reintroduce sensitive plants • Consider development of an lake overlook

Mgmt Area	Action
MA-2d	• Remove approximately 5 invasive trees • Maintain and enhance open dune scrub with open sand • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2e	• Remove approximately 100 invasive trees on slopes and in wetlands • Maintain and enhance mixed forest and oak woodland • Maintain views • Augment sensitive plant populations • Reintroduce sensitive plants • Consider development of new trail
MA-2f	• Maintain and enhance coastal scrub • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2g	• Maintain and enhance grassland with open sand • Augment sensitive plant populations
MA-3a	• Install signs requesting boaters keep 30 ft from wetlands
MA-3b	• Maintain and enhance urban forest • Allow for recruitment of invasive trees
MA-3c	• Maintain and enhance mixed forest-grassland mosaic • Allow for recruitment of invasive trees

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 8,152 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 134; total invasive trees to remain: 11,866
- Implement erosion control as require (GR-12)
- Implement wildlife enhancements as appropriate
- Discourage animal feeding (GR-14c)

Management Areas

- management area 1
- management area 2
- management area 3

Trails

- primary
- secondary
- proposed

EIP ASSOCIATES

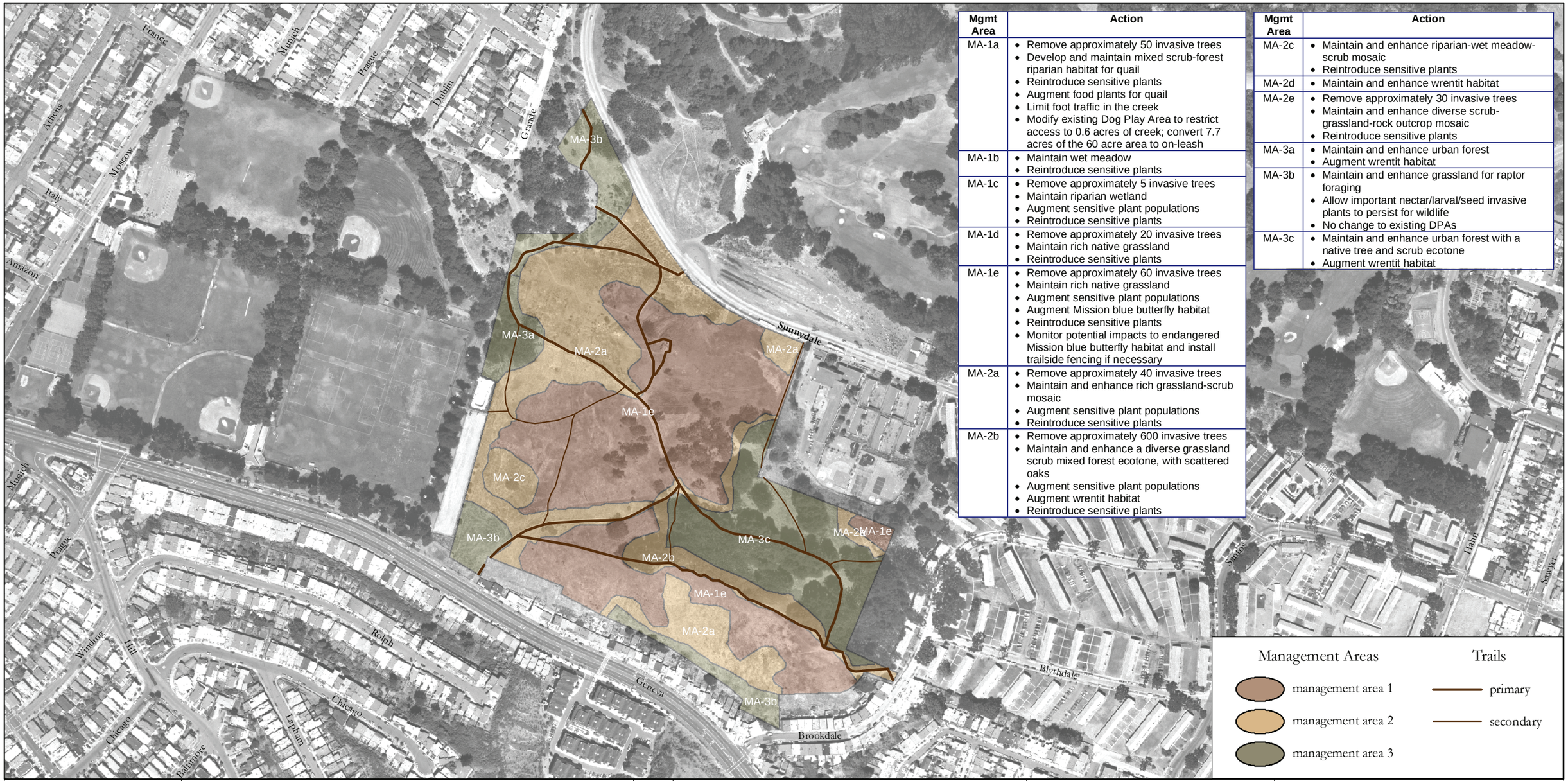
Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 30, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised October 13, 2005.

N

0 250 500 1,000
Feet

FIGURE 6.1 - 9
MANAGEMENT AREAS AND TRAIL PLAN
Lake Merced
Significant Natural Resource Areas Management Plan
San Francisco, California



Mgmt Area	Action
MA-1a	• Remove approximately 50 invasive trees • Develop and maintain mixed scrub-forest riparian habitat for quail • Reintroduce sensitive plants • Augment food plants for quail • Limit foot traffic in the creek • Modify existing Dog Play Area to restrict access to 0.6 acres of creek; convert 7.7 acres of the 60 acre area to on-leash
MA-1b	• Maintain wet meadow • Reintroduce sensitive plants
MA-1c	• Remove approximately 5 invasive trees • Maintain riparian wetland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1d	• Remove approximately 20 invasive trees • Maintain rich native grassland • Reintroduce sensitive plants
MA-1e	• Remove approximately 60 invasive trees • Maintain rich native grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Reintroduce sensitive plants • Monitor potential impacts to endangered Mission blue butterfly habitat and install trailside fencing if necessary
MA-2a	• Remove approximately 40 invasive trees • Maintain and enhance rich grassland-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2b	• Remove approximately 600 invasive trees • Maintain and enhance a diverse grassland scrub mixed forest ecotone, with scattered oaks • Augment sensitive plant populations • Augment wrentit habitat • Reintroduce sensitive plants

Mgmt Area	Action
MA-2c	• Maintain and enhance riparian-wet meadow-scrub mosaic • Reintroduce sensitive plants
MA-2d	• Maintain and enhance wrentit habitat
MA-2e	• Remove approximately 30 invasive trees • Maintain and enhance diverse scrub-grassland-rock outcrop mosaic • Reintroduce sensitive plants
MA-3a	• Maintain and enhance urban forest • Augment wrentit habitat
MA-3b	• Maintain and enhance grassland for raptor foraging • Allow important nectar/larval/seed invasive plants to persist for wildlife • No change to existing DPAs
MA-3c	• Maintain and enhance urban forest with a native tree and scrub ecotone • Augment wrentit habitat

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1 Foot Resolution - 2001: City of San Francisco Department of Public Works, San Francisco; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

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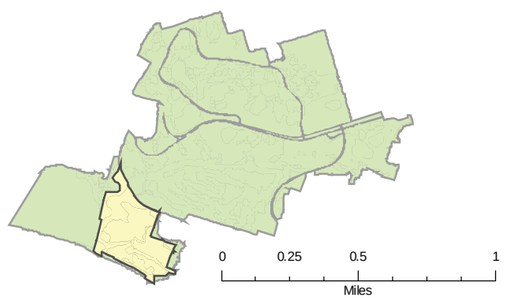


0 125 250 500
Feet

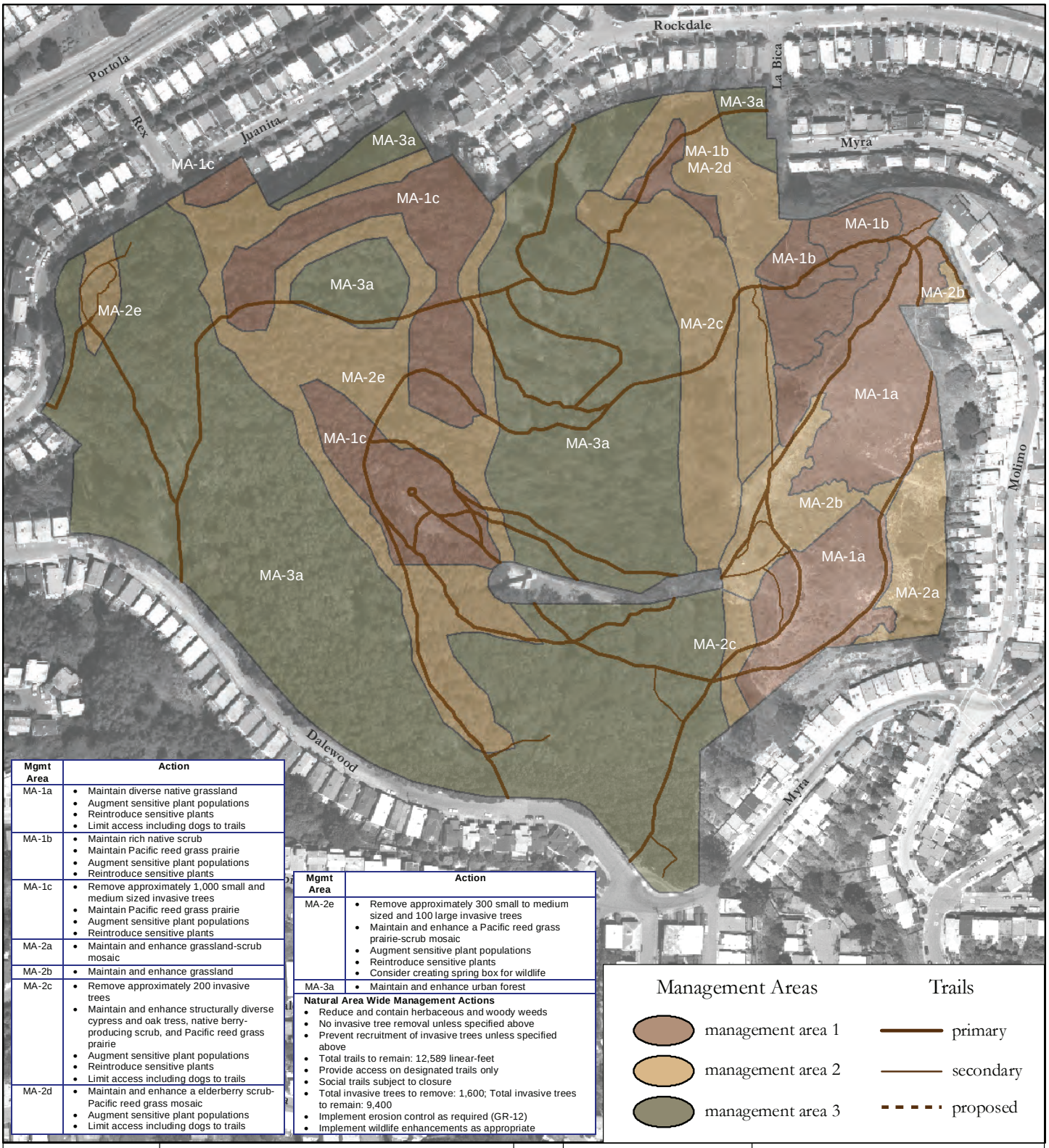
FIGURE 6.19 - 13

MANAGEMENT AREAS AND TRAIL PLAN

McLaren Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-1b	• Maintain rich native scrub • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1c	• Remove approximately 1,000 small and medium sized invasive trees • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2a	• Maintain and enhance grassland-scrub mosaic
MA-2b	• Maintain and enhance grassland
MA-2c	• Remove approximately 200 invasive trees • Maintain and enhance structurally diverse cypress and oak tress, native berry-producing scrub, and Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-2d	• Maintain and enhance a elderberry scrub-Pacific reed grass mosaic • Augment sensitive plant populations • Limit access including dogs to trails

Mgmt Area	Action
MA-2e	• Remove approximately 300 small to medium sized and 100 large invasive trees • Maintain and enhance a Pacific reed grass prairie-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants • Consider creating spring box for wildlife
MA-3a	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 12,589 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 1,600; Total invasive trees to remain: 9,400
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

- management area 1
- management area 2
- management area 3

Trails

- primary
- secondary
- proposed

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSUGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science (SFSU IGIS); revised August 22, 2005.

N

0 75 150 300

Feet

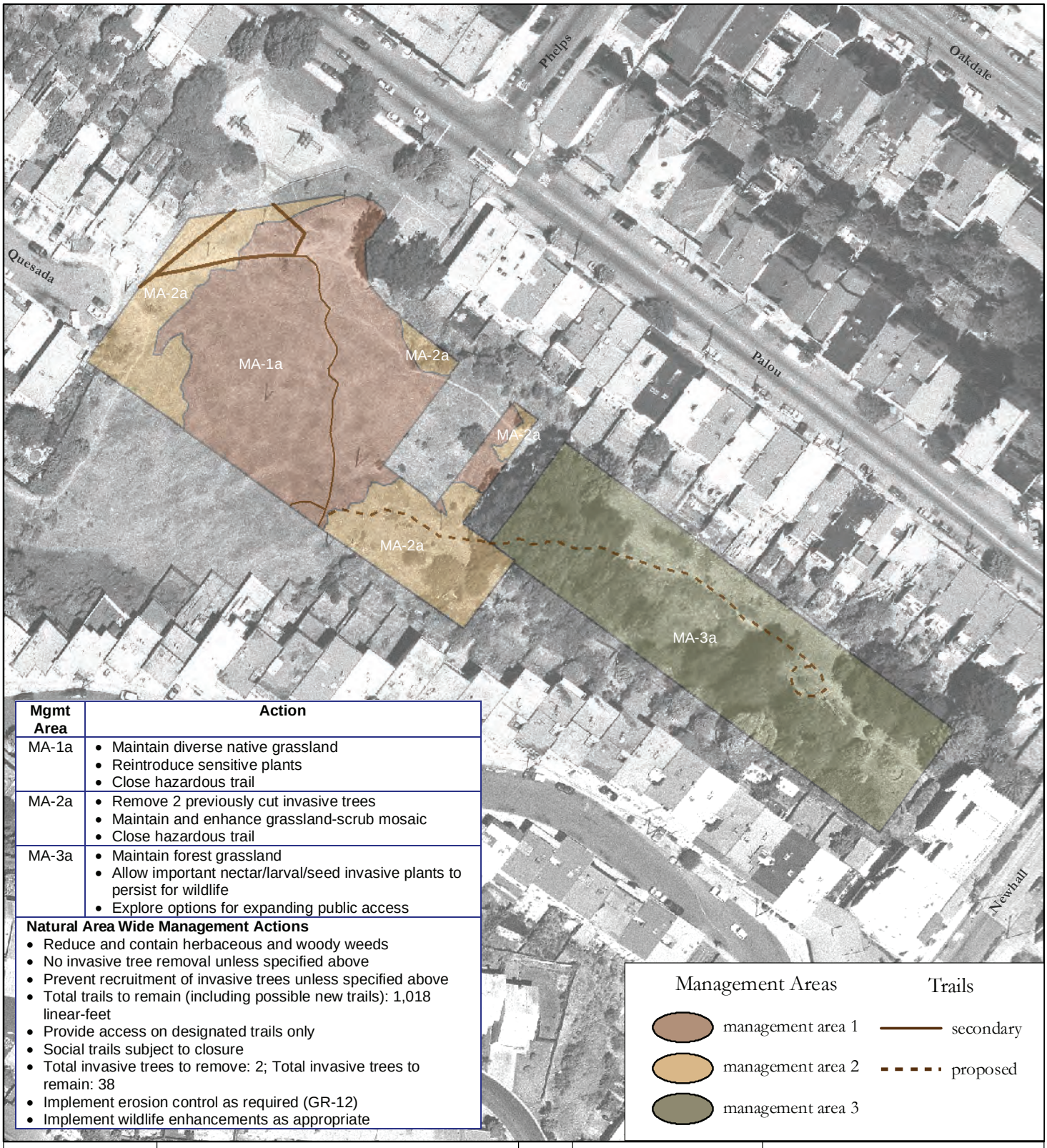
FIGURE 6.2 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Mt. Davidson

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Reintroduce sensitive plants • Close hazardous trail
MA-2a	• Remove 2 previously cut invasive trees • Maintain and enhance grassland-scrub mosaic • Close hazardous trail
MA-3a	• Maintain forest grassland • Allow important nectar/larval/seed invasive plants to persist for wildlife • Explore options for expanding public access

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 1,018 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 2; Total invasive trees to remain: 38
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100
Feet

FIGURE 6.20 - 4

MANAGEMENT AREAS AND TRAIL PLAN

Palou Phelps

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain tule marsh • If found, relocate western pond turtle to Lake Merced • Consider reintroducing Pacific chorus frog • Reduce and contain invasive aquatic plant species, such as *Ludwigia* • Restrict dog access to tule marsh and water's edge
MA-2a	• Maintain and enhance riparian and coastal scrub • Maintain and enhance oak woodland-coastal scrub mosaic • Maintain views • If found, relocate western pond turtle to Lake Merced • Reintroduce sensitive plants • Limit access including dogs to designated trails, platforms and overlooks, install temporary fencing, if necessary
MA-2b	• Maintain and enhance riparian habitat
MA-2c	• Protect red-tailed hawk nest
MA-3a	• Maintain and enhance urban forest • Improve or re-route concrete trail at west end
MA-3b	• Maintain and enhance a riparian corridor

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 2,562 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 1,000
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate
- No change to existing Dog Play Area

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s Street-Map 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 50 100 200
Feet

FIGURE 6.7 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Pine Lake

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment Mission blue butterfly habitat
MA-1b	• Maintain riparian and open water habitats • Restrict dog access, fence if necessary
MA-1c	• Remove approximately 50 invasive trees • Maintain diverse native grassland • Augment Mission blue butterfly habitat
MA-1d	• Maintain riparian and open water habitats surrounded by coastal scrub • Augment red-legged frog and San Francisco garter snake habitat • Restrict dog access to sensitive habitat at Horse Shoe Pond, fence if necessary • Remove tires
MA-1e	• Maintain riparian and open water habitat surrounded by coastal scrub • Augment red-legged frog and San Francisco garter snake habitat • Restrict dog access to sensitive habitat area, fence if necessary

Mgmt Area	Action
MA-1f	• Maintain an emergent wetland and open water habitat surrounded by coastal scrub • Augment red-legged frog and San Francisco garter snake habitat with willow plantings • Restrict dog access to sensitive habitat area, fence if necessary
MA-2a	• Remove approximate 50 invasive trees • Maintain and enhance coastal scrub
MA-2b	• Maintain and enhance native grassland
MA-2c	• Remove approximately 200 invasive trees • Maintain and enhance a scrub-grassland mosaic
MA-2d	• Remove approximately 50 invasive trees • Maintain and enhance riparian scrub
MA-2e	• Remove approximately 50 invasive trees • Maintain and enhance native grassland • Augment Mission blue butterfly habitat
MA-2f	• Thin eucalyptus trees by 50 percent • Maintain and enhance mixed forest-scrub mosaic • Work with SF Archers to develop a plan for safe public access

Mgmt Area	Action
MA-2g	• Thin eucalyptus trees by 75 percent • Maintain and enhance native coastal scrub • Work with SF Archers to develop a plan for safe public access
MA-2h	• Thin eucalyptus trees by 75 percent • Maintain and enhance native coastal scrub • Augment Mission blue butterfly habitat
MA-2i	• Thin eucalyptus trees by 75 percent • Maintain and enhance native coastal scrub • Augment Mission blue butterfly habitat
MA-2j	• Thin eucalyptus trees by 75 percent • Maintain and enhance native coastal scrub
MA-2k	• Thin eucalyptus trees by 50 percent • Maintain and enhance mixed forest-scrub mosaic • Work with SF Archers to develop a plan for safe public access
MA-3a	• Maintain and enhance urban forest

Mgmt Area	Action
MA-3b	• Maintain and enhance mixed grassland-scrub mosaic
MA-3c	• Maintain and enhance grassland
MA-3d	• Maintain and enhance grassland-forest mosaic
MA-3e	• Maintain and enhance grassland-forest mosaic
MA-3f	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 15,880 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 15,000; Total invasive trees to remain: 39,000
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography from HJW for NAP, 1995, 2-foot pixels; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 24, 2005.

N

0 500 1,000 2,000
Feet

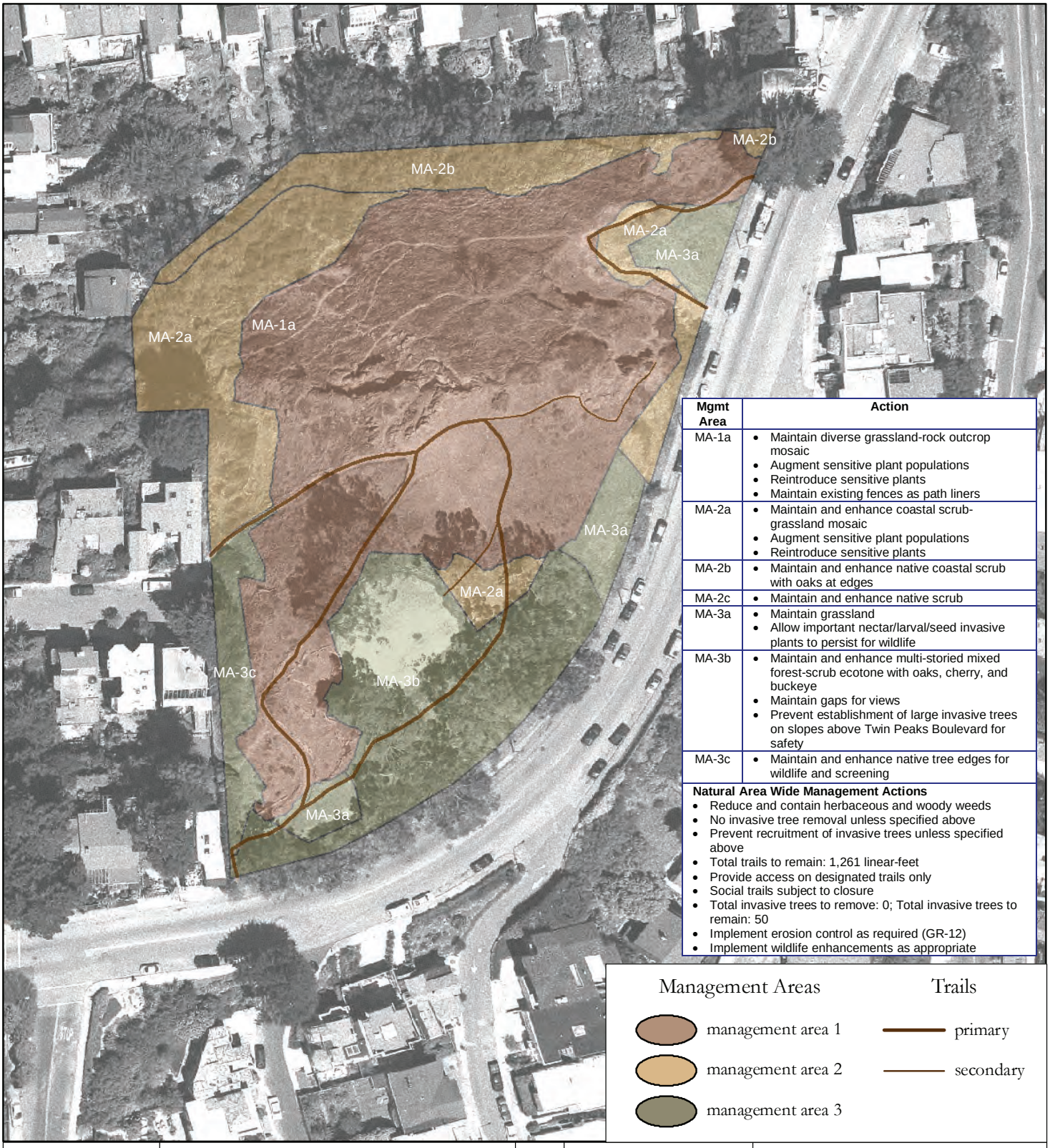
FIGURE 6.4-5

MANAGEMENT AREAS AND TRAIL PLAN

Sharp Park

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse grassland-rock outcrop mosaic • Augment sensitive plant populations • Reintroduce sensitive plants • Maintain existing fences as path liners
MA-2a	• Maintain and enhance coastal scrub-grassland mosaic • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2b	• Maintain and enhance native coastal scrub with oaks at edges
MA-2c	• Maintain and enhance native scrub
MA-3a	• Maintain grassland • Allow important nectar/larval/seed invasive plants to persist for wildlife
MA-3b	• Maintain and enhance multi-storied mixed forest-scrub ecotone with oaks, cherry, and buckeye • Maintain gaps for views • Prevent establishment of large invasive trees on slopes above Twin Peaks Boulevard for safety
MA-3c	• Maintain and enhance native tree edges for wildlife and screening

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 1,261 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 50
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 1

management area 2

management area 3

Trails

primary

secondary

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 25 50 100

Feet

FIGURE 6.14 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Tank Hill

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Reintroduce sensitive plants • Restrict motorcycle and mountain bike use, install fences if necessary • Maintain existing fences • Monitor potential impacts to endangered Mission blue butterfly habitat and install trailside fencing if necessary
MA-2a	• Remove 3 invasive trees • Maintain and enhance coastal scrub-grassland mosaic • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Reintroduce sensitive plants • Maintain existing fences • Restrict motorcycle and mountain bike use, install fences if necessary

Mgmt Area	Action
MA-3a	• Maintain and enhance an urban forest-scrub mosaic • Allow important nectar/larval/seed invasive plants to persist for wildlife • Consider developing new trails along Twin Peaks Boulevard
MA-3b	• Maintain and enhance coastal scrub • Allow important nectar/larval/seed invasive plants to persist for wildlife

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain (including possible new trails): 6,939 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 3; Total invasive trees to remain: 87
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

- management area 1
- management area 2
- management area 3

Trails

- primary
- secondary

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 29, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised October 11, 2005.

N

0 75 150 300
Feet

FIGURE 6.8 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Twin Peaks

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-2a	• Maintain and enhance oak woodland and coastal scrub

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 0; Total invasive trees to remain: 0
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Management Areas

management area 2

EIP ASSOCIATES

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's StreetMap 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

N

0 15 30 60
Feet

FIGURE 6.16 - 4

MANAGEMENT AREAS AND TRAIL PLAN

15th Avenue Steps

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	Maintain diverse native grassland
	Reintroduce sensitive plants
MA-2a	Maintain and enhance grassland
MA-3a	Maintain and enhance multi-storied forest-scrub ecotone with oaks, and buckeye
Natural Area Wide Management Actions	
	Reduce and contain herbaceous and woody weeds No invasive tree removal unless specified above Prevent recruitment of invasive trees unless specified above Provide access on designated trails only Social trails subject to closure Total invasive tree removal: 0; Total invasive trees to remain: 0. Implement erosion control as required (GR-12) Implement wildlife enhancements as appropriate

SAN FRANCISCO RECREATION & PARKS

Source: Orthophoto - SFDT, 2007; Street Data - SFDPW, 2009;
Significant Natural Area Data created by RPD Planning from information provided by RPD Natural Area Program, 2010;
All Data are NAD 1983 StatePlane California III FIPS 0403 Feet

Created by Sean Stasio, SFRPD Planning Division
for SFRPD Significant Natural Areas Program, NOvember 2010

N

0 25 50 75 100
Feet

FIGURE 6.27-4

MANAGEMENT AREAS

Everson/Digby

Significant Natural Resource Areas
Management Plan

San Francisco, California

APPENDIX C

Cultural Resources

SAN FRANCISCO
PLANNING DEPARTMENT

MEMO

Historic Resource Evaluation Response

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San Francisco,
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415.558.6409

Planning
Information:
415.558.6377

MEA Planner:	Jessica Range
Project Address:	**Significant Natural Resource Areas Management Plan: Sharp Park Golf Course, Pacifica**
Block/Lot:	N/A
Case No.:	2005.1912E
Date of Review:	February 8, 2011
Planning Dept. Reviewer:	Shelley Caltagirone (415) 558-6625 | shelley.caltagirone@sfgov.org

PROPOSED PROJECT ☐ Demolition ☒ Alteration

PROJECT DESCRIPTION

The project is the implementation of the San Francisco Recreation and Parks Department's Significant Natural Resource Areas Management Plan. The plan establishes goals and objectives for 32 Natural Areas, including Sharp Park Golf Course located in Pacifica. The specific goals and objectives are listed fully in Chapters 2 and 3 of the Sharp Park Golf Course Historical Resources Evaluation (HRE) report. In summary, the proposed project would convert about 19 acres of the golf course to Natural Area to facilitate restoration of the Laguna Salada and wildlife habitats associated with the property. Both the lagoon and pond would be excavated extensively and the dredge spoils would be used to raise Holes 10, 14, 15, and 18, creating upland habitat on the east edge of Laguna Salada. Thirteen acres of the golf course would be converted to upland habitat along the east side of the lagoon and would require that Holes 10 and 13 are slightly shortened or narrowed. A dispersal corridor between the lagoon and the pond would be constructed with upland features and would necessitate closing Hole 12 of the golf course. A post and rail fence would also be installed along the seawall to the west of the lagoon, with additional fencing around the wetland complex to discourage human and pet intrusion.

PRE-EXISTING HISTORIC RATING / SURVEY

The golf course and the clubhouse were separately designated as historic landmarks for the City of Pacifica in 2009. The property is not listed on the state or national registries. The property is considered a "Category A" (Known Historic Resource) property for the purposes of the Planning Department's California Environmental Quality Act (CEQA) review procedures.

HISTORIC DISTRICT / NEIGHBORHOOD CONTEXT

The 411-acre golf course is located in the town of Pacifica in San Mateo County. It borders the Pacific Ocean and is bisected by Highway 1. Thirteen fairways, the clubhouse, and Laguna Salada are located to the west of the highway, and the four remaining fairways are located to the east of the highway.

1. **California Register Criteria of Significance:** A building may be an historical resource if it meets any of the California Register criteria listed below. If more information is needed to make such a determination please specify what information is needed. *(This determination for California Register Eligibility is made based on existing data and research provided to the Planning Department by the above named preparer / consultant and other parties. Key pages of report and a photograph of the subject building are attached.)*

Event: or	☒ Yes	☐ No	☐ Unable to determine
Persons: or	☐ Yes	☒ No	☐ Unable to determine
Architecture: or	☒ Yes	☐ No	☐ Unable to determine
Information Potential:	☐ Further investigation recommended.		
District or Context:	☒ Yes, may contribute to a potential district or significant context.		
	If yes, period of significance: 1929-1932		

The Planning Department concurs with Tetra Tech's determination that the subject property appears to be eligible for listing on the California Register for its significance under Criteria 1 (Events) and 3 (Architecture). The golf course's development is associated with the broader event of the golden age of golf in the US and in California. The course is also an important example of a seaside golf course designed by a master landscape architect, Alister Mackenzie. Please refer to Section 5.2 of the HRE report for a full analysis of the resource's historical significance.

---

2. **Integrity** is the ability of a property to convey its significance. To be a resource for the purposes of CEQA, a property must not only be shown to be significant under the California Register criteria, but it also must have integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The subject property has retained or lacks integrity from the period of significance noted above:

Location:	☒ Retains	☐ Lacks	**Setting:**	☒ Retains	☐ Lacks
Association:	☒ Retains	☐ Lacks	**Feeling:**	☒ Retains	☐ Lacks
Design:	☒ Retains	☐ Lacks	**Materials:**	☒ Retains	☐ Lacks
Workmanship:	☒ Retains	☐ Lacks			

The resource retains sufficient integrity in all aspects of its character to convey its historical significance. Please refer to Section 5.3 of the HRE report for a full analysis of property's integrity.

---

3. **Determination** of whether the property is an "historical resource" for purposes of CEQA.

☐ No Resource Present *(Go to 6 below.)* ☒ Historical Resource Present *(Continue to 4.)*

---

4. **If the property appears to be an historical resource,** would the proposed project materially impair the resource (i.e. alter in an adverse manner those physical characteristics which justify the property's inclusion in any registry to which it belongs)?

☐ The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. *(Continue to 5 if the project is an alteration.)*

☒ The project is a significant impact as proposed. *(Continue to 5 if the project is an alteration.)*

The Planning Department fully concurs with the impacts analysis provided by Tetra Tech in Section 5.4 of the HRE report. In summary:

Project Impacts:

- Raising Holes 10, 14, 15, and 18 *would not cause a significant impact* on the character-defining features of the golf course and the holes would remain in their original locations and the visual character of their fairways would only be minimally affected.

- The closure of Hole 12 *would cause a significant impact* to the historic resource as the work would eliminate an original hole and fairway on the west side of the course. Its removal would significantly alter the original golf course design and boundaries.

- The proposed fencing would add a modern element to the golf course but would not harm the character or setting of the resource. This addition to the landscape *would not cause a significant impact* to the historic resource.

- Modifying approximately 13 acres of the golf course to create upland habitat along the east side of the lagoon would require slightly shortening or narrowing Holes 10 and 13. This alteration would significantly alter the character of these original fairways. Therefore, the work *would cause a significant impact* to the historic resource.

Alternative Project Impacts:

- The recreation analysis of the SNRAMP EIR proposes a mitigation measure (Option 1) that would create a new hole on the east side of Highway 1 as a replacement for Hole 12. This would result in a total of 13 holes on the west side of the highway and five holes on the east side. This arrangement would not maintain the historic balance of holes on either side of the highway and would change the historic boundaries of the course. This *would cause a significant impact* to the original design of the historic resource.

- The recreation analysis of the SNRAMP EIR proposes a mitigation measure (Option 2) that would create a new hole on the west side of Highway 1 as a replacement for Hole 12. While the mitigation measure would change the layout of the holes, this alternative mitigation measure would restore some of the elements that Mackenzie had implemented in his original design by placing the new holes in areas of the course where holes were historically placed. The proposed holes would also be in keeping with the historic boundaries of the golf course. Because of the restorative aspect of the work, this mitigation *would cause a less than significant impact* to the resource.

The project would result in significant impacts to several character-defining features of the golf course, including Holes 10, 12, and 13.

5. **Character-defining features** of the building to be retained or respected in order to avoid a significant adverse effect by the project, presently or cumulatively, as modifications to the project to reduce or avoid impacts. Please recommend conditions of approval that may be desirable to mitigate the project's adverse effects.

   The character-defining features of the property are:

   - The original features and design of the clubhouse;
   - The original features and design of the permanent maintenance building; and,
   - The original features and design of the golf course, including the 12 original holes (current holes 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17, and 18), the original landscape features, and the cypress tree plantings that line the fairways.

   Documentation of the historic cultural landscape by a qualified architectural historian should be completed before the commencement of any landscape alterations, as described in Chapter 6 of the HRE report. However, documentation of the resource will not mitigate the impacts of the project to Holes 10, 12, and 13 to a less than significant level.

---

6. **Would the proposed project have an adverse effect on off-site historical resources, such as adjacent historic properties?**

   ☐ Yes ☒ No ☐ Unable to determine

   There are no identified off-site historical resources that would be affected by the project.

SENIOR PRESERVATION PLANNER REVIEW

Signature: Tina Tam Date: 2/15/2011

Tina Tam, *Senior Preservation Planner*

cc: Linda Avery, *Recording Secretary*, Historic Preservation Commission
Virnaliza Byrd / Historic Resource Impact Review File

SC: G:\DOCUMENTS\Cases\CEQA\EIR\Significant Natural Resource Areas Management Plan\Sharp Park Golf Course_HRER.doc

SAN FRANCISCO
PLANNING DEPARTMENT

MEMO

Historic Resource Evaluation Response

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Fax:
415.558.6409

Planning
Information:
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MEA Planner:	Jessica Range
Project:	**Significant Natural Resource Areas Management Plan: Mount Davidson**
Block/Lot:	N/A
Case No.:	2005.1912E
Date of Review:	January 12, 2011
Planning Dept. Reviewer:	Shelley Caltagirone (415) 558-6625 | shelley.caltagirone@sfgov.org

PROPOSED PROJECT ☐ Demolition ☒ Alteration

PROJECT DESCRIPTION

The project is the implementation of the San Francisco Recreation and Parks Department's Significant Natural Resource Areas Management Plan. The plan establishes goals and objectives for 32 Natural Areas, including Mount Davidson. The specific plan actions for this site are primarily vegetation changes to maintain the health of the existing forest. The work would include the removal of a portion of the existing invasive tree species, including approximately 1,600 of the estimated 11,000 blue gum eucalyptus trees, and the introduction of native plant species. There are no proposed changes to the hardscape features of the natural area (i.e. retaining walls and steps).

PRE-EXISTING HISTORIC RATING / SURVEY

The property is not currently listed on any local, state, or national registries. The property is considered a "Category B" (Properties Requiring Further Consultation and Review) property for the purposes of the Planning Department's California Environmental Quality Act (CEQA) review procedures due to the age of the park and structures.

HISTORIC DISTRICT / NEIGHBORHOOD CONTEXT

Mount Davidson Natural Area is in south-central San Francisco south of Portola Drive in the Miraloma neighborhood. Forests cover approximately 30 acres of the 40-acre Natural Area and the area contains WPA-era retaining walls and staircases. It is also the location of the Mount Davidson cross erected in 1929 (the cross has been privately owned since 1997 and is not considered part of the Mount Davidson Natural Area). Please refer to the attached "Mount Davidson WPA-Era Retaining Walls & Stairs" DPR form, Sections P3a and B10, for a full description of the site and associated structures and their historic context.

---

1. **California Register Criteria of Significance:** A building may be an historical resource if it meets any of the California Register criteria listed below. If more information is needed to make such a determination please specify what information is needed. *(This determination for California Register*

Eligibility is made based on existing data and research provided to the Planning Department by the above named preparer / consultant and other parties. Key pages of report and a photograph of the subject building are attached.)

Event: or	☒ Yes	☐ No	☐ Unable to determine
Persons: or	☒ Yes	☐ No	☐ Unable to determine
Architecture: or	☒ Yes	☐ No	☐ Unable to determine
Information Potential:	☐ Further investigation recommended.		
District or Context:	☒ Yes, may contribute to a potential district or significant context. If yes, period of significance: 1885-1943		

The WPA-era staircases and retaining walls located at Mount Davidson were evaluated by Tetra Tech for eligibility for listing on the California Register. These hardscape features were found to be eligible for listing on the California Register under Criterion 1 (Event) and 3 (Architecture) for their association with WPA/New Deal Construction. The Planning Department concurs with the findings presented in the attached DPR form, Section B10. (See form for full evaluation of these features.)

Tetra Tech also prepared a memorandum[1] describing the history of the urban forest located at Mount Davidson and the establishment of the city park in this location. Based upon this information the Planning Department finds that the Mount Davidson natural area is potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape. Although further research is required to establish a full historic context for the site, Mount Davidson is a prominent topographical feature in San Francisco that has historically held special natural and cultural significance for the city. The site is associated with local philanthropist Adolph Sutro, with an annual Easter ceremony established in 1923, and with the early development of natural areas dedicated to recreational use within San Francisco. For these reasons, the natural area will be considered a historic resource for the purposes of this review.

Sutro, known for his Comstock Lode engineering and as a philanthropist, and specifically his conservationist activities, purchased the Mount Davidson (then known as Blue Mountain) property in 1881 and began planting the forest circa 1885. This activity occurred around the same time that Sutro was helping to organize the first California Arbor Day held in 1886. The original forest was planted with pine, cypress, and eucalyptus trees; however, over time the eucalyptus have begun to dominate and have occasionally been thinned to retain the diversity of the forest. The property was transferred to A.S. Baldwin in 1909. During this time the mountain was given the name 'Mount Davidson', and the first public trails were established on the property. In 1923 the first Easter ceremony was held at the top of the mountain, beginning the tradition which continues through today. The property was finally purchased by the City in 1927 and the land was dedicated as a city park in 1929. In the same year as the park dedication, a permanent cross was constructed at the mountaintop for the yearly Easter services. As noted above the park became the site of a WPA-era work project between 1936-1943. Based upon these facts, the period of significance for the potential historic landscape would

[1] Memorandum regarding "Summary of History of Trees on Mount Davidson Taken from Research Conducted for DPR 523 Forms for Mount Davidson WPA-era Walls and Stairs" to Sophie Hayward, Planning Department, from Julia Mates, Historian, Tetra Tech, Inc. dated August 10, 2010.

appear to be 1885-1943, beginning with the forest planting and extending through to what appears to be the last major improvement project for the park.

---

2. **Integrity** is the ability of a property to convey its significance. To be a resource for the purposes of CEQA, a property must not only be shown to be significant under the California Register criteria, but it also must have integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The subject property has retained or lacks integrity from the period of significance noted above:

Location:	☒ Retains	☐ Lacks	**Setting:**	☒ Retains	☐ Lacks
Association:	☒ Retains	☐ Lacks	**Feeling:**	☒ Retains	☐ Lacks
Design:	☒ Retains	☐ Lacks	**Materials:**	☒ Retains	☐ Lacks
Workmanship:	☒ Retains	☐ Lacks			

Other than the expected weathering of outdoor landscape features, the retaining wall and staircases have retained a high level of integrity in all aspects of their significance. Although a full survey of the site has not been conducted, the historic landscape also appears to be intact and to display the same range of vegetation first established in Sutro Forest in 1885. As is expected in a living landscape, the forest has grown over time; however this change does not diminish the integrity of the site.

---

3. **Determination** of whether the property is an "historical resource" for purposes of CEQA.

☐ No Resource Present *(Go to 6 below.)* ☒ Historical Resource Present *(Continue to 4.)*

---

4. **If the property appears to be an historical resource,** would the proposed project materially impair the resource (i.e. alter in an adverse manner those physical characteristics which justify the property's inclusion in any registry to which it belongs)?

☒ The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. *(Continue to 5 if the project is an alteration.)*

☐ The project is a significant impact as proposed. *(Continue to 5 if the project is an alteration.)*

Staff has reviewed the proposed project and found that the work will not result in any significant changes to the historic landscape or its hardscape features. The selective tree removal will help to restore the historic balance of tree species within the forest and will preserve its historic character. Moreover, the historic landscape's use as a public park will be preserved. Therefore, the project will not cause a substantial adverse change in the significance of the resource.

5. **Character-defining features** of the building to be retained or respected in order to avoid a significant adverse effect by the project, presently or cumulatively, as modifications to the project to reduce or avoid impacts. Please recommend conditions of approval that may be desirable to mitigate the project's adverse effects.

   The character-defining features of the Mount Davidson historic landscape appear to be the WPA-era hardscape retaining walls and stairs; the Sutro forest, composed of pine, cypress, and eucalyptus trees; and, the Mount Davidson cross.

---

6. **Would the proposed project have an adverse effect on off-site historical resources, such as adjacent historic properties?**

   ☐ Yes ☒ No ☐ Unable to determine

   There are no indentified historic resources at the perimeter of the Mount Davidson natural area. The project would not directly or indirectly affect any off-site historic resources.

SENIOR PRESERVATION PLANNER REVIEW

Signature: _____ Date: 2-10-2011

Tina Tam, *Senior Preservation Planner*

cc: Linda Avery, *Recording Secretary*, Historic Preservation Commission
Virnaliza Byrd / Historic Resource Impact Review File

SC: G:\DOCUMENTS\Cases\CEQA\EIR\Significant Natural Resource Areas Management Plan\Mt. Davidson_HRER.doc

Historical Resources Evaluation Report

For the

Sharp Park Golf Course
Part of the Natural Areas
City and County of San Francisco

Pacifica, San Mateo County

January 2011

Prepared for:

City and County of San Francisco Planning Department
Major Environmental Analysis
1650 Mission Street, Suite 400
San Francisco, California 94103

Prepared by:

Tetra Tech, Inc.
555 Market Street, 15th Floor
San Francisco, California 94105

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(All photographs are by Tetra Tech, Inc., unless otherwise noted.)

APPENDIX

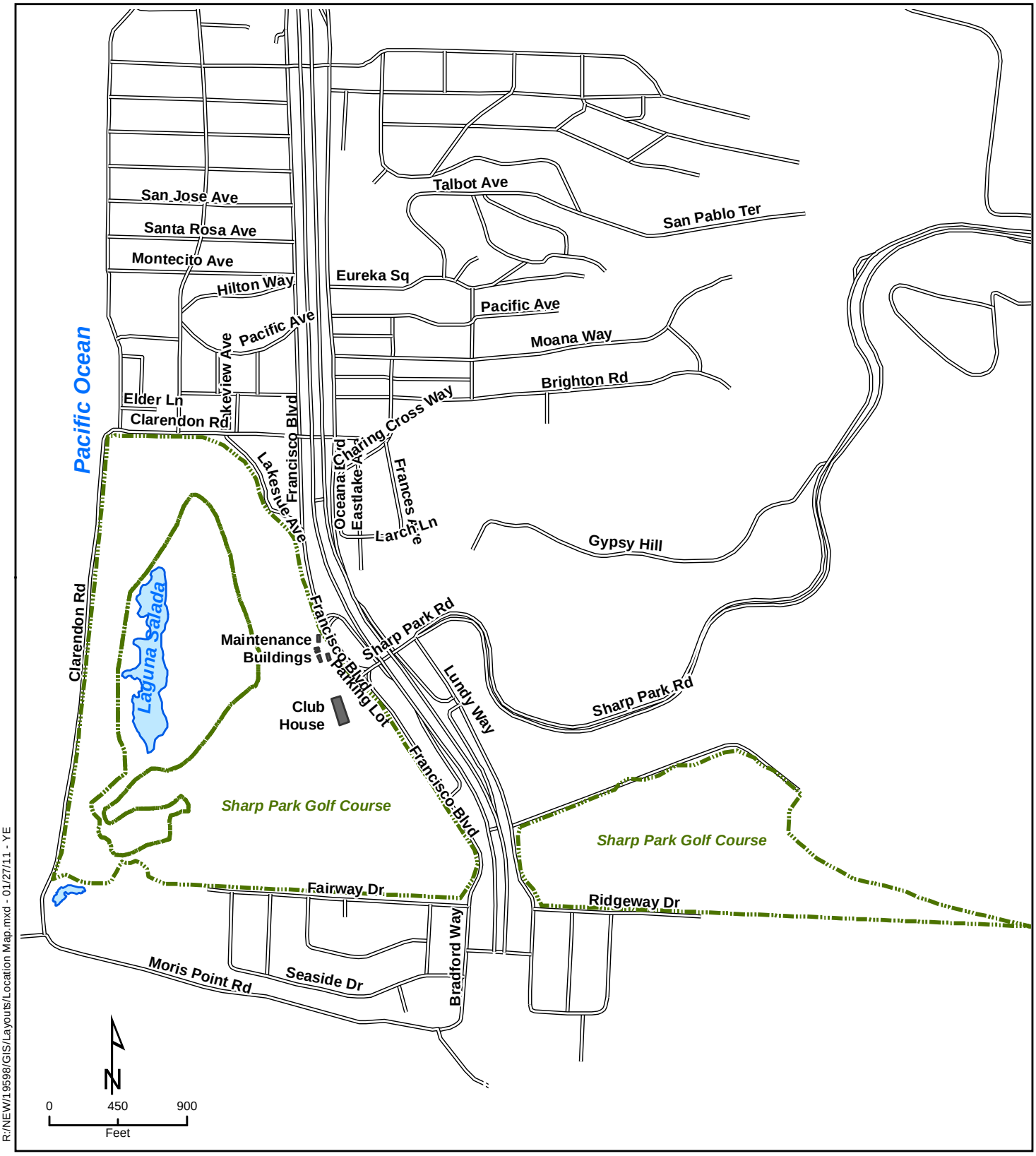
A DPR 523 Forms

CHAPTER 1
SUMMARY OF FINDINGS

In response to public concerns raised during the California Environmental Quality Act (CEQA) scoping process for the Significant Natural Resource Area Management Plan (SNRAMP) Environmental Impact Report (EIR), this Historical Resources Evaluation (HRE) addresses Sharp Park Golf Course as a designed historic landscape. CEQA requires that the lead agency for the project, the City and County of San Francisco Planning Department Major Environmental Analysis (MEA), determine the impact that implementing the SNRAMP may have on historical resources at Sharp Park Golf Course. MEA and the San Francisco Recreation and Park Department (SFRPD) are preparing an EIR for this project, for which this HRE will be a technical background report. Tetra Tech prepared this HRE, in accordance with Section 15064.5(a)-(b) of the CEQA guidelines and using the criteria outlined in Section 5924.1 of the California Public Resources Code and Section 15126.4 of the CEQA guidelines. The report identifies known or potential historical resources at Sharp Park Golf Course that could be impacted by the project and assesses potential impacts on those resources. The report also proposes measures to mitigate any substantial adverse changes to historical resources. The location of the Golf Course is shown in Figure 1.

Based on the scoping comments from the Initial Study, Tetra Tech and MEA established the project's area of potential effects (APE) as the footprint of the Sharp Park Golf Course[1] (Figure 2). Tetra Tech's historian identified the built environment resources within the APE that could be potentially impacted by this project. These resources constitute the survey population properties for this study, which are Sharp Park Golf Course, including the course itself, maintenance buildings, and clubhouse.

[1]The term "area of potential effect" is associated with historic resources studied in compliance with the National Historic Preservation Act, Section 106 and its regulation in Title 36, Code of Federal Regulations, Section 800. APE is used in this document to define the geographical area that the SNRAMP EIR project may directly or indirectly impact. This report is prepared for the project's compliance under CEQA and use of APE should not be taken to imply that the SNRAMP EIR project is a federal undertaking that must comply with Section 106.



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Location Map

Legend

Sharp Park Golf Course Boundary

Pacifica, California

TETRA TECH

Figure 1



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Legend

- Original holes
- Modified original holes
- Built after 1941

TETRA TECH

Existing Golf Course

Pacifica, California

Figure 2

Tetra Tech inventoried and evaluated the golf course to assess whether it should be considered a historical resource for the purposes of CEQA, that is, whether it is listed on, determined eligible for listing on, or appears to meet the criteria for listing on the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP).

Tetra Tech concludes that Sharp Park Golf Course appears to meet the criteria for listing on the CRHR and NRHP and should be considered a historical resource for the purposes of CEQA. Furthermore, the project would cause a substantial adverse change to the Sharp Park Golf Course because some of the project activities would diminish the historic integrity of the property. Therefore, mitigation measures are proposed in this document.

CHAPTER 2
PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats, known as Natural Areas, have been preserved in San Francisco and Pacifica, in the parks that are managed by the SFRPD. In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation and Park Commission approved the first SNRAMP.

Over the course of several years, the SFRPD developed a new SNRAMP (SFRPD 2006), with a final draft plan based on the 1995 plan and published in February 2006. This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, all of which are in San Francisco except Sharp Park, which is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP.

2.2 PROJECT OBJECTIVES

Summarized below are the goals and objectives of the SNRAMP.

Conservation and Restoration Goals

- To identify existing natural resources;
- To maintain viable populations of all special status species;
- To maintain and enhance native plant and animal communities;
- To maintain and enhance local biodiversity;

- To reestablish native community diversity, structure, and ecosystem function where degraded;
- To improve Natural Area connectivity; and
- To decrease the extent of invasive exotic species cover.

Education Goals

- To provide services that will enable all age groups to better understand the values of the Natural Areas, including ecosystem functions and socioeconomic values;
- To provide opportunities for service learning to students in the San Francisco Unified School District; and
- To provide diverse outdoor classroom opportunities.

Research Goals

- To provide a research framework and research opportunities to schools and universities that will lead to an enhanced understanding of the natural systems and an informed adaptive management approach;
- To contribute to the scientific understanding of local natural systems; and
- To contribute to the field of restoration ecology and other applied sciences.

Stewardship Goals

- To develop and support opportunities for public stewardship of Natural Areas;
- To foster neighborhood stewardship and volunteer groups; and
- To provide diverse opportunities for participation by stewardship groups.

Recreation Goals

- To provide opportunities for passive recreational uses (e.g., hiking and nature observation) that are compatible with conservation and restoration goals and
- To improve and develop a recreational trail system that provides the greatest amount of accessibility while protecting natural resources.

Monitoring Goals

To establish a long-term monitoring program to:

- Identify the species on which monitoring should focus;
- Detect increases and declines in abundance, distribution, or health of special status species;
- Detect significant changes in acreage of native communities, wildlife habitats, and invasive species;
- Detect significant increases and declines in native species richness;

- Assess success of restoration in achieving conservation and restoration goals; and
- Provide an adaptive management framework for evaluating changes (e.g., conceptual model).

Design and Aesthetic Goals

- Where possible, to develop aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions, especially where adjacent parklands and traditionally landscaped areas abut Natural Areas;
- To maintain and develop viewpoints and viewsheds to enhance park experiences; and
- Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments.

Safety Goal

- To design and maintain landscapes that promotes public safety.

2.3 PROJECT LOCATION

The 411-acre Sharp Park is in the town of Pacifica in San Mateo County. The park borders the Pacific Ocean and is bisected by Highway 1. Thirteen fairways, the Sharp Park Golf Course clubhouse, and Laguna Salada are on the western side of Highway 1; the four remaining fairways are on the eastern side of Highway 1. Figure 1 is a map of Sharp Park Golf Course.

CHAPTER 3
PROPOSED PROJECT

Recommended Sharp Park Management Actions that include Sharp Park Golf Course in general are as follows:

- Implement improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following:
  - Create shallow pools within existing wetlands,
  - Continue monitoring red-legged frogs and San Francisco garter snakes,
  - Remove tires from Horse Stable Pond,
  - Install signs and barriers to keep dogs out of Horse Stable Pond
- Separate the small peninsulas within Laguna Salada from the mainland by small canals,
  - Restore Sanchez Creek by deepening the channel, expanding the creek corridor upstream, and installing buffer zones to limit human disturbance;
- Raise the area directly east of Laguna Salada to prevent flooding and plant with willows and other native vegetation to provide snake and frog basking sites, and to provide nesting habitat for riparian birds;
- Work with golf course staff to minimize use of chemicals;
- Educate golf course staff about the importance of identifying California red-legged frogs, San Francisco garter snakes, and forktail damselflies and their habitats;
- Work with golf course maintenance staff to incorporate native plants within bank stabilization efforts along Sanchez Creek where it flows through the golf course.

The following specific project activities would impact Sharp Park Golf Course:

- The areas that are currently open water within the lagoon and Horse Stable Pond would be deepened by two to three feet, and parts of the eastern portions of the lagoon and pond would be excavated extensively to restore open water habitat and to ensure that ample edge habitat consisting of open water/emergent vegetation interface would persist for the foreseeable future. Excavated dredge spoils appropriate for use as golf course substrate materials would be used on-site to raise Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. A dispersal corridor between the lagoon and the pond would be constructed with upland features designed to support the San Francisco garter snake; this action would necessitate closing Hole 12 of the Sharp Park Golf Course.
- A post and rail fence would also be installed along the seawall to the west of the lagoon, with additional fencing around the wetland complex to discourage human and pet intrusion into the restored habitat area.

The proposed project would convert about 19 acres of the Sharp Park Golf Course to Natural Area to facilitate Laguna Salada restoration. To restore California red-legged frog and San Francisco garter snake habitat at Laguna Salada, approximately 13 acres of the golf course would be modified to create upland habitat along the east side of the lagoon to provide critically important San Francisco garter snake upland habitat, to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded and to allow for the creation of new wetlands to compensate for those filled during the restoration process. This would primarily affect the layout of the golf course Holes 13 and 14, directly east of Laguna Salada. Holes 10 and 13 would be slightly shortened or narrowed, and Hole 12 would be removed. This habitat corridor would be approximately six acres, bringing the total of modified area at the golf course to about 19 acres. This change would affect the playability of the course.

The EIR for the project identifies mitigation to reduce this recreation impact on Sharp Park Golf Course. In order to create a habitat corridor between Horse Stable Pond and Laguna Salada, one of two potential mitigation measures would be implemented. These measures are detailed below.

Recreation Mitigation Measure, Option 1. The SFRPD would coordinate with a golf course consultant and would restore the playability of the Sharp Park Golf Course. One possible approach is the creation of a new Hole 7 east of Highway 1. Under this option, there would be a total of 13 holes on the west side of the Highway 1 and five holes on the east side. The bunkering and sculptured contouring would be characteristic of the design and strategy aesthetics of Alister Mackenzie, the famous golf-architect who had designed several courses in the US and abroad. The SFRPD would use a professional golf course architect to design the new and reconfigured holes and fairways, while distinguishing the new holes from the original historic holes.

Recreation Mitigation Measure, Option 2. The SFRPD would coordinate with a golf course consultant and would restore the playability of the Sharp Park Golf Course. Under this option, the golf course would be reconfigured to include 15 holes on the west side of Highway 1 and three holes on the east side. Two new holes and fairways would be created on the coast side of the course, to the west of Laguna Salada. The bunkering and sculptured contouring would be characteristic of the design and strategy aesthetics of Alister Mackenzie, the famous golf-architect who had designed several courses in the US and abroad. The SFRPD would use a professional golf course architect to design the new and reconfigured holes and fairways, while distinguishing the new holes from the original historic holes.

CHAPTER 4
RESEARCH AND FIELD METHODOLOGY

Tetra Tech conducted preliminary research at the City and County of San Francisco Planning Department and the City of Pacifica Planning Department to determine whether any previous studies or evaluations had been conducted for Sharp Park Golf Course. We also reviewed the NRHP and California Inventory of Historic Resources, as the golf course would automatically be eligible for listing on the CRHR and would be considered a historical resource for the purposes of CEQA if it was listed in the NRHP. None of the state or national registers identified Sharp Park Golf Course as a historical resource.[2] The golf course and the clubhouse were separately designated as historic landmarks for the City of Pacifica in 2009.[3]

Tetra Tech inventoried the golf course for recordation on DPR 523 forms and conducted research for this HRE in March and April 2010. We prepared a historic context to address the themes and background for the property, which we evaluated under the CRHR and NRHP criteria on the DPR 523 forms; the latter criteria applied because properties that are listed on or eligible for listing on the NRHP are automatically eligible for listing on the CRHR. Historical research was conducted at the San Francisco Public Library History Center and its general collections, California Historical Society, San Mateo County Public Library (various branches), and the City of Pacifica Planning and Economics Department. Research revealed that the relevant themes and context for discussing the significance of the golf course as a designed historic landscape include the growth and development of golf in San Francisco. The relevant period for the themes and context, as they relate to the survey population, is the early to mid-twentieth century.

[2]National Park Service, National Register Information System, online database http://www.nr.nps.gov/ and http://www.nationalregisterofhistoricplaces.com.
[3]Elizabeth Claycomb, City of Pacifica Planning and Economic Development Department, personal communication with Julia Mates, Tetra Tech March 8, 2010.

4.1 AREA OF POTENTIAL EFFECT

Tetra Tech and MEA established as the APE for this project the footprint of Sharp Park Golf Course, which has boundaries on both the east and west sides of the Highway 1. This APE includes all of the buildings and structures within the golf course boundaries.

4.2 HISTORICAL OVERVIEW

The following overview provides historic background to the project area and historic context for the golf course and includes a discussion of the development of golf in San Francisco. This historic context summarizes the context provided in the inventory and evaluation form in the appendix.

4.3 HISTORY OF SHARP PARK GOLF COURSE

Sharp Park Golf Course is on the former Mexican Rancho land of San Pedro. A portion of this land, 410 acres, was eventually owned by George Sharp, a prominent San Francisco attorney and corporate counsel for the Ocean Shore Railroad in the late 1880s.[4] When Sharp died in early 1882, the land was left to his wife, Honora. She died in 1905, and the land was left to her trustees, Ruben Lloyd and Adolph Spreckles, both members of the San Francisco Parks Commission. Spreckles sold his share of the property to the City and County of San Francisco in 1916 for 10 dollars in gold, and, after Lloyd passed away in 1917, the remaining shares of the land were bequeathed by the estate to the City of San Francisco.[5] The property was stipulated to be used for a park and recreation only.

The City and County of San Francisco commissioned Alister Mackenzie to design the course. Having worked on other seaside golf courses in Great Britain, Mackenzie believed that "golf in its early days was always played on commons or links land which bordered the sea. The natural characteristics of this type of land made it easily the most suitable for the game."[6] Mackenzie stated that Sharp Park, being constructed on land reclaimed from the sea "now has a great resemblance to real links land."[7] Jack Fleming, the City's golf course overseer appointed by the Parks Commission, was Mackenzie's assistant during the project. In the mid-1930s, Robert Hunter was appointed to supervise construction of the course.[8]

The location of Sharp Park Golf Course posed a challenge. The parcels of land designated for the course were next to the Pacific Ocean, and the land was composed of barren sand dunes and a lagoon. In order to construct the golf course and build up fairway grades, the Sharp Park site was dredged. The natural lagoon, Laguna Salada, remained within the golf course, and the design incorporated it by surrounding it with

[4]Sharp Park Golf Course occupies only 120 acres of this land.
[5]Sharp Park Golf Course Web site: http://www.sharpparkgc.com/.
[6]Alister Mackenzie, *The Spirit of St. Andrews* (1995 Published Posthumously Sleeping Bear Press, Chelsea, Michigan, p. 246).
[7]Mackenzie, *The Spirit of Saint Andrews*, pp. 171-172.
[8]National Golf Foundation Consulting, Inc., *Sharp Park Golf Course* (City of San Francisco, California, no date), p. 84. On file at City and County of San Francisco Park and Recreation Department vertical files, labeled "Miscellaneous Documents, Golf Course History."

fairways. Construction began on the course in 1929, and it took fourteen months to dredge the area around Laguna Salada marsh. Sharp Park Golf Club opened in 1932, after two delays due to drainage problems on the course from winter rains.[9]

The original layout of the golf course included Holes featuring multiple tees (Holes 2, 5, and 14), double fairways (Holes 5 and 10), cross bunkering (Hole 16), fairways in sand dunes (Holes 3 and 7), and several holes bordering Laguna Salada (Holes 4, 5, 8, 9, 10, and 11). Cypress trees dotted the setting.[10]

When constructed, the course used well water for irrigation. In the 1930s, the Works Progress Administration (WPA) installed a water pipeline for the course that extended from the San Bruno County Jail reservoir to a concrete pressure-reducing tank, 20 feet wide by 150 feet long. This pipeline provided water to the course for irrigation and for drinking until it was abandoned in place in 2008. The line extended through the canyon to the east of the course through the Hole 7 fairway.[11]

Golf courses have been called living things in the sense that they are mostly constructed of living elements, such as grass and trees, which grow and change over time. Soil erodes, changing the pitch of slopes; trees grow or are replanted, and the holes cannot be played as they were originally. Advancements in playing equipment also change the game.[12]

Courses are redesigned, replaced, or remodeled for two reasons; the first is to improve the layout of the course, the second is to adjust the course for advances in golf technology. Redesigning golf courses involves rerouting and adjusting holes. In golf course architecture, restoring courses is considered to be the act of bringing a course back to, or closer to, its original state.[13] At the same time, there are technological advances in the game of golf (balls, clubs, and mowing techniques) that advance and therefore result in alteration of the course to maintain playability. By the late 1920s, golf course designers accepted the idea that both natural and technological advances are factors, among others, that make it necessary to continuously improve golf courses, in order to maintain the strategy of the game.

4.3.1 Changes to the Course

The layout of Sharp Park Golf Course has undergone several alterations to accommodate natural changes in the landscape because of the course's location along the Pacific Ocean shoreline. The course was also modified to accommodate the anticipated realignment of Highway 1.

[9]Joe Faulkner, *Sharp Park*, 1970, www.sfpublic.golf.com.
[10]Daniel Wexler, *The Missing Links: America's Greatest Lost Golf Course & Holes* (Sleeping Bear Press, Chelsea, Michigan, 2000), pp. 114-115.
[11]Clyde Healy, Assistant City Engineer, *Report of Clyde E. Healy, Assistant City Engineer, City of San Francisco and Coordinator of WPA Projects*, (San Francisco, October 1935-1939), p. 53.
[12]Graves and Cornish, *Golf Course Design* (John Wiley & Sons, Inc, New York, 1998), pp. 127, 131-132.
[13]Graves and Cornish, *Golf Course Design*, pp. 131-132.

The first major alteration was in 1941, when a seawall or berm was constructed to keep the ocean from reaching and flooding the course. To make room for the berm, the two original oceanside Holes 3 and 7 were moved inland. Another alteration was removing the lagoon and the second fairway at original Hole 10 (current Hole 14). Course modifications also included the installation of a 4,000-gallon pump to help with annual flooding of Laguna Salada, rerouting fairways for holes on the east side of Highway 1, and modest alterations, such as renumbering and shortening some of the original fairways. More recent changes involved lengthening fairways and adding and rebuilding tee boxes from 1985 until 1994.

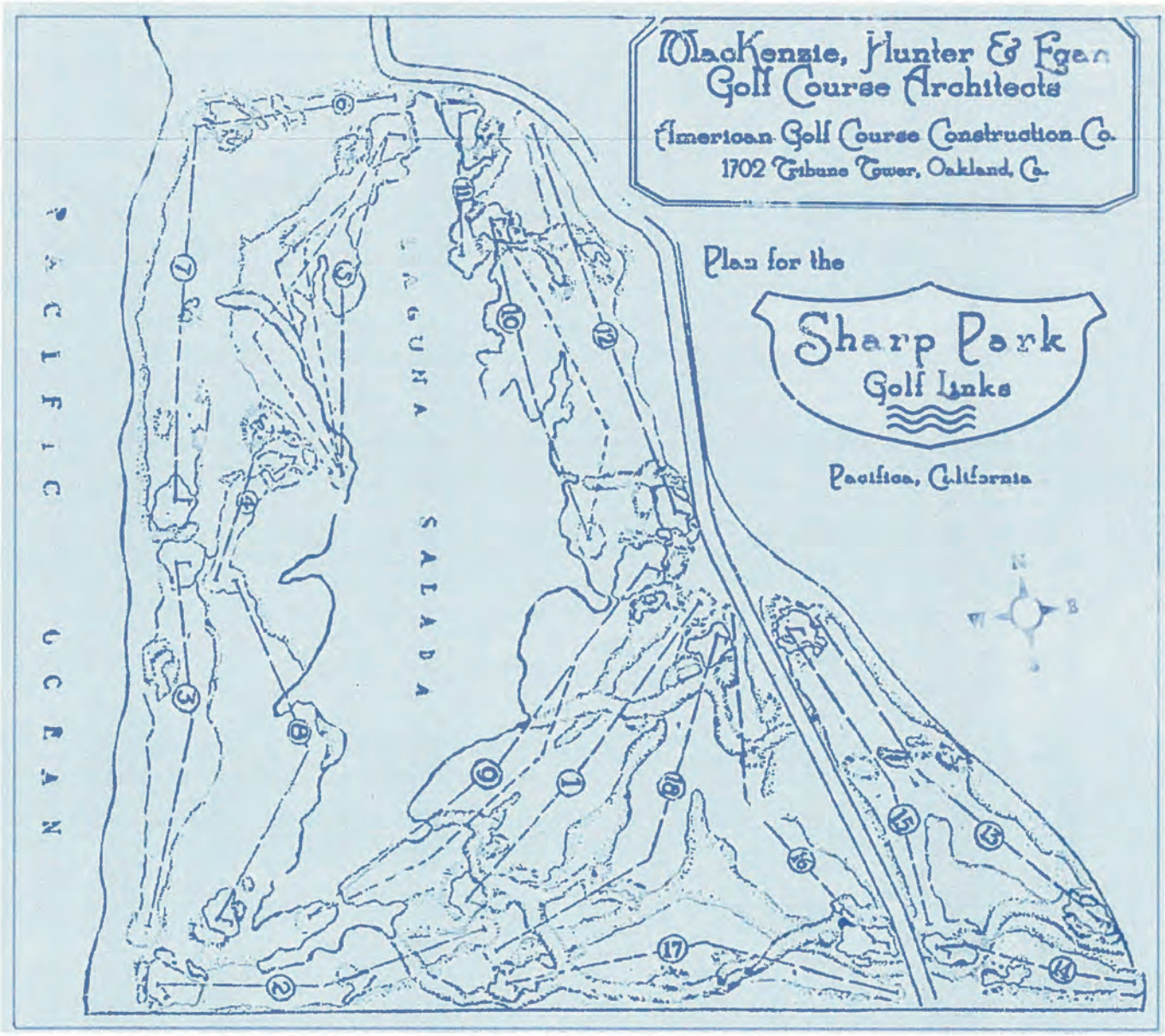
The original design of the course had three holes on the east side of what was a county road, in front (on the west side) of the clubhouse, as shown in Figure 3. Around 1943, the county road was improved and rerouted to become Highway 1, which no longer passed the west side of the club house but was now on the east side. Although Highway 1 was not realigned until sometime after 1940, the designers of the course knew the course would have to be modified to accommodate the road (Figure 3). In 1932, Jack Fleming, in writing about the course in the *San Francisco Call-Bulletin*, described it as being "at present along the edge of the county road which is planned to re-locate." Other, more minor alterations included changing sand trap shapes, filling in sand traps with grass, and rerouting fairways in 1962 and 1963. Between 1985 and 1994, several tees were lengthened and tee boxes were added or enlarged in order to accommodate female players and to accommodate larger numbers of golfers. Concrete cart paths were constructed along the back nine holes by 1996.

There has been a strong desire to maintain the original design layout of the course to the greatest extent. Many of the alterations have been forced by the natural changes in the landscape, with only a few changes made to accommodate advanced technology in golf clubs and ball construction. The goal has been to make the necessary modifications while preserving Sharp Park's function as a golf course, laden with elements of challenge and surprise, and to maintain playability.

4.3.2 History of Public Golf in San Francisco

The game of golf came to California in the late 1800s, and the first course was constructed in southern California at the Riverside Country Club in 1891. The first northern California golf course, a three-hole course built in 1893, was at the Burlingame Country Club. The first course to be constructed in San Francisco was the private San Francisco Golf Club in 1895.[14]

[14]Neal Hotelling, *Pebble Beach Golf Links: The Official History* (Sleeping Bear Press, Chelsea, Michigan, 1999), p. 20.



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Original Plan for Sharp Park Golf Course

Pacifica, California

TETRA TECH

Figure 3

While golf courses at private country clubs were gaining in popularity, golfers unable to afford the high prices of country clubs had very few places to play. In the early 1900s, avid golfers and wealthy members of private clubs, Jack Neville and Vincent Whitney, approached John McLaren, Supervisor of Golden Gate Park, about constructing a municipal golf course. Neville and Whitney then began designing San Francisco's first municipal golf course, Lincoln Park.[15] Lincoln Park remained the only San Francisco municipal golf course for 23 years, until the construction in 1925 of Harding Park, designed by Sam Whiting and Willie Watson.

The popularity of golf in San Francisco reflected the popularity of the sport within the entire country, and peaked during the 1920s. Often called "the golden age of golf," the sport grew in popularity during the late 1910s through the early 1930s, with many well-designed courses constructed during this period. Within the City of San Francisco, Lincoln Park and Harding Park were the only two public golf courses in San Francisco and, on weekends, they were overrun with golfers. The City decided to use the land in San Mateo County, formerly owned by George Sharp, for a third public golf course, named for the former landowner. Alister Mackenzie was commissioned to design the course, assisted by Jack Fleming, Superintendent of Maintenance for Golf Courses and Bowling Greens in San Francisco. Supervision of construction was given to Chandler Eagan, with whom Mackenzie had worked on Pebble Beach Golf Links in 1929.[16] In 1930, Robert Hunter, Jr., was appointed the superintendent for the remaining ten months of the course's construction. Willis Polk and Company architect Angus McSweeney prepared plans for the golf clubhouse.

Alister Mackenzie

Alister Mackenzie was born in Scotland in 1870. He served as the Alwoodley Golf Club Green Chairman in the early 1900s, assisting golf architect H. S. Colt with the design of the golf course in Leeds.[17] Mackenzie continued to work with Colt on other courses, and, in 1925, he established his own golf architecture firm and designed golf courses in Great Britain, Uruguay, Australia, Argentina, Canada, and the US.[18] Mackenzie's best work in America was done between 1928 and 1933. By the time Mackenzie was commissioned to work on Sharp Park, he was living in the Bay Area. He died in 1934.[19]

Mackenzie's concept of an ideal hole in perfect surroundings was one surrounded by sand dunes next to the seashore.[20] Mackenzie felt that the success of golf course construction depended entirely on making the best use of natural features and devising

[15]Joe Faulkner, 1970, p. 5; although the course was constructed in the early 1900s, it was not expanded to a full 18-hole course until 1917.
[16]Bo Links and Richard Harris. *Mackenzie's Sharp Park Under Siege*. Golf Club Atlas Web site: http://golfclubatlas.com/in-my-opinion/sharp-park
[17]Geoff Shackelford, *Grounds for Golf: the History and Fundamentals of Golf Course Design* (St. Martin's Press, New York, 2003), p. 154.
[18]Cornish and Whitten, *The Architects of Golf*, p. 81.
[19]Honorable Julie Lancelle, Bo Links, and Jeffrey Phillips, *Sharp Park Golf Course*, The Cultural Landscape Foundation, July 2009.
[20]Mackenzie, *Golf Architecture*, p, 28.

artificial ones indistinguishable from nature.[21] He also contended that a golf course must offer adventure in order to hold interest for continuous play. His courses provided interesting challenges for golfers, regardless of their skill level. Mackenzie's firm was also known for its original and distinctive bunkers, with irregular shapes and each with its own design.[22] He often had the overall vision for design of his courses and left the details to those who worked with him, such as Eagan. George Shackelford, in his book *Grounds for Golf*, describes Mackenzie as a master designer and offers that Mackenzie's secret to creating unique courses was his talent for routing.[23] Mackenzie designed his hole layout and sequencing on natural ground contours, not on any prescribed sequencing. Distinctive bunkering, the use of small hillocks around greens, and exciting hole locations were Mackenzie's trademark. As Shackelford describes, while many architects try to create a special course, Mackenzie "could figure out how best to fit holes onto a property and situate a golf course to evoke a comfortable, settled, connection to the ground. His course routings are always functional and original but rarely do they fight the contours of the property."

Mackenzie's notable US golf course designs were Cypress Point Golf Club, California (1928), Augusta National Golf Club, Georgia (1932), and Pasatiempo Golf Club, California (1929). Mackenzie was commissioned by the City and County of San Francisco to design Sharp Park Golf Course in 1929.

According to Geoffrey Cornish and Ron Whitten, golf architects and authors of the book, *The Architects of Golf*, post-World War II golf course designers were influenced most by Mackenzie's philosophies.[24]

Sharp Park Golf Course Clubhouse

The two-story clubhouse was designed the prestigious design firm of Willis Polk and Company, a highly respected architectural firm, responsible for many architectural masterpieces throughout northern California. Examples are the Palace of Fine Arts and the Hobart Building in San Francisco and the Water Temple in Sunol. The firm was also instrumental in rebuilding San Francisco after the 1906 earthquake. After Polk died in 1924, his firm developed the plans for the Sharp Park Golf Course Clubhouse, the chief architect of which was Angus McSweeney. The building was constructed by the Works Progress Administration, and a plaque on the clubhouse states, "Improved by Works Progress Administration 1935-1936." The clubhouse, designed in the Mission style of architecture, has undergone a few alterations over time.

[21]Mackenzie, *Golf Architecture*, p. 29.
[22]Shackelford, *Grounds for Golf*, p. 155.
[23]"Routing" is a golf term used to describe the path the course follows from the first tee to the 18th hole; Shackelford, *Grounds for Golf*, p. 156.
[24]Geoffrey S. Cornish and Ronald E Whitten, *The Golf Course* (New York: The Rutledge Press 1981), p. 8.

CHAPTER 5
FINDINGS AND CONCLUSIONS

Tetra Tech prepared this HRE using the criteria outlined in Section 5924.1 of the California Public Resources Code, as well as Section 15126.4 of the CEQA guidelines. The report identifies historical resources that could be impacted by the SNRAMP project and assesses potential impacts on the Sharp Park Golf Course.

5.1 EVALUATION CRITERIA

The criteria for identifying historical resources under CEQA are in Section 15064.5(a)(2)-(3) of the CEQA guidelines, which provide the criteria from Section 20524.1 of the California Public Resources Code. According to the CRHR (California Code of Regulations Title 14, Chapter 11.5), properties listed on or formally determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR. The CRHR criteria are largely based on the NRHP criteria, which are codified in 36 CFR, Part 60, and are explained in guidelines published by the Keeper of the National Register.[25] Resources must be at least 50 years old in order to be eligible for listing on the NRHP or the CRHR.

National Parks Service Preservation Brief 36 defines a cultural landscape as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other values." There are four general types of cultural landscape, one of which is the historic designed landscape. National Parks Service *National Register Bulletin 18*, "How to Evaluate and Nominate Designed Historic Landscapes," defines a historic designed landscape as one that "has significance as a design or work of art; was consciously designed and laid out by a master gardener, landscape architect, architect, or horticulturalist to a design principle, or an owner or other amateur using a recognized style or tradition in response or reaction to a recognized style or tradition; has a historical association with a significant person, trend, or event, etc. in landscape

[25]The most widely accepted guidelines are contained in the US Department of Interior, National Park Service, "Guidelines for Applying the National Register Criteria for Evaluation," *National Register Bulletin 15* (US Government Printing, Washington, DC, 1991, revised 1995 through 2002).

gardening or landscape architecture; or a significant relationship to the theory or practice of landscape architecture." *Bulletin 18* goes on to list golf courses as an example of grounds designed or developed for outdoor recreation or sports that fall under the category of a designed historic landscape. Therefore, Sharp Park Golf Course is being evaluated for its historic significance as a designed historic landscape.

Historic significance is judged by applying NRHP Criteria A through D and CRHR Criteria 1 through 4. The NRHP guidelines state that a historic resource's "quality of significance in American history, architecture, archeology, engineering and culture" is determined by meeting at least one of the following, (properties may be significant at the local, state, or national level):

Criterion A: Association with events or trends significant in the broad patterns of our history;

Criterion B: Association with the lives of significant individuals;

Criterion C: A property that embodies the distinctive characteristics of a type, period, or method of construction that represents the work of a master, or that possesses high artistic values;

Criterion D: Has yielded, or is likely to yield, information important to history or prehistory.

In general, Criterion D is used to evaluate historic sites and archaeological resources.

"Integrity" is determined through applying seven factors to the historical resource: location, design, setting, workmanship, materials, feeling, and association. All of these aspects must be considered in order to determine whether a landscape retains enough of its important historic characteristics and features to convey its historically significant appearance or associations. Because landscape features change over time, a landscape need not retain all of the original features it had during its period of significance, but it must retain the essential features and characteristics that make its historic character clearly recognizable.[26]

The CRHR criteria closely parallel those of the NRHP. Each resource must be determined to be significant at the local, state, or national level under one of four criteria (paraphrased below) in order to be determined eligible:

Criterion 1: Resources associated with important events that have made a significant contribution to the broad patterns of our history.

Criterion 2: Resources associated with the lives of persons important to our past.

[26]National Park Service, "How to Evaluate and Nominate Designed Historic Landscapes," *National Register Bulletin No. 18*, p. 6, Web site: www. http://www.nps.gov/history/nr/publications/bulletins/pdfs/nrb18.pdf.

Criterion 3: Resources that embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master.

Criterion 4: Resources that have yielded, or may be likely to yield, information important in prehistory or history.[27]

As with NRHP Criterion D, Criterion 4 is generally used to evaluate historic sites and archaeological resources.

The CRHR definition of integrity and its special considerations for certain properties are slightly different from those for the NRHP. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The CRHR further states that eligible resources must "retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance," and the CRHR lists the same seven aspects of integrity used for evaluating properties under the NRHP criteria.

5.2 EVALUATION

Tetra Tech concludes that Sharp Park Golf Course appears to meet the criteria for listing on the CRHR and NRHP and should be considered a historical resource for the purposes of CEQA.

The following provides a summary of Sharp Park Golf Course's historic significance. It is evaluated on the DPR 523 forms in the appendix.

Sharp Park Golf Course appears to meet the criteria for listing on the NRHP for its significance under Criteria A and C and for listing on the CRHR under Criteria 1 and 3. (See the DPR 523 form for the evaluation of this property under NRHP Criteria B and D, along with the evaluation of the property under CRHR Criteria 2 and 4.)

The property's period of significance is from 1929 to 1932, which represent the construction dates for the course's original design.

Sharp Park Golf Course is significant under Criterion A/1 because its construction is associated with the need within San Francisco for a third municipal golf course. The construction and development of Sharp Park Golf Course was a direct result of the overcrowding at Harding and Lincoln Park municipal courses and the City's desire to build a third course to accommodate San Francisco golfers. The construction of Sharp Park Golf Course represents a development pattern within the City of San Francisco and within the US in general, in which golf was an increasingly popular sport. The years between 1910 and the late 1930s have been called the "golden age of golf" in the US due to the fact that many of the great golf course architects designed courses during

[27]California Public Resources Code, Sections 4850 through 4858; California Office of Historic Preservation, "Instructions for Nominating Historical Resources to the California Register of Historical Resources," August 1997.

this period. Many of the courses, like Sharp Park Golf Course, are still in use today. The construction of Sharp Park Golf Course is directly associated with the growing popularity of recreational golf within the US during the early twentieth century.

Sharp Park Golf Course is significant under Criterion C/3 for its architecture and landscape architecture—a public golf course constructed between 1929 and 1932, embodying distinctive characteristics of a seaside golf course. This period is often called "the golden age of golf" because of the popularity of the game and the increase in golf courses constructed in the US. Sharp Park Golf Course contains many distinctive elements of its type, a golf course constructed on the oceanside, on sandy dunes, with original seaside holes that provide water hazards as part of the game. The course was designed by a well-known architect, with nuances, style, and innovation that enhanced golf courses constructed during this period in the US, many of which were private. The original layout of the golf course included holes featuring multiple tees, double fairways, cross bunkering, fairways in sand dunes, and several holes bordering Laguna Salada. Cypress trees dotted the setting. Although the course has been modified, it is common to modify a living landscape, although efforts to keep the fairways' general original course design were always in effect. Twelve of the original 18 holes are part of the current design, and two fairways are original but without original greens.

The golf course is also the work of a master. While there are other examples of Mackenzie's work that are more well known, Sharp Park Golf Course is an example of his idea of the perfect surroundings for a golf course—holes surrounded by sand dunes next to the seashore. Although alterations have been made to the course, during the period of significance the course retained Mackenzie's routing, surprise elements, and hole and fairway locations.

The clubhouse is a good example of an Eclectic architectural style, with Mission and Spanish elements, improved by the Works Progress Administration during the Great Depression. The clubhouse was built to serve the golfers of Sharp Park Golf Course, is directly associated with the golf course, and is considered a historical character-defining feature of the golf course. It is a good representation of its architectural type and period, and its alterations have not diminished its historic integrity, as discussed below. The golf course clubhouse has consistently been used as a clubhouse for Sharp Park golfers, as was its original purpose. The presence of the golf course clubhouse helps to convey the historic character of the entire golf course.

In rare instances, buildings and landscape features themselves can serve as sources of important information about historic construction materials or technologies (Criterion D/4); however, the Sharp Park Golf Course does not appear to be a principal source of information in this regard.

5.3 INTEGRITY

Integrity of a historic resource is measured by applying seven factors: location, design, setting, workmanship, materials, feeling, and association. Sharp Park Golf Course, including the clubhouse and maintenance building, has retained a sufficient level of

integrity in all measures. Although the course has been modified over time, the golf course is in its historic location and retains much of its historic appearance, except that the ocean is no longer visible from the course. Still present are the lagoon, the east and west locations of the holes, and the fairway, which were all elements of the original design. Mackenzie designed the course with interesting challenges for golfers, regardless of their skill level, which is still true of the current course. Man-made features that have been added, such as the seawall, do not diminish the historic integrity of the course because the land and its location were important to Mackenzie's design; thus, the course is still authentic to Mackenzie's plan. The course retains its integrity of design, workmanship, and materials, which provide it with a similar sense of feeling and association to its period of significance.

The clubhouse retains most of its historic design features, and original or in-kind materials illustrate the workmanship that went into its design. Modifications, such as additions to the dining area and replaced windows, have not reduced the overall historic character of the building that give it the sense of feeling and association to its period of significance.

Sharp Park Golf Course's character-defining features are the original features and design of the clubhouse, the original permanent maintenance building, and the course's original layout, including the 12 remaining original holes (current holes 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17 and 18) and original landscape features. The cypress trees that line the fairways also contribute to its significance, although none of the specific shrubs or trees on the property are considered contributors. The property's noncontributing features are the practice green, the maintenance trailers, the cart paths, the four holes that were moved to the east side of Highway 1, and other alterations that occurred after the period of significance.

The permanent maintenance building is part of the original construction of the golf course and retains its original integrity. The cypress trees that line the fairways also contribute to its significance, although none of the specific shrubs or trees on the property are considered contributors. Together, these features contribute to the golf course's historic significance and must be present to do so. The property's noncontributing features are the practice green, the maintenance trailers, the cart paths, and the four holes that were moved to the east side of Highway 1. These noncontributing features are those that were constructed or added after the period of significance, or, as in the case of the maintenance trailers, are temporary structures.

5.4 IMPACTS ANALYSIS AND MITIGATION MEASURES

CEQA guidelines Section 15064.5(b) states that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." The following provides reference to the project description in Section 2 as it relates to Sharp Park Golf Course and an impacts analysis for the golf course as a historic resource.

The SNRAMP project activities will be situated at and next to the eastern and western part of Sharp Park Golf Course and will not be near either the clubhouse or maintenance building. Therefore, none of the project components or construction will cause a substantial adverse change to these contributing buildings on this property such that they will be materially impaired or unable to continue to convey their significance. Potential impacts on this property would be on the designed historic landscape itself.

As part of the proposed project, some of the activities that will take place when implementing the SNRAMP will have the following direct potential impacts on Sharp Park Golf Course:

Impact HR-1. Excavated dredged spoils appropriate for use as golf course substrate materials would be used on-site to raise Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. Raising Holes 10, 14, and 15 would not have a significant impact on the historical character-defining features of the golf course because the holes would remain in place and alterations would be to elevate the holes, which would not impact the historic integrity of the fairways. There would be a less than significant impact on these holes from this proposed project activity.

Impact HR-2. The closure of Hole 12 (historic Hole 2) would have significant impacts on the historic character-defining features of the golf course because it would eliminate a hole and fairway on the west side of the course, along the ocean. Hole 2 was originally designed as a 262-yard fairway and a par 4. The hole was shortened in the early 1960s and was renumbered. Although Hole 12 has been altered from its original design, its closure and conversion to coastal/shrub habitat is a significant impact on the golf course because the Hole 12 area was included as part of the golf course design since the original construction of the course. The hole had always been at the edge of the lagoon or backed against the seawall. Using the area for habitat conservation and not as part of the golf course changes the boundaries of the golf course and its historic design. Closing Hole 12 would therefore be a significant impact. Implementing Mitigation Measure 1 (Document Historical Resources), as described in Section 5.0, would record the golf course following the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes*. Because implementing Mitigation Measure 1 would not reduce this impact, there would still be a significant impact on the historic resource.

Impact HR-3. A post and rail fence would also be installed along the seawall, to the west of the lagoon, with additional fencing around the wetland complex to discourage human and pet intrusion into the restored habitat area. This fence would alter the visual appearance of the seawall and would add a modern element to the golf course. The seawall is not an original feature of the golf course but was constructed during the golf course's period of significance and would be a modern element within the historic setting of the course. The construction of a fence would add a modern element to the course but would not alter a historic character-defining feature. Therefore, constructing a fence would not have a significant impact on the golf course.

Impact HR-4. Modifying approximately 13 acres of the golf course to create upland habitat along the east side of the lagoon to provide critically important San Francisco garter snake upland habitat would require slightly shortening or narrowing Holes 10 and 13 (historic Holes 18 and 9). The habitat corridor would be approximately six acres, bringing the total of modified area at the golf course to about 19 acres. This would have a significant impact on the historic character-defining features, historic Holes 18 and 9, because these holes and fairways would be narrowed and shortened. Fairways have been altered in the past at Sharp Park Golf Course. Implementing Mitigation Measure 1 (Document Historical Resources) would record the golf course in its existing condition under the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes*. It would serve as a record of the changes on the golf course through time, including the alterations on fairways and holes due to varying natural conditions. Implementing this mitigation measure would not reduce this impact to less than significant because modifying the historic character-defining features would still constitute a significant impact on the golf course, a historic resource.

Impact HR-5. The recreation analysis in the SNRAMP EIR proposes a mitigation measure (Recreation Mitigation Measure, Option 1) that would create a new hole on the east side of Highway 1, as a replacement for Hole 12. This reconfiguration would result in a total of 13 holes on the west side of Highway 1 and five holes on the east side. Adding another hole on the east side of the freeway diminishes the historic integrity of the landscape because it changes the balance of holes that were originally on the east and west side of Highway 1 and creates a hole in an area that was not originally planned and not originally part of the Mackenzie-designed course. Adding another hole on the east side of the course, in an area that would change the historic boundaries of the golf course design, would be a significant impact on Sharp Park Golf Course, a historic resource. Implementing Mitigation Measure 1 (Document Historical Resources), as described in Section 5.0, would record the golf course following the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes*. Because implementing Mitigation Measure 1 would not reduce this impact, there would still be a significant impact on the historic resource.

Impact HR-6. The recreation analysis in the SNRAMP EIR proposes a mitigation measure (Recreation Mitigation Measure, Option 2) that would create a new hole on the west side of Highway 1, as a replacement for Hole 12. This reconfiguration would result in a total of 15 holes on the west side of Highway 1 and three holes on the east side. This alternative mitigation measure would be beneficial to the Sharp Park Golf Course because it would restore some of the elements that Mackenzie had implemented in his original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where Mackenzie situated holes in his original design, and would be in keeping with the historic boundaries of the golf course. Impacts on Sharp Park Golf Course, if this version of the mitigation measure were implemented, would be less than significant.

CHAPTER 6
MITIGATION

Mitigation Measure 1, Document Historical Resources—The SFRPD would document or retain a consultant to document Sharp Park Golf Course before any construction work or modifications to the course. The National Park Service has published some guidance for the preservation of cultural landscapes in *Preservation Brief 36: Protecting Cultural Landscapes, Planning, Treatment and Management of Historic Landscapes* and in the more complete Secretary of the Interior's *Standards for Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes.* The appropriate level of documentation would be selected by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation will consist of the following:

- Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course;
- Digital photographs (does not have to be large-format negatives) of Sharp Park Golf Course;
- A written history and description of Sharp Park Golf Course and its alterations.

The professional historian will prepare the documentation and will submit it for review and approval by the San Francisco Planning Department's Preservation Specialist. The documentation will be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.[28]

[28]Note that in most cases the use of drawings, photographs, and displays does not mitigate the physical impact caused by demolishing or destroying a historical resource (14 CCR, Section 15126.4[b]). However, CEQA requires that all feasible mitigation be undertaken even if it does not mitigate below a level of significance. Recordation serves a legitimate archival purpose; Office of Historic Preservation, *How Can Substantial Adverse Change be mitigated?* California State Parks Web site: www.ohp.parks.ca.gov.

CHAPTER 7
QUALIFICATIONS

Julia Mates Historian/Architectural meets the History and Architectural History professional qualifications as outlined by the federal government in Title 36, Code of Federal Regulations, Part 61. Ms. Mates prepared this HRE with assistance from Cultural Resource Specialists Erin King and Frank Stipe. Ms. Mates reviewed project information, assessed known and potential historical resources, and prepared the text for this report. Ms. Mates has a Masters Degree in History/Public History and ten years of experience conducting historic resource projects.

Ms. King assisted with field recordation of the Sharp Park Golf Course. She has an MA, RPA, and over nine years of experience.

Mr. Stipe assisted with peer review of the designed historic landscape report. Mr. Stipe has an MA, RPA, and over ten years of experience.

APPENDIX A

DPR 523 FORMS

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 3S
Other Listings _____
Review Code _____ Reviewer _____ Date _____

 ***Resource Name or #** (Assigned by recorder) Sharp Park Golf Course

P1. Other Identifier: Sharp Park Golf Course

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Mateo

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5′ Quad** San Francisco South **Date** 1956 (photorevised 1999) **T** ___; **R** ___; __ ¼ **of Sec** ___; _____ **B.M.**

c. Address Sharp Park Drive / Francisco Boulevard City Pacifica Zip 94404

d. UTM: (give more than one for large and/or linear resources) Zone _____; _____mE/ _____mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

Intersection of Sharp Park Drive and Francisco Boulevard. Sharp Park Drive, heading west, dead ends at golf course.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Sharp Park Golf Course (SPGC) is an 18-hole, 120-acre golf course in the town of Pacifica in San Mateo County. The golf course borders the Pacific Ocean, is bisected by Highway 1, and contains the natural Laguna Salada lagoon, wetlands, and associated vegetation. The course is owned and maintained by the City of San Francisco Recreation and Parks Department. The clubhouse is at the east side of the property, overlooking the course, as shown in Photograph 1, below. (See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes) HP29: Landscape Architecture; HP13: Clubhouse; HP35: New Deal Public Works Project ***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Photograph 1: Clubhouse, camera facing southeast, April 9, 2010.

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐ Prehistoric ☐ Both
1931/ City of San Francisco Historic Records

***P7. Owner and Address:**
City and County of San Francisco

***P8. Recorded by:** (Name, affiliation, address)
Julia Mates/Erin King
Tetra Tech, Inc.
555 Market Street, 15th Floor
San Francisco, CA 94105

***P9. Date Recorded:** March 4, 2010
***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Tetra Tech, Inc., "Historical Resources Evaluation Report for Sharp Park Golf Course SFRPD Natural Resources Areas," 2011.

***Attachments:** NONE ☐ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) _____

***NRHP Status Code** 3S

***Resource Name or #** (Assigned by recorder) Sharp Park Golf Course

B1. Historic Name: Sharp Park Golf Course

B2. Common Name: Sharp Park Golf Course

B3. Original Use: Golf course and clubhouse and maintenance building B4. Present Use: Golf course and clubhouse and maintenance building

***B5. Architectural Style:** Eclectic with elements of Spanish and Mission Revival

***B6. Construction History:** (Construction date, alteration, and date of alterations) Course: built 1929-1932; alterations 1941, 1962; lengthening some tees 1985-1994 / Clubhouse: built 1932; early improvements 1935-1936; enclosed dining area and additional dining space 1994

***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** _____ **Original Location:** _____

***B8. Related Features:** _____

B9. Architect: Course: Alister Mackenzie / Clubhouse: Agnus McSweeny b. Builder: Course: Unknown / Clubhouse: Unknown, improvements WPA

***B10. Significance: Theme** Golf **Area** San Francisco

Period of Significance 1929-1932 **Property Type** Golf Course and Clubhouse **Applicable Criteria** A / 1 & C / 3

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Sharp Park Golf Course, including the clubhouse, appears to meet the criteria for listing in the National Register of Historic Places (NRHP) for its significance under Criteria A and C. Furthermore, this property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the California Environmental Quality Act (CEQA) Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and the property appears to meet the significance criteria as outlined in these guidelines. Therefore, it is a historical resource for the purposes of CEQA. (See Continuation Sheet.)

(Sketch Map with north arrow required.)

See Continuation Sheet.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** Neal Hotelling, *Pebble Beach Golf Links: The Official History*, (Chelsea, MI: Sleeping Bear Press, 1999); *Sharp Park & Pro Shop Plans*, (San Francisco Planning Department 1994); Sharp Park Golf Course Website: http://www.sharpparkgc.com; Alister Mackenzie, The Spirit of St. Andrews, (Chealsea, MI: Sleeping Bear Press, 1995); City and County of San Francisco, Board of Park Commissioners, Map. *Sharp Park Municipal Golf Course, Salada Beach, San Mateo County, California,* on file at City of Pacifica Planning Department*;* Harris, Richard. Pacifica Planning Commission Meeting correspondence 2009, on file at City of Pacifica Planning Department; San Francisco, California; National Golf Foundation Consulting, Inc. *Sharp Park Golf Course,* City of San Francisco, CA, no date on file at\ San Francisco Parks and Recreation Department files titled Miscellaneous Documents, Golf Course History; Dr. Michael J. Hurzdan, Golf Course Architecture: Evolutions in Design, Construction, and Restoration Technology, Second Edition, (Hoboken, NJ: and see footnotes.

B13. Remarks:

***B14. Evaluator:** Julia Mates

***Date of Evaluation:** March 2010

(This space reserved for official comments.)

P3a. Description (continued)

Along with the 18-hole course, the facility includes a large clubhouse, practice green, and maintenance area. The course and clubhouse were completed in April 1932. Access to the facility is from Sharp Park Road; a chain link fence, trees, and bushes establish the property's boundaries. A parking lot is adjacent to the east side of the clubhouse. The course's front nine holes are on the southern and eastern sides of the course. Some of the front nine holes (holes 4 through 7) are on the east side of Highway 1 and are accessed by a tunnel under the highway. The back nine holes are located on the western and southern sides of the property. Routing of the course is accomplished with fairways running parallel to each other and divided by mature cypress trees. The fairways are surrounded by concrete cart paths. A natural lagoon, Laguna Salada, is located at the western end of the course, and four holes (14 through 17) play around the lagoon. The southern end of the lagoon is traversed by a bridge. A seawall divides the course from the ocean on the west side of the course. **Photograph 2**, **3**, and **4** are representative photos of the golf course.

The golf course has undergone alterations since its construction, including lengthening, relocating and renumbering fairways, infilling some sand dunes with grass, construction of a seawall/berm dividing the ocean from the course, lengthening tees, adding tee boxes, and re-routing the course to accommodate the alignment changes in Highway 1.

The two-story clubhouse has an irregular footprint with multiple wings. The clubhouse is shown in **Photographs 5, 6, 7, 8, 9 and 10**. It sits on a concrete foundation and is clad in stucco. The building is topped with a cross gable roof with multiple-level, cross-gabled roof wings that run on a north-south axis. The roof is sheathed in red clay tiles and is moderately pitched with no eave overhang. There are two extended entrances on the north axis, one facing east and the other facing west. An extension off the south end of the building is a modest addition, constructed in 1994.[1] The clubhouse was constructed in the Eclectic architectural style with elements of Spanish Revival and Mission styles, popular in California during the 1920s. Architect Agnus McSweeny, an associate at the San Francisco architectural firm started by Willis Polk, designed the building that was constructed by the Works Progress Administration (WPA). A plaque on the clubhouse states, "Improved by Works Progress Administration 1935-1936." Exterior details include a variety of sizes of fixed and vertical hung sliding sashes. Many windows on the building appear to have been replaced with modern sashes, with the exception of the windows on the east façade which are original wood, vertical hung and casement sashes. There are circular vents, some covered with wrought iron bars and others in the form of Mission Style canals in some of the gables. There are four chimneys along the roof line that are sheathed in stucco. A driving range is north of the clubhouse, and maintenance buildings are on the northeast side of the course.

The north wing faces the practice green. There is secondary entrance at the first floor of this north side that contains a set of original double wood doors with fixed center sashes covered by metal security grilles. The windows on this side of the building are comprised of replacement metal sliding sashes and original one-over-one hung wood sashes. There is a small north facing patio at the second story that is accessed through a set of paired, glazed doors, with multiple panes of rectangular glass.

[1] *Sharp Park Restaurant & Pro Shop plans for proposed work*, dated October 1994, on file at City of Pacifica Planning Department, Permit No. 1327994.

The east side of the building faces the parking lot and contains the main entrance to the club from the lot. This side has a projecting first story with a recessed, round arched entrance with a decorative iron work and gates set into the arch. The front doors are a set of original, paired glazed doors with multiple panes of rectangular glass, flanked by sets of fixed, windows with multiple panes of rectangular glass.

The western side of the clubhouse faces the golf course, and serves as the main façade. The main entrance on this side is recessed with an extended arch. Flanking the arch are two piers, sided in smooth stucco. A pair of original, wood doors identical to those at the east side of the building serve as the front doors. Metal security grilles cover the windows of these doors. The remainder of this west side features a ribbon of six large, replacement floor-to-ceiling windows. Each set of three windows flanks a central, wood door with multiple glass panes.

The south side of the building is an extension, constructed in 1994, that faces the current Hole 2 fairway. It has large, modern, fixed windows, and little architectural relief.

A compound of temporary and one permanent building serves as the maintenance area for the golf course and is north of the clubhouse, on the east end of the property, atop a small hill. This maintenance area is surrounded by trees and metal fencing. Most of the structures within the maintenance area are temporary storage containers; the only permanent building is a large, one-story barn that rests on a concrete foundation, and is topped with a front gable roof with shallow eaves with exposed wood roof rafter tails. **(Photograph 11**). The walls of this building are clad in vertical shiplap redwood. At both the north and south sides of the building are two over-head mounted wood doors. Fenestration along the building consists of original awning sashes with wood muntins. This barn is currently used for storage and is original to the course.

B10. Significance (continued)

History of Sharp Park Golf Course

Sharp Park Golf Course is located on the former Mexican Rancho land of San Pedro. A portion of this land, 410-acres, was eventually owned by George Sharp, prominent San Francisco attorney and corporate counsel for the Ocean Shore Railroad in the late 1880s.[2] When Sharp passed away in early 1882, the land was left to his wife, Honora. She passed away in 1905 and the estate land was left to her trustees, Ruben Lloyd and Adolph Spreckles, both members of the San Francisco Parks Commission. Spreckles sold his share of the property to the City and County of San Francisco in 1916 for 10 dollars in gold, and, after Lloyd passed away in 1917, the remaining shares of the land were bequeathed by the estate to the San Francisco.[3] The property was stipulated to be used for park and recreational purposes only.

Alister Mackenzie was commissioned by the City and County of San Francisco to design the course. Having worked on other seaside golf courses in Great Britain, Mackenzie believed that "golf in its early days was always played on commons or links land which bordered the sea. …the natural characteristics of this type of land made it easily the most suitable for the game."[4] Mackenzie stated that Sharp Park, being constructed on land reclaimed

[2] Sharp Park Golf Course is located on only 120 acres of this land.
[3] Sharp Park Golf Course website: http://www.sharpparkgc.com/.
[4] Alister Mackenzie, *the Spirit of St. Andrews*, (Chelsea, MI: Sleeping Bear Press 1995), 246.

B10. Significance (continued)

from the sea "now has a great resemblance to real links land."[5] Jack Fleming, who was the Parks Commission-appointed City golf course overseer, served as Mackenzie's assistant during the project. In the mid-1930s, Robert Hunter was appointed to supervise construction of the course.[6]

The location of Sharp Park Golf Course posed a challenge. The parcels of land designated for the course were adjacent to the Pacific Ocean and the land was composed of barren sand dunes and a lagoon. In order to construct the golf course and build up fairway grades, the Sharp Park site was dredged. The natural lagoon, Laguna Salada, remained within the golf course, and the design incorporated it by surrounding it with fairways. Construction began on the course in 1929, and dredging the area around Laguna Salada marsh took 14 months. Sharp Park Golf Club opened in 1932, after two delays due to drainage problems on the course from winter rains.[7]

The original layout of the golf course included holes featuring multiple tees (holes 2, 5, and 14), double fairways (holes 5 and 10), cross bunkering (hole 16) fairways in sand dunes (holes 3 and 7) and several holes bordering the inland lake (hole 4, 5, 8, 9, 10, and 11). Cypress trees dotted the setting. [8]

When originally constructed, the course used well water for irrigation. In the 1930s, the WPA installed a water pipeline for the course that extended from the San Bruno county jail reservoir to a concrete pressure reducing tank, 20 feet wide by 150 feet long. This pipeline provided water to the course for irrigation and for drinking until it was abandoned in place in 2008. The line extended through the canyon to the east of the course through the current Hole 7 fairway.[9]

Golf courses have been called living things in the sense that they are mostly constructed of living elements, such as grass and trees, which grow and change over time. Soil erodes, changing the pitch of slopes; trees grow or are replanted, and the holes cannot be played as they were originally. Advancements in playing equipment also change the game.

Courses are redesigned, replaced, or remodeled for two reasons; the first is to improve the layout of the course, the second is to adjust the course for advances in golf technology. Redesigning golf courses involves rerouting and adjusting holes. In golf course architecture, restoring courses is considered to be the act of bringing a course back to, or closer to, its original state. At the same time, there are technological advances in the game of golf (balls, clubs, and mowing techniques) that advance and therefore result in alteration of the course to maintain playability. By the late 1920s, golf course designers accepted the idea that both natural and technological advances are factors, among others, that make it necessary to continuously improve golf courses, in order to maintain the strategy of the game.

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[5] Mackenzie, *the Spirit of Saint Andrews*, 171-172.

[6] National Golf Foundation Consulting, Inc., *Sharp Park Golf Course*, (City of San Francisco, CA, no date), 84, On file at City and County of San Francisco Park and Recreation Department vertical files *Miscellaneous Documents, Golf Course History*.

[7] Joe Faulkner, *Sharp Park*, 1970, www.sfpublic.golf.com.

[8] Daniel Wexler, *the Missing Links: America's Greatest Lost Golf Course & Holes*, (Chelsea, Michigan: Sleeping Bear Press 2000) 114-115.

[9] Clyde Healy, Assistant City Engineer, *Report of Clyde E. Healy, Assistant City Engineer, City of San Francisco and Coordinator of WPA Projects*, (San Francisco: October 1935-1939), 53.

B10. Significance (continued)

Changes to the Course

The layout of Sharp Park Golf Course has undergone several alterations to accommodate natural changes in the landscape because of the course's location along the Pacific Ocean shoreline. The course was also modified to accommodate the anticipated realignment of Highway 1.

The first major alteration was in 1941, when a seawall or berm was constructed to keep the ocean from reaching and flooding the course. To make room for the berm, the two original oceanside Holes 3 and 7 were moved inland. Another alteration was removing the lagoon and the second fairway at original Hole 10 (current Hole 14). Course modifications also included the installation of a 4,000-gallon pump to help with annual flooding of Laguna Salada, rerouting fairways for holes on the east side of Highway 1, and modest alterations, such as renumbering and shortening some of the original fairways. More recent changes involved lengthening fairways and adding and rebuilding tee boxes from 1985 until 1994.

The original design of the course had three holes on the east side of what was a county road, in front (on the west side) of the clubhouse, as shown in Figure 3. Around 1943, the county road was improved and rerouted to become Highway 1, which no longer passed the west side of the club house but was now on the east side. Although Highway 1 was not realigned until sometime after 1940, the designers of the course knew the course would have to be modified to accommodate the road (Figure 3). In 1932, Jack Fleming, in writing about the course in the San Francisco Call-Bulletin, described it as being "at present along the edge of the county road which is planned to re-locate." Other, more minor alterations included changing sand trap

Historic Contexts

Golf Course Design

Modern golf has its roots in Scotland beginning in the mid-fifteenth century on hilly grazing land along the coastline covered with fescues, broom, and other links plants. Early golf courses in the United States were referred to as "golf links" because they were designed in the tradition of Scottish links—the sandy seaside wasteland that links the ocean with the arable soil inland is the location where the Scottish used to construct golf grounds.[10] Holes were placed in an area that afforded interesting play, and aside from removing tall brush, little was done to modify the grounds. By the turn of the century, golf was becoming an important sport and golf course architecture was becoming a respected profession. Several early courses constructed in the United States during the mid to late nineteenth century were designed by professional golfers from Great Britain. Interest in golf evolved in the US during the late nineteenth and early twentieth centuries and increased in popularity during the post-World War II years.[11]

Prior to the 1920s, golf courses were designed by prominent players, not golf architects. Golf course architecture was a full time profession in the 1920s, and it was a period of growing prosperity for the US, a time when construction costs, real estate values, and interest rates were low. The 1920s have been called the Golden Age of

[10] Graves and Cornish, *Golf Course Design*, 3; Neal Hotelling, *Pebble Beach Golf Links: the Official History* (Michigan: Sleeping Bear Press, 1999), 13.
[11] Tom Fazio, *Golf Course Designs*, (New York: Harry N. Abrams, Inc. 2000), 98-100.

B10. Significance (continued)

golf course style in America and the 1920s saw the style of golf courses enhance immeasurably.[12] By the mid-1930s, golf construction regained popularity and many municipalities hired course architects to design golf courses. During the Great Depression era, the federal WPA program was used to provide workers to build these public courses.[13]

Because golf courses are both natural and manmade, it is common for golf courses to be redesigned over time. Courses are redesigned, replaced, or remodeled for two primary reasons to accommodate for advances in golf technology and to improve the layout of the course to accommodate the natural changes that occur within a natural landscape such as vegetation growth, soil erosion, and changes in slope pitch.

History of Public Golf in San Francisco

The game of golf came to California in the late 1800s and the first course was constructed in Southern California at the Riverside Country Club in 1891. The first Northern California golf course was at the Burlingame Country Club, a three hole golf course, built in 1893. The first golf course to be constructed in San Francisco was the San Francisco Golf Club in 1895. [14]

While golf courses at private country clubs were gaining in popularity, golf courses for golfers unable to afford the high prices of country clubs had very few places to play. In the early 1900s, avid golfers and wealthy members of private clubs, Jack Neville and Vincent Whitney, approached John McLaren, Supervisor of Golden Gate Park, about constructing a municipal golf course. Neville and Whitney then began designing San Francisco's first municipal golf course, Lincoln Park.[15] Lincoln Park remained the only San Francisco municipal golf course for 23 years until the construction of Harding Park. Harding Park, designed by Sam Whiting and Willie Watson, was constructed in 1925.

The popularity of golf in San Francisco peaked during the 1920s. Lincoln Park and Harding Park were the only two golf courses in San Francisco and, on weekends, they were overrun with golfers. The City decided to use the land in San Mateo County, formerly owned by George Sharp, for the location of a third public golf course, named for the former land owner. Alister Mackenzie, the famous golf architect who had designed several courses in the US and abroad, was commissioned to design the course. Mackenzie was assisted by Jack Fleming, Superintendent of Maintenance for Golf Courses and Bowling Greens in San Francisco. Supervision of construction was given to Chandler Eagan, with whom Mackenzie had worked on Pebble Beach Golf Links in 1929.[16] In 1930, Robert Hunter Jr. was appointed the superintendent of construction for the course for the remaining ten months of construction. Willis Polk and Company architect Agnus McSweeny was hired to prepare plans for the construction of the golf clubhouse.

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[12] Geoffrey S. Cornish and Ronald E. Whitten, *the Architects of Golf*, (Harper Collins Publishers: New York 1993.), 84.

[13] Cornish and Whitten, *the Architects of Golf*, 106.

[14] Neal Hotelling, *Pebble Beach Golf Links: The Official History*, (Chelsea, MI: Sleeping Bear Press, 1999), 20.

[15] Joe Faulkner, 1970 5; Although the course was constructed in the early 1900s, it did not consist of a full 18 holes until 1917 when the course expanded to a full 18 hole course.

[16] Bo Links and Richard Harris. *Mackenzie's Sharp Park Under Siege*.

B10. Significance (continued)

Alister Mackenzie

Alister Mackenzie was born in Scotland in 1870 and received a medical degree. He served as the Alwoodley Golf Club Green Chairman in the early 1900s, assisting golf architect H.S. Colt with the design of that golf course in Leeds.[17] Mackenzie continued to work with Colt on other courses, and, in 1925, he established his own golf architecture firm and designed golf courses in Great Brittan, Uruguay, Australia, Argentina, Canada, and the US.[18] Mackenzie's best work in America was done between 1928 and 1933 prior to his death in 1934.[19] By the time Mackenzie was commissioned to work on Sharp Park, he was living in the Bay Area.

Mackenzie's concept of an ideal hole in perfect surroundings was a hole surrounded by sand dunes next to the seashore.[20] Mackenzie felt that the success of golf course construction depended entirely on making the best use of natural features and the devising of artificial ones indistinguishable from nature.[21] He also contended that a golf course must offer adventure in order to hold interest for continuous play. His courses provided interesting challenges for golfers, regardless of their skill level. Mackenzie's firm was also known for its original and distinctive bunkers with irregular shapes, each with its own individual design.[22] Mackenzie often had the overall vision for design of his courses, and left the details to be created by those who worked with him, such as Eagan.

George Shackelford, in his book *Grounds for Golf*, describes Mackenzie as a master designer and offers that Mackenzie's secret to creating unique courses was his talent for routing.[23] Mackenzie designed his hole layout and sequencing on natural ground contours, not on any prescribed sequencing. Distinctive bunkering, the use of small hillocks around greens and exciting hole locations were Mackenzie's trademark. As Shackelford describes, while many architects try to create a special course, Mackenzie "could figure out how best to fit holes onto a property and situate a golf course to evoke a comfortable, settled, connection to the ground. His course routings are always functional and original but rarely do they fight the contours of the property."

Mackenzie's notable US golf course designs were Cypress Point Golf Club, California (1928), Augusta National Golf Club, Georgia (1932), and Pasatiempo Golf Club, California (1929). Mackenzie was commissioned by the City and County of San Francisco to design Sharp Park Golf Course in 1929. According to Geoffrey Cornish and Ron Whitten, golf architects and authors of the book, *The Architects of Golf,* it was Mackenzie's philosophies that most influenced post-World War II designers.[24]

[17] Geoff Shackelford, Grounds for Golf: the History and Fundamentals of Golf Course Design, (New York: St. Martin's Press, 2003), 154.
[18] Cornish and Whitten, *the Architects of Golf*, 81.
[19] Honorable Julie Lancelle, Bo Links, and Jeffrey Phillips, *Sharp Park Golf Course*, The Cultural Landscape Foundation, July 2009.
[20] Mackenzie, *Golf Architecture*, 28.
[21] Mackenzie, *Golf Architecture*, 29.
[22] Shackelford, *Grounds for Golf*, 155.
[23] Shackelford, Grounds for Golf, 156.
[24] Geoffrey S. Cornish and Ronald E Whitten, *The Golf Course*, (New York: The Rutledge Press 1981), 8.

B10. Significance (continued)

Agnus McSweeny

The prestigious design firm of Willis Polk and Company was chosen as the clubhouse architect at Sharp Park. Willis Polk and Company was a highly respected architectural firm, responsible for many architectural masterpieces throughout Northern California. Willis Polk, the architect credited for such masterpieces as the Palace of Fine Arts, the Hobart Building and the Sunol Water Temple as well as the rebuilding San Francisco after the 1906 earthquake, died in 1924. His architectural firm carried on in his tradition and developed the plans for the Sharp Park Golf Clubhouse. The chief architect in charge of the project was Angus McSweeney.

Evaluation

Significance

The following provides an evaluation of the Sharp Park Golf Course under each NRHP and California Register of Historical Resources (CRHR) criteria. The property's period of significance is from 1929 to 1932, and represents the period from start of the property's construction to its completion.

Sharp Park Golf Course appears to meet the criteria for listing on the NRHP for its significance under Criteria A and C and for listing on the CRHR under Criteria 1 and 3.

Sharp Park Golf Course is significant under Criterion A/1 because its construction is associated with the "golden age of golf" in the US, during the late 1910s through the 1930s, a time of great popularity for the sport and a period during which golf architects designed many courses throughout the US. The trend in popularity of golf during this period is also reflected in the history of the golf within San Francisco, because during the early 1920s, the City had the need for a third municipal golf course. The construction and development of Sharp Park Golf Course was a direct result of the overcrowding at Harding Park and Lincoln Park municipal courses and the City's desire to build a third course to accommodate San Francisco golfers.

Sharp Park Golf Course is significant under Criterion C/3 for its architecture and landscape architecture—a public golf course constructed between 1929 and 1932, embodying distinctive characteristics of a seaside golf course. This period is often called "the golden age of golf" because of the popularity of the game and the spike in golf courses constructed in the US. Sharp Park Golf Course contains many distinctive elements of its type, a golf course constructed on the oceanside, on sandy dunes, with original seaside holes that provide water hazards as part of the game. The course was designed by a well-known architect, with nuances, style, and innovation that enhanced golf courses constructed during this period in the US, many of which were private. The original layout of the golf course included holes featuring multiple tees, double fairways, cross bunkering, fairways in sand dunes, and several holes bordering Laguna Salada. Cypress trees dotted the setting. Although the course has been modified, it is common to modify a living landscape, although efforts to keep the fairways' general original course design were always in effect. Twelve of the original 18 holes are part of the current design, and two fairways are original but without original greens.

B10. Significance (continued)

The golf course is also the work of a master. While there are other examples of Mackenzie's work that are more well known, Sharp Park Golf Course is an example of his idea of the perfect surroundings for a golf course—holes surrounded by sand dunes next to the seashore. Although alterations have been made to the course, during the period of significance the course retained Mackenzie's routing, surprise elements, and hole and fairway locations.

The clubhouse is a good example of an Eclectic architectural style, with Mission and Spanish elements, improved by the WPA during the Great Depression. The clubhouse is associated with the golf course and is considered a historic character defining feature of the golf course.

Finally, in rare instances, buildings and landscape features themselves can serve as sources of important information about historic construction materials or technologies (Criterion D/4); however, the Sharp Park Golf Course does not appear to be a principal source of information in this regard.

Integrity

Integrity of a historic resource is measured by applying seven factors: location, design, setting, workmanship, materials, feeling, and association. Sharp Park Golf Course, including the club house and maintenance building has retained a sufficient level of integrity in all measures, with the exception of setting, because the seawall now obstructs the view of the ocean from the course. The CRHR definition of integrity is "the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance."

The CRHR goes on to state that eligible resources "must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance," and then it lists the seven aspects of integrity. Although the course has been modified over time, the golf course is in its historic location and retains much of its historic appearance, with the exception of the fact that the ocean is no longer visible from the course. Still present are the lagoon, the east and west locations of the holes, and the freeway bisection, which were all elements of the original design. Mackenzie designed the course with interesting challenges for golfers, regardless of their skill level, which is still true of the current course. Man-made features that have been added, such as the seawall, do not diminish the historic integrity of the course because the land and its location was important to Mackenzie's design; thus, the course is still authentic to Mackenzie's plan. The course retains its integrity of design, workmanship, and materials that provide it with a similar sense of feeling and association to its forty-four years period of significance.

The clubhouse retains most of its historic design features; original or in-kind materials illustrate the workmanship that went into its design. Modifications, such as additions to the dining area and replaced windows, have not reduced the overall historic character of the building that give it the sense of feeling and association to its period of significance.

B10. Significance (continued)

Sharp Park Golf Course's character-defining features are the original features and design of the clubhouse, the original permanent maintenance building, and the course's original layout, including the 12 remaining original holes (current holes 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17 and 18) and original landscape features. The cypress trees that line the fairways also contribute to its significance, although none of the specific shrubs or trees on the property are considered contributors. The property's noncontributing features are the practice green, the maintenance trailers, the cart paths, the four holes that were moved to the east side of Highway 1, and other alterations that occurred after the period of significance.

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Sean Sweeny, Sharp Park Golf Course, personal communication with Julia Mates, Tetra Tech, April 28, 2010.

Photographs (continued):



Photograph 2: Southern-most hole and fairway, camera facing north 3/4/2010



Photograph 3: Western portion of golf course, Fairway No. 12, camera facing east, 3/4/2010



Photograph 4: Fairway No. 3, camera facing south, 3/4/2010



Photograph 5: East side of clubhouse, camera facing northwest 3/4/2010



Photograph 6: Fairway No. 10, camera facing west, 3/4/2010



Photograph 7: East entrance to clubhouse, camera facing west, 3/4/2010



Photograph 8: South side of clubhouse, camera facing northeast 3/4/2010



Photograph 9: North side of clubhouse, camera facing south, 3/4/2010

Photographs (continued):

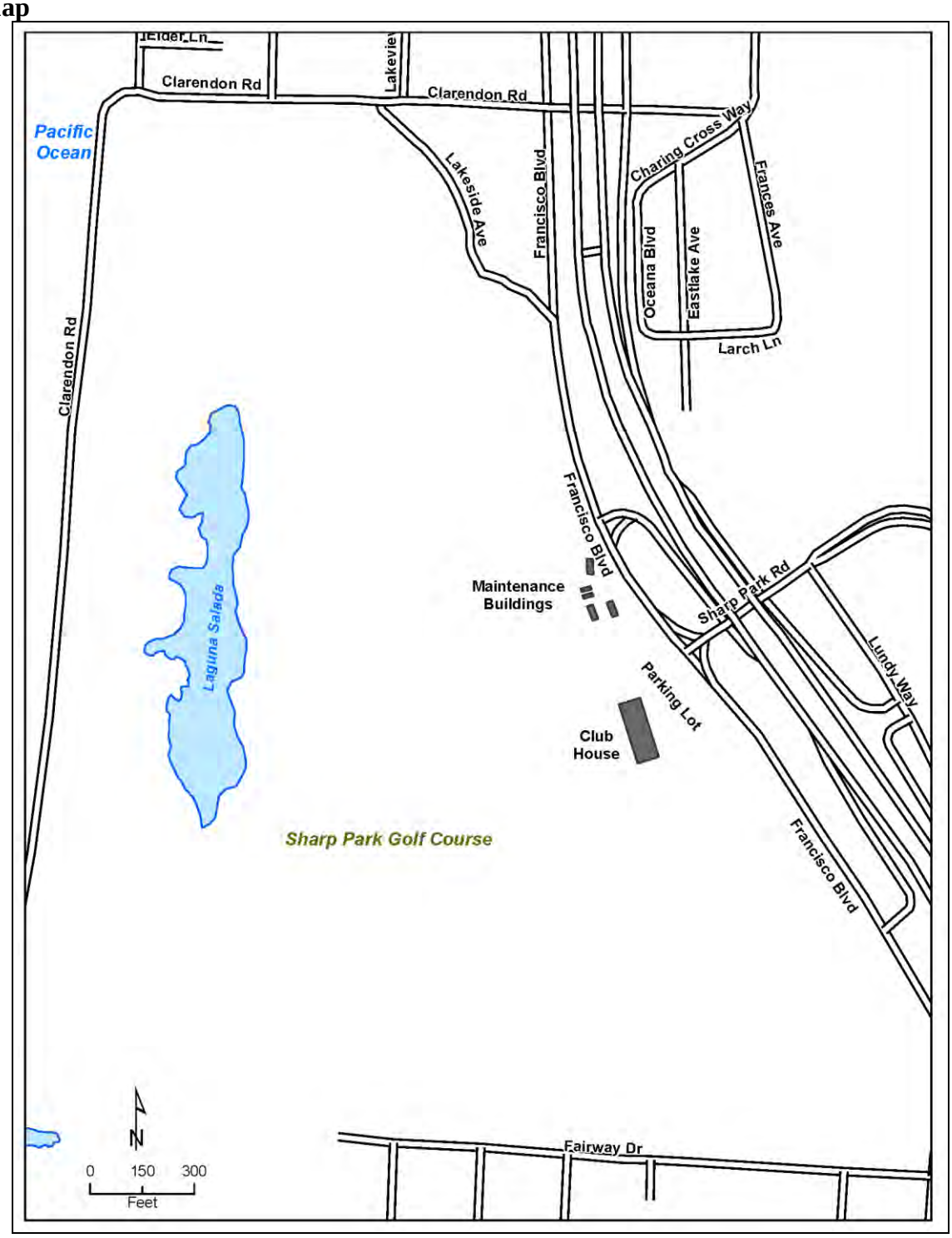


Photograph 10: West side of clubhouse, camera facing southeast 3/4/2010



Photograph 11: Maintenance building, camera facing southeast, 3/4/2010

Location Map



Archaeological Sensitivity Assessment

for the

Significant Natural Resource Areas

San Francisco and San Mateo Counties, California

Submitted to:

City and County of San Francisco Planning Department
Major Environmental Analysis
1650 Mission Street, Suite 400
San Francisco, California 94103
Case No. 2005.0912E

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December 2010

ABSTRACT

This assessment summarizes the factors that contribute to the archaeological sensitivity of 32 Significant Natural Resource Areas managed by the City and County of San Francisco's Recreation and Park Department. These areas are primarily within the City and County of San Francisco; one, Sharp Park, is in San Mateo County. The assessment was completed in support of the Environmental Impact Report analyzing the environmental effects of implementing a management plan for these Natural Areas. Research included records searches through the Northwest Information Center, a literature and archival review, an examination of historic maps, and a review of materials housed by the Staff Archaeologist at San Francisco Planning Department's Major Environmental Analysis Division. Little to no previous surveys or archaeological resources have been documented in the Natural Areas. This assessment addresses the potential for surface and subsurface archaeological resources only. Built environment and historical landscape resources were addressed in a separate document.

In total, nine Natural Areas were found to have a high level of archaeological sensitivity, nine have a moderate level as well as the Whiskey Hill portion of the Golden Gate Park Oak Woodlands Natural Area, and 14 have a low level (including the Lily Pond, Oak Woodlands, and Strawberry Hill portions of Golden Gate Park Oak Woodlands Natural Area).

Distribution of the Natural Areas Across Archaeological Sensitivity Levels

Archaeological Sensitivity	Natural Areas	
Low	1. Billy Goat Hill 2. Brooks Park 3. Dorothy Erskine Park 4. Duncan-Castro 5. Edgehill Mountain 6. Fairmount Park 7. Golden Gate Heights Park 8. Golden Gate Park Oak Woodlands (Lily Pond, Oak Woodlands, and Strawberry Hill areas only)	9. Grandview Park 10. Hawk Hill 11. Kite Hill 12. Lakeview/Ashton Mini Park 13. Rock Outcrop 14. Twin Peak
Moderate	1. 15th Avenue Steps 2. Bayview Park 3. Bernal Hill 4. Buena Vista Park 5. Corona Heights	6. Everson/Digby 7. Golden Gate Park Oak Woodlands (Whiskey Hill area only) 8. India Basin Shoreline Park 9. Mount Davidson 10. Tank Hill
High	1. Balboa Park 2. Glen Canyon Park 3. Interior Greenbelt 4. Lake Merced	5. McLaren Park 6. O'Shaughnessy Hollow 7. Palou-Phelps 8. Pine Lake 9. Sharp Park

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1. INTRODUCTION

This report was prepared for the San Francisco Recreation and Park Department (SFRPD). It documents the archaeological resources inventory for the San Francisco Significant Natural Resource Areas Management Plan (SNRAMP) and assesses the archaeological sensitivity of each Natural Area. The inventory is based solely on previous surveys and studies, and no archaeological survey was conducted. There are 32 Natural Areas within San Francisco and one Natural Area in Pacifica in San Mateo County. This assessment addresses only archaeological resources and is meant to support the cultural resource impact analysis included in the associated project EIR (Tetra Tech 2010); buildings and structures are addressed in a separate report (Mates 2010).

1.1 SAN FRANCISCO SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT REPORT

The Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately four percent of the total city area; one Natural Area is in Pacifica (Figure 1-1). The areas range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. While mostly owned by the SFRPD, some remnant Natural Areas are managed by other public and private entities. Some of these properties may eventually be transferred to the SFRPD. Detailed maps of each Natural Area depicting the designated management areas can be found in Appendix B of the associated project EIR (Tetra Tech 2010) as well as in Chapter 6 of the SNRAMP itself (SFRPD 2006). The *Significant Natural Resource Areas Management Plan, Final Draft* (SFRPD 2006) is incorporated by reference into this description of the project.

1.2 METHODOLOGY

In order to complete the archaeological sensitivity assessment, cultural resources records were reviewed and archives and literature were researched.

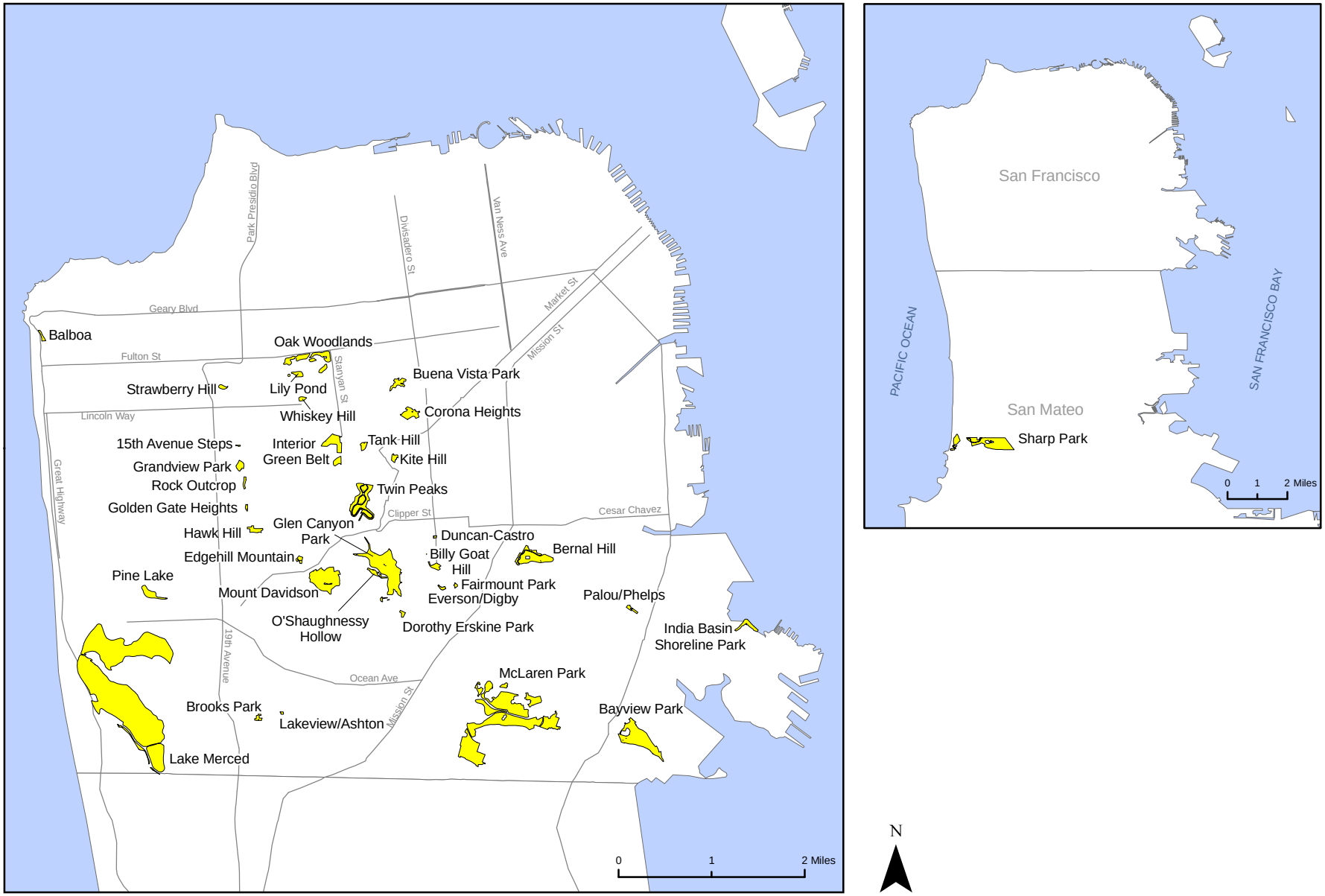
1.2.1 Cultural Resources Records Searches

Tetra Tech searched records through the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University for each of the Natural Areas and a 400-meter buffer around each (NWIC file numbers 07-1792, 08-0414, and 09-0630). The records search was done initially for the purposes of the EIR and in order to determine whether a subject parcel or its environs have been previously surveyed for cultural resources and whether any sites or historic buildings have been identified and recorded. In addition historic maps were consulted, and two directories of cultural resources were reviewed: Office of Historic Preservation's Historic Properties Directory and the California Inventory of Historical Resources.

1.2.2 Archival/Literature Research

Tetra Tech staff reviewed the records search results and conducted additional research based on past local projects in the San Francisco Major Environmental Analysis'(MEA) archaeology library and at local libraries. This included reviewing MEA's geographic information system (GIS) database, historic maps, site records, reports, and general history library.

Tetra Tech previously completed an archaeological properties assessment for the San Francisco Public Utilities Commission's San Andreas Pipeline No. 3 project in western San Francisco (King 2008). As part of that effort and in order to illustrate the types of archaeological resources potentially within



R:\NEW\19598\GIS\Layouts\Cultural Resources\Sensitivity Assessment\NaturalAreas.mxd - 08/02/10 - EK

The 32 Natural Areas total approximately 1,107 acres and range in size from 0.3 acres (15th Avenue Steps) to 395 acres (Lake Merced).

Legend

- Natural Area
- Roadway

Natural Areas

Tetra Tech, Inc

Figure 1-1

that project's developed CEQA Area of Potential Effect (C-APE), Tetra Tech staff conducted a general review of archaeological sites within the same study area used here. Much of this work and the understanding of site types and associated environmental settings were reviewed and incorporated into this sensitivity assessment.

1.2.3 Qualities of Archaeologically Sensitive Areas

Several elements contribute to the archaeological sensitivity of an area. Primarily, these elements are prehistoric and historic natural settings, historic and modern disturbances, and density and patterning of recorded archaeological resources. The potential for buried archaeological resources is also affected by landscape evolution, such as erosion, subsidence, and deposition.

Natural settings suggest to the researcher areas that would have been desirable settlement or activity areas for humans. The more resources available at or near a location, the more attractive the location would have been.

Disturbances and landform evolution can contribute to the destruction or preservation of an archaeological site. Although urban development is typically considered destructive of sites due to large-scale excavations or cuts made into landforms, it can also bury sites, effectively capping and protecting the resource from further disturbance.

The evolution of a landform can have similar effects when periods of sedimentation occur, burying sites sometimes tens of meters beneath the new surface. However, landform evolution can also include periods of erosion where the landform and archaeological materials deposited on them are removed. Similar effects are experienced during periods that lack sedimentation, when the site can become deflated (removal of the sediment matrix within the site, leaving only the artifacts). Further, the age of the landform contributes to the archaeological potential. It is generally accepted that humans did not occupy North America, particularly the California coast, before approximately 12,000 years ago; therefore, buried landforms that are Pleistocene (1.8 million years to 11,800 cal BP) in age are less likely to contain subsurface archaeological resources. Landforms that formed during the Holocene (10,500 cal BP to the present) are conversely more likely to include archaeological resources (Meyer and Rosenthal 2007:15).

The distribution and density of recorded archaeological resources can be more problematic in determining the archaeological sensitivity of an area. The archaeological record can suggest the potential for additional sites to exist, and the distribution pattern of the sites can also suggest the likelihood of unrecorded sites. For instance, if a stream corridor or other specific habitat is particularly dense with sites in one portion of a region, the potential for similar areas to include sites is increased. However, it is important to note that the archaeological record includes the biases of survey coverage, survey technique, records accuracy, and ground surface visibility, which can limit the ability to identify sites. Surveys are typically limited to defined project areas, so large portions of regions, if not most regions, are unsurveyed, as will be seen in the discussion here regarding the minimal survey coverage of the Natural Areas. Ground surfaces can be paved, landscaped, or heavily vegetated, limiting the ability of archaeologists to identify surface sites. If the survey techniques used do not account for subsurface resources, these sites can be missed as well. An additional problem with the archaeological record is the accuracy of site records, particularly older records or accounts of sites that were produced without the benefit of modern mapping techniques. In these instances, the "official" location of a site may simply be an approximate location.

1.3 CEQA AREA OF POTENTIAL EFFECT AND PROJECT STUDY AREA

A C-APE for archaeological resources is defined as those surface and subsurface areas that may be disturbed as a result of proposed. Additionally, a C-APE is expanded to include the boundaries and depths of any archaeological sites documented within or partially within the area of direct impact. For the proposed SNRAMP, the C-APE would encompass all areas where ground-disturbing activities would occur, as well as staging areas for those activities. Ground-disturbing activities include construction, trail creation and maintenance, new planting or plant removal, and activities that could contribute to erosion.

To better understand the likelihood for archaeological sites to occur within the C-APE, a larger project study area was established, similar in geologic and prehistoric environmental context and modern development. The area includes the northern end of the San Francisco Peninsula subregion (the Peninsula), from the intersection of Interstate Highways 280 and 380 (I-280 and I-380) in northern San Mateo County, and extending north to the Golden Gate Strait. Covering the area are the 7.5-minute United States Geological Survey (USGS) quadrangles Montara Mountain, San Mateo, San Francisco South, San Francisco North, Point Bonito, Hunters Point, and Oakland West. Expanding the project study area outside the C-APE allows for a more informed assessment of the possibility for unidentified archaeological resources to exist within the C-APE and what types of resources, such as prehistoric village sites and historic locales, may be anticipated.

2. ENVIRONMENTAL SETTING

The Natural Areas are described as oases surrounded by historic and modern urban development, providing some of the remaining natural habitats on the Peninsula. Vegetation within the parks include native and introduced species, notably eucalyptus groves. Surrounding areas include turf and greens at the Sharp Park Golf Course in Pacifica and others in San Francisco, isolated patches of introduced annual weeds, and vegetation, such as lawns, flower beds, and ornamental trees and shrubs associated with homes and yards near the parks. With the exception of Sharp Park, most historic watercourses have been covered by modern development. Detailed descriptions of each Natural Area, including geologic, biological, and hydrological descriptions, are included in the SNRAMP (SFRPD 2006). These are summarized below, with specific attention given to factors that may influence archaeological preservation or human attraction to the area. Reconstruction of the historic and prehistoric environmental settings of the Natural Areas is critical to assessing the likelihood of historic and prehistoric use of the areas, as well as the potential for the archaeological indicators of those activities to remain intact.

2.1 CLIMATE

The climate of the project area is classified as Mediterranean, characterized by seasonal precipitation of wet mild winters and dry summers (Golden Gate Weather Service 2008; Ritter 2008; SFRPD 2006). The project area is west of the Coast Range. While the Coast Range provides a wind buffer to the east, the areas west of the Coast Range are unprotected and experience cool marine winds and more summer fog. Summers in the study area experience cool marine air and persistent coastal clouds and fog. Specifically, within San Francisco, Twin Peaks acts as a prominent dividing point for the summer coastal fog. West-facing slopes receive substantial fog and strong winds while the east-facing slopes receive more sun and warmth (SFRPD 2006:6.8-1). Spring and fall often bring the warmest and most cloud-free periods to San Francisco. Rainfall during the spring is infrequent, while it is considered rare between May and September, when often only around one inch of rainfall accumulates. During winter, the polar jet stream and associated periodic storms reach into the lower latitudes of the Mediterranean zones, bringing rain to the San Francisco region. Most rain falls between November and March, predominantly in the western portion of the Peninsula. The combination of climate patterns with the variable topography of the area produces strong microclimates. Temperatures are generally moderate, with a comparatively small range of temperatures between the winter low and summer high (Golden Gate Weather Service 2008; Ritter 2008; SFRPD 2006).

2.2 TOPOGRAPHY AND GEOLOGY

The Natural Areas are spread primarily across southern and central San Francisco and are varied in their topography and geology. Descriptions of each are included in Section III of the associated project EIR (Tetra Tech 2010) as well as in the SNRAMP itself (SFRPD 2006). In general, the parks are underlain by Franciscan bedrock, and soils reflect the local bedrock condition. In most, a thick rocky soil is present over the Franciscan bedrock, but in others disturbed soils, including cut and fill material, is present. Fill depths vary greatly across the Peninsula. Erosion is common within the Natural Areas but is not necessarily active year-round. Such processes are intensified by steep slopes, road cuts, paved surfaces, and pedestrian traffic (SF Environment 2006; SFRPD 2006:3-1–3-2).

Historic-era explorers noted that the western areas of the Peninsula were dominated by sand dunes (Shoup and Baker 1981:9); most of San Francisco west of Twin Peaks is underlain by dune sand. Where the topography is relatively flat, the sand is deep and is not especially prone to erosion when undisturbed or vegetated. In steeper areas (such as Grandview Heights) the sand is shallow, is underlain by impermeable

bedrock, and is easily disturbed. In these areas erosion is more commonplace. More loamy soils tend to be less easily eroded than clean sandy soils due to their ability to hold water longer and develop deeper deposits and more dense vegetation (SFRPD 2006:3-2).

These dunes would have played a critical role in the formation and post-depositional processes of archaeological sites within the natural areas in this portion of the study area. The sand dunes of the Peninsula and San Francisco originated on the Pleistocene coastal plain, when sea level was at the 100-meter (328-foot) isobath, approximately 15,000 BP (Atwater et al. 1977; NPS 2002). Historically, they extended from Lake Merced north to Point Lobos and then east through the San Miguel Hills and what is now Golden Gate Park to the bay shore (SFRPD 2006:3-4). Older Aeolian sandstones underlie the Peninsula from Lake Merced south to Colma Creek Valley (city of San Mateo area) (SFRPD 2006:3-2). As sea levels rose and eventually stabilized, between 15,000 and 6000 BP, sand from the plain was transported to the beaches of the now modern coastline, where it was blown over the coastal hills to form the historic San Francisco sand dune complex composed of Sirdak sand (Atwater et al. 1977; NPS 2002; SFRPD 2006). Wind-driven processes such as this can cause both erosion and sediment deposition, typically of fine sand, silt, and clay. The wind-driven movement of materials can easily deflate an archaeological site, bury and obscure it, destroy its stratigraphy, or sandblast artifacts, altering their appearance. Deposits initially laid on the windward side of a dune are immediately subjected to deflation, while artifacts laid near the peak can be subject to deflation and be transported to the leeward side, where they can become buried. Deposits originating on the leeward side of a sand dune are more likely to be buried and preserved by sand drift (Schiffer 1983, 1987; Waters 1992).

Although the Natural Areas have the same general geological setting, the overlying soils and topography that can contribute to archaeological preservation are more specific to each area. of the effects of development and occurrence of bedrock outcrops that may have been prehistorically or historically quarried are also specific to each Natural Area. The following descriptions of each park's specific geologic and topographic setting are derived from SFRPD (2006).

15th Avenue Steps: The 15th Avenue Steps Natural Area includes unexposed Franciscan chert bedrock overlain by dune sand. A chert quarry once existed near the southern end of the area. Slopes are extensively steep and a landslide scar is present in the northeast portion of the Natural Area (SFRPD 2006:6.16-1).

Balboa: The Balboa Natural Area is composed entirely of a loose sand dune formation directly across the Great Highway from the Pacific Ocean. It is a beach and dune sand terrace at the base of a Franciscan sandstone bluff. The area has been restored since 2002 from prior use as a construction staging area. The sand used to form the dune is redeposited material from beneath the De Young Museum, and vegetation was planted between 2003 and 2005. The redeposited sand was mixed with the staging area surface, and some of these hardpan areas may still be present beneath the sand (SFRPD 2006:6.22-1).

Bayview Park: Bayview Park Natural Area is atop a peak in the southeast corner of the city, overlooking San Francisco Bay. Soils consist of very gravelly sandy loam and fine sandy loam. Outcrops of chert and sandstone occur throughout the park, and bedrock is exposed in several areas along the main paved path. A history of anthropogenic ground surface disturbance is evidenced by benched slopes, old road grades, and very large soil slumps. The southeastern slope has been terraced. The northern slope is eroding rapidly in several locations due to water runoff. In one erosional area a landslide has

occurred near the base of the area's slope and the northern boundary . It appears to extend from an old rock quarry that is now an escarpment. Disturbances are apparent above the quarry, as well as remnant stockpiles on the quarry floor, and suggest the topsoil and sandy subsoil have been stripped from the rock surface (SFRPD 2006:6.17-1–6.17-2).

Bernal Hill: The Bernal Hill Natural Area includes Franciscan chert and greenstone bedrock overlain by slope debris. The chert bedrock occurs in outcrops at the lower elevations of the park and is decomposed in areas. A remnant of a redeveloped quarry is present on the south side of the area, and a large soil slip is in the northwest corner. An ancient terrace is also present at the east end of the park, covered by sandy soil and slope debris (SFRPD 2006:6.21-1).

Billy Goat Hill: The Billy Goat Hill Natural Area is underlain by Franciscan chert, sandstone, and volcanic greenstone bedrock. The greenstone bedrock mostly lies beneath a thin rocky slope debris soil and is exposed on the northern edge of the park. It is referred to as pillow lava due to its rounded shape, formed by an underwater volcanic eruption. At the top of the hill is a chert exposure with a thin debris deposit over it. At the southern end of the park ancient terraces are underlain by sandstone. Debris deposits on the terraces are evidence of shallow soil slips in this area. Erosion, particularly in denuded areas, can be extensive in this Natural Area (SFRPD 2006:6.9-1).

Brooks Park and Lakeview/Ashton Mini Park: These two small Natural Areas are discussed together given their proximity and similar setting. Brooks Park sits atop an east-west trending bedrock ridge, with less than one-foot of sandy soil overlying Franciscan sandstone at its center. Exposures of the erodible sandstone are observable throughout the park. Slope debris and thick sandy soils several feet thick are present at the bases of slopes along the edges of the park. An area of thin fill has been placed in the southwest corner of the park where a soil slip is also present. Quarried areas of Franciscan sandstone bedrock are also present within the northwest and southeast corners. The Lakeview/Ashton Mini Park (also referred to colloquially as Orizaba Rocks) is at the highest point of the same bedrock ridge and is also composed primarily of Franciscan sandstone. Similar to Brooks Park, the center of the park includes the peak of the outcrop, while the edges include a less than 0.3-meter-deep layer of sandy soil. Slope debris and weathered sandstone bedrock accumulates on the slopes of the park (SFRPD 2006:6.6-1–6.6-2).

Buena Vista Park: This park is composed of a moderately steep hill of historic dune sand. A small area of chert is present in the northeast corner of the Natural Area. Wind and water erosion is considered moderate and is exacerbated by paved roads and sandy foot trails (SFRPD 2006:6.10-1, 6.10-10).

Corona Heights: Corona Heights Natural Area is near the center of San Francisco and is almost entirely underlain by Franciscan chert bedrock, with smaller areas of Franciscan sandstone and greenstone in the lower elevations of the northwest portion. Thin rocky slope debris covers most of the bedrock. Bedrock slopes are very steep, with ancient soil slips present on most of the hillsides, as well as steep escarpments on the northern and southern edges. The amphitheater at the center of the Natural Area is a former quarry and is bare ground today (SFRPD 2006:6.11-1).

Dorothy Erskine Park: Like most of the other Natural Areas, Dorothy Erskine Park is underlain by Franciscan chert bedrock. Primarily, slope debris of a thin rocky soil overlies the bedrock. Bedrock

outcrops occur along the northern and eastern edges of the northeast corner, as well as at the top of the hill where soils are thin. The northern boundary is dominated by shallow soil slips (SFRPD 2006:6.24-1).

Duncan-Castro: The Duncan-Castro Natural Area is underlain entirely by layered Franciscan chert bedrock. Thin rocky soil overlies the bedrock in areas. Folded chert layers are exposed along the south side as well as the escarpment along the west side of the area. Below the escarpment are landslide deposits and slope debris. Bedrock exposures and shallow slips of the soil are common (SFRPD 2006:6.12-1).

Edgehill Mountain: This Natural Area is underlain by Franciscan chert bedrock covered by a thin rock layer of slope debris. The steep terrain of the area leads to soil slips and rock falls throughout the park and bedrock has been exposed in elongated scarps along the south-facing hillside and along road cuts for bordering streets (SFRPD 2006:6.25-1).

Everson/Digby: Soils in the Everson/Digby Natural Area are thin, usually less than 30 centimeters deep. The area is underlain by Franciscan bedrock, which is evident in outcrops. Slopes are steep, with a terrace running east-west along the middle of the site (SFRPD 2006).

Fairmount Park: The Fairmount Park Natural Area is underlain by Franciscan chert and greenstone bedrock. The chert bedrock is primarily in the southern portion, where loamy soils of varied depths dominate. The greenstone bedrock is primarily in a band across the southern half of the northern portion. Slope debris covers this area. Sandy soils are mapped in the northern and most southern portions. Roadcuts along the eastern edge of the Natural Area have exposed the bedrock, while eroded slopes are present in the central and southwestern portions (SFRPD 2006:6.26-1).

Glen Canyon Park and O'Shaughnessy Hollow: Given their proximity, these two parks are discussed together. Both are within an area called the San Miguel Hills and gain elevation from south to north. The canyon for which Glen Canyon Park is named drops 107 meters over a horizontal distance of 1.6 kilometers, creating very steep slopes that lead down to Islais Creek. Franciscan chert underlies both parks, interbedded with very thin layers of shale. Less common in the parks is Franciscan sandstone with interbedded shale. Large areas of outcropping bedrock occur in the northwest and northeast rims of the canyon and along O'Shaughnessy Boulevard between the two parks. In fact, these outcrops are some of the city's largest. Franciscan greenstone has also been mapped along the southwest boundary of these parks. Soils are typically thin, with high rock content, but in flatter areas soils can include deep layers of eroded soils and fill material (SFRPD 2006:6.3-1–6.3-2, 6.3-4).

Golden Gate Park Oak Woodlands (including Whiskey Hill, Lily Pond, and Strawberry Hill): The Oak Woodlands Natural Area's topography was likely altered when it was planted around the 1870s. Similar effects likely occurred when much of the native vegetation of Golden Gate Park was removed and the park was landscaped. Slopes within the park are often the result of grading and park management. Most soils are from the historic dune complex and are susceptible to erosion. In addition to sandy soils, chert outcrops and stabilized sand dune formations are found throughout Golden Gate Park. Whiskey Hill is a classic example of the latter. The ground surface is composed of moderately compacted silty fine sand. However, at the base of the windward north face of the hill, the sand is looser and has been exposed by erosion. No bedrock is exposed in Whiskey Hill, and borings indicate at least 150 feet of sand and other loose sediment rests above Franciscan bedrock here. The Lily Pond area is a

flatter sand dune than Whiskey Hill. Slopes are moderate to gentle on all sides. A quarried lake, Lily Pond, is next to the area. Strawberry Hill is surrounded by Stow Lake. Most of the island is a hill composed of Franciscan chert overlain by dune sand that ranges in depth from a few inches at the top to several feet at the base. Chert exposures, sandstone, and a mixture of rocky material are present, particularly on the leeward south face of the hill (SFRPD 2006:6.15-1–6.15-3).

Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill: Given the proximity and similar geologic setting of these Natural Areas, they are discussed together here. All of these parks sit atop a remnant ridgeline of the historic sand dune complex that once covered western San Francisco. Grandview Park includes chert overlain by these dune sands, as well as chert exposures. The peak of the park's hill exhibits extensive erosion, with exposed tree roots and bare ground. Exposed sand that erodes, particularly during storms, is also present within the southern and eastern slopes. Rock Outcrop Natural Area is composed primarily of a Franciscan chert outcrop with steep faces. Inclusions of sandstone and conglomerate and deposits of colluvium and fill are also present. Very little erosion has been noted, primarily due to the nature of the dominating chert outcrops. Golden Gate Heights Natural Area includes areas of exposed chert and chert outcrops but is predominantly sandy soils. Erosion has been primarily caused by public use. Hawk Hill soils are entirely dune sand, which is easily eroded. Installation of retaining walls has limited the extent of erosion (SFRPD 2006:6.5-1–6.5-2).

India Basin Shoreline Park: The India Basin Shoreline Park is along the southern bayshore of San Francisco, near Hunters Point. Wetland restoration was completed in 2002, which included creation of a salt marsh. The park is entirely within a filled area that created an unnatural shoreline. Adjacent to the park, bay waters are at most 10 feet deep and the mudflats here are exposed at low tides (SFRPD 2006:6.18-1).

Interior Greenbelt: This Natural Area is underlain by Franciscan chert and sandstone bedrock. Sandy soil covers the bedrock on the northern and eastern slopes with bedrock outcrops and small scarps. Near the center of the area, a loamy soil of varying depths is present. An ancient fault or shear zone is evidenced by a prominent valley along the northwest boundary of the area. The fault or shear has eroded with time to develop a narrow straight cleft in the bedrock. Shallow soil slips occur along the valley walls (SFRPD 2006:6.23-1).

Kite Hill: The Kite Hill Natural Area is underlain almost completely by Franciscan chert and greenstone, with thin rocky soils atop the bedrock. Greenstone is concentrated along the western border at the base of the hill. Chert is primarily at the top of the hill, where there are chert knobs, and within terraces facing east. Bedrock slopes are very steep, and ancient landslide scarps are evident on most hillsides. Shallow slips are common, evidenced by debris deposits at the base of the terraces (SFRPD 2006:6.13-1).

Lake Merced: Lake Merced was originally a brackish bay open to the Pacific Ocean. But during the Late Pleistocene and Early Holocene, the area became sedimented as a result of sea level rise, and a sand barrier formed, creating the lake. In 1852 the barrier was breached as a result of an earthquake, reopening the lake to the saltier ocean water. A sand bar reformed in the 1880s and a dam was constructed in the 1950s as a more permanent barrier (Shoup and Baker 1981:7-8). Similar incidents of sedimentation and breaching no doubt occurred in prehistory as well. Today, the lake is further divided into North, East, South, and Impound Lakes by berms constructed in the late 1800s and 1950s. Soils are primarily fill

material and Sirdak sands. Lakeshore slopes are fairly steep. In the northern and eastern terraces of the park, soils are underlain by bedrock, while deep sand dune areas are present in the south and west portions of the park (SFRPD 2006:6.1-2). In fact, Aeolian sandstones older than the northern dune system underlie the study area from Lake Merced south to the City of San Mateo (SFRPD 2006:3-2).

McLaren Park: McLaren Park Natural Area includes a portion of a ridgeline that extends east to include Bayview Park. Slopes on the north face are more gradual than those on the south face of the hill that makes up the park. The northeast corner of the Natural Area contains loamy soils that vary in depth atop recent sand and silt sediments. In the rest of the northern half of the park is partially decomposed bedrock with thin rocky soils. Exposures of the bedrock are few, but greenstone has been mapped along the western slope, serpentine at the ridgetop and northeast corner of the park, and sandstone along most of the eastern slope. The ridgetop knolls are eroding, and soil creep has been noted on the east-facing slopes in the most northern areas of the park. A portion of the park in the northwest corner included a sandstone quarry face nine meters high. In the southern half of the park the same thin rocky soil is present as in the northern half, but there are also numerous greenstone and sandstone outcrops. Historic quarrying is evidenced by terraces in the extreme southwest corner. In the most eastern parts of the southern half, animal burrows and periodic fires have created soil slip over an area of old road fill. The soil slip continues downslope, south to two outcrops of conglomerate. Most of the southern half of the McLaren Park Natural Area includes the Gleneagles International Golf Course, which has likely altered the natural topography there. Greenstone outcrops and terracing are noticeable along the northern and southern boundaries, respectively, of the course. At the southernmost edge of the Natural Area is an extensive hillside soil slump (SFRPD 2006:6.19-1–6.19-3).

Mount Davidson: Mount Davidson is the highest point in San Francisco. The park is underlain predominantly by Franciscan chert, with Franciscan sandstone in the northern corners of the park and Franciscan greenstone in the lower elevations of the southern slope. Outcrops of the chert do occur throughout the park (SFRPD 2006:6.2-1–6.2-2). Soils at Mount Davidson are a mixture of fine sandy loam, sandy loam, and gravelly loam (SFRPD 2006:3-2).

Palou-Phelps: This Natural Area is dominated by a steep hill that rises to the east and south, creating steep slopes and escarpments. It is underlain by sandstone bedrock that is decomposing in areas to a thick rocky soil. Erosion in one area has created a six-meter drop-off along the northeast boundary (SFRPD 2006:6.20-1).

Pine Lake: The Pine Lake Natural Area is within an elongated valley with steep wooded walls, the lake being at the western end. Underlying soils are sandy and susceptible to erosion. An escarpment parallels the northern shoreline of the lake, and a dog play area is east of the Natural Area in an open field (SFRPD 2006:6.7-1).

Sharp Park: Coastal Sharp Park Natural Area includes a public golf course, creeks, an extensive lagoon and associated wetlands, and an extensive canyon. It borders Sweeney Ridge and extends west to the Pacific Ocean. Soils are loamy with sand, fill, and disturbed areas closer to the ocean. The canyon that forms the eastern and upper portion of the park consists of Franciscan sandstone overlain by approximately one foot of gravelly sandy loam. Franciscan greenstone is present in the northern and eastern areas of the park. In the upper canyon are thin, gravelly, sandy loam soils underlain by Franciscan

sandstone. Active and extensive erosion, landslides, and soil creep toward the west have been identified in this area of the park (SFRPD 2006:6.4-1–6.4-3).

Tank Hill: The Tank Hill Natural Area is also entirely underlain by Franciscan chert bedrock with a thin layer of rocky soil over it. There is a concrete foundation pad for a historic Spring Valley Water Company water tank (no longer present) in the southern portion of the area where the Franciscan bedrock is altered to a mostly buried greenstone that extends south to an outcrop near the southern and eastern boundaries of the park. A thin layer of slope debris is present within the northwest corner, where there is a fault-sheared bedrock mixture of sandstone, chert, claystone, and shale. The eastern and northern slopes are exceedingly steep and ancient landslide scarps form most of the hillside in these areas. Debris deposits at the base of the slopes evidence common shallow soil slips and slope raveling. On the southeast slope an area of steep, weathered, and eroded chert is exposed (SFRPD 2006:6.14-1).

Twin Peaks: The Twin Peaks Natural Area is near the geographic center of San Francisco and offers the second highest peak in the city. The two peaks are within the northern portion of the San Miguel Hills. Soils consist of a very gravelly sandy loam and a fine sandy loam lay over Franciscan bedrock. Roadcuts in the area have exposed chert and sandstone outcrops that range from five to fifteen feet in height. Spoils from these roadcuts were placed on the downslope side of the road. Erosion is primarily contained to along trails and where public use has degraded the ground surface. Ground surfaces are bare on the northwest-facing slope of the southern peak as well as at the top of the northern peak (SFRPD 2006:6.8-1–6.8-2).

2.3 HYDROLOGY

Specific discussions of the hydrologic setting of the natural areas are included in Sections III and V.H of the project EIR (Tetra Tech 2010), as well as in the SNRAMP (SFRPD 2006). The hydrology of an area affects the likelihood of it to have been prehistorically or historically occupied, and the potential for erosion to have affected the preservation of archaeological sites. Many of the Natural Areas do not have water bodies, but the following have natural or man-made water bodies: Bayview Park (proposed detention basin/seasonal wetland), Lake Merced, Pine Lake, India Basin Shoreline Park (San Francisco Bay), Golden Gate Park Oak Woodlands (Stow Lake), McLaren Park, Glen Canyon Park and O'Shaughnessy Hollow (Islais Creek), and Sharp Park (Sanchez Creek and Laguna Salada wetland complex). Numerous creeks, tributaries, wetlands, bay mudflats, tidal marsh, and lagoons once existed across the Peninsula and along the shorelines (SFEI 2010; USGS 1896). Several creeks begin in, are next to, or flow through a Natural Area. Similarly those Natural Areas along the bay shore or coastline are next to or in what was once marsh, lagoon, or mudflat habitat. Most of these creeks and habitats have been covered by modern development or are filled or otherwise altered.

Floods and drought likely occurred historically among the historic water bodies within the study area. Similar to wind-driven processes, hydrologic processes can affect archaeological sites postdepositionally. Overflow of lakes, rivers, and streams can result in fluvial flooding of nearby archaeological sites (Schiffer 1983, 1987; Sundborg 1967:335). They can also result in slope wash, alluvial fans, or colluvial deposits that can bury and preserve a site if activity occurs quickly and briefly. Erosion can result from streams and rivers cutting away at their banks, which can undercut the land and possibly destroy a site. Sometimes sites in what eventually becomes a waterway are eroded away by the flowing water, unless the flow is gentle enough to merely cover the site with alluvial sediment eroded from upstream. Rising groundwater levels, as would have been the case along sea and bay shores during periods of sea level rise, could submerge the lower reaches of a deposit.

Additionally, sea levels affect a region's coastline through erosion and inundation. Along the Peninsula's coast, old coastlines would have been located offshore, as noted above. The larger landmass would have offered a larger area available for settlement and use (Schiffer 1983, 1987).

The hydrology of the Natural Areas is specific to each. Those that possess significant hydrologic processes, historically and today, are discussed below; however, all of the areas exhibit erosion by water or public use. The hydrology of the Natural Areas not discussed below primarily consists of surface runoff.

Glen Canyon Park and O'Shaughnessy Hollow: At the bottom of the canyon within Glen Canyon Natural Area flows Islais Creek on its way to San Francisco Bay. This is one of the few historic creeks that still flow through the city. However, the watershed of Islais Creek is today limited to Glen Canyon Park, 80 percent smaller than its historic extent. Overland flow and some hillside seeps feed the creek but also deposit eroded sediment. The additional sediment reduces stream flow, which can lead to periodic flooding and has reduced the historically open water channel (SFRPD 2006:6.3-1–6.3-3).

India Basin Shoreline Park: Given the proximity of this Natural Area to San Francisco Bay, hydrology at India Basin Shoreline Park is primarily tidal action (SFRPD 2006:6.18-1).

Interior Greenbelt: Water accumulates in the prominent valley of this Natural Area. The valley drains the higher slopes of Mount Sutro. The creek that is formed runs only in the early spring or after substantial rainfall (SFRPD 2006:6.23-1).

Lake Merced: The Lake Merced Natural Area includes the largest expanse of wetland in San Francisco and the largest freshwater lake between Point Reyes and southern San Mateo County. Water today in the lake is lower than historic levels due to watershed alterations. Historic levels since 1935 have fluctuated between 6.4 and 11.28 meters amsl (SFRPD 2006:6.1-1–6.1-3). Lake Merced is fed by an underground spring and, historically, up to nine creeks (USGS 1896) and their tributaries, some of which originated near 19th Avenue. Modern topographic maps (USGS 1995) indicate that none of the streams and creeks currently flow directly to the water body. Prehistorically, the lake would have provided a source of freshwater and aquatic subsistence resources for human populations. As discussed above, Lake Merced was originally a brackish bay, fed by streams flowing to the Pacific Ocean, but during the late Pleistocene and early Holocene the area became sedimented as a result of sea level rise, and a sand barrier formed, creating the lake. In 1852, the barrier was breached as a result of an earthquake, reopening the lake to the saltier ocean water until a dam was constructed in the 1950s. In the past 100 years, the lake has been reduced to a series of three water bodies, separated by mudflats as a result of stream rechanneling and lake filling (Shoup and Baker 1981: 7-8).

Golden Gate Park Oak Woodlands: The Lily Pond portion of this Natural Area is next to a quarried lake (SFRPD 2006:6.15-3). It is unclear when the lake, also referred to as Lily Pond, was created. Stow Lake surrounds the Strawberry Hill portion of the Natural Area (SFRPD 2006:6.5-3). It is unclear when this man-made lake was created or by what methods.

McLaren Park: Three springs on the northern slope of McLaren Park and Sunnydale Creek historically fed Yosemite Creek. Sunnydale Creek was fed by springs on the southern slope of McLaren Park. Yosemite Creek would then flow southeast from the park to Visitacion Bay. A marsh associated with Yosemite Creek is still present within the park, as are several ponds. Also within the northern

portion of the park is Gray Fox Creek, which flows north from the ridgeline and empties into McNab Lake in the northwest portion of McLaren Park. Seeps are present throughout the park (SFRPD 2006:6.19-1–6.19-3).

Pine Lake: The Pine Lake Natural Area includes Pine Lake itself, also known as Laguna Puerca in what is now Stern Grove. Laguna Puerca was fed by one creek historically (USGS 1896). Modern topographic maps (USGS 1995) indicate that the creek does not currently flow directly to the water body. Prehistorically, the creek would have provided a source of freshwater and aquatic subsistence resources for populations.

Sharp Park: There are seeps throughout Sharp Park and two major water features. The Natural Area includes free-flowing Sanchez Creek and brackish Laguna Salada. The creek originates on the ridge above the park and flows through the upper canyon to an irrigation reservoir, then through the golf course to a pond near the Pacific Ocean. The water is then pumped into the ocean via an automated system. Creek banks of expansive clay have been reinforced with ready-mix concrete where it flows through Sharp Park Golf Course. In segments that are not reinforced, undercutting and exposed roots have been noted. There is also evidence of dredging of the creek. Historically, Laguna Salada was similar to other coastal tidal lagoons that trapped winter runoff until levels topped adjacent dunes to connect the lagoon to the ocean. Construction of Sharp Park Golf Course modified the lagoon with a levee that prevents the exchange of tidal water. Today, a man-made channel drains the brackish water from the lagoon to the same pond that Sanchez Creek drains to (SFRPD 2006:6.4-1–6.4-2).

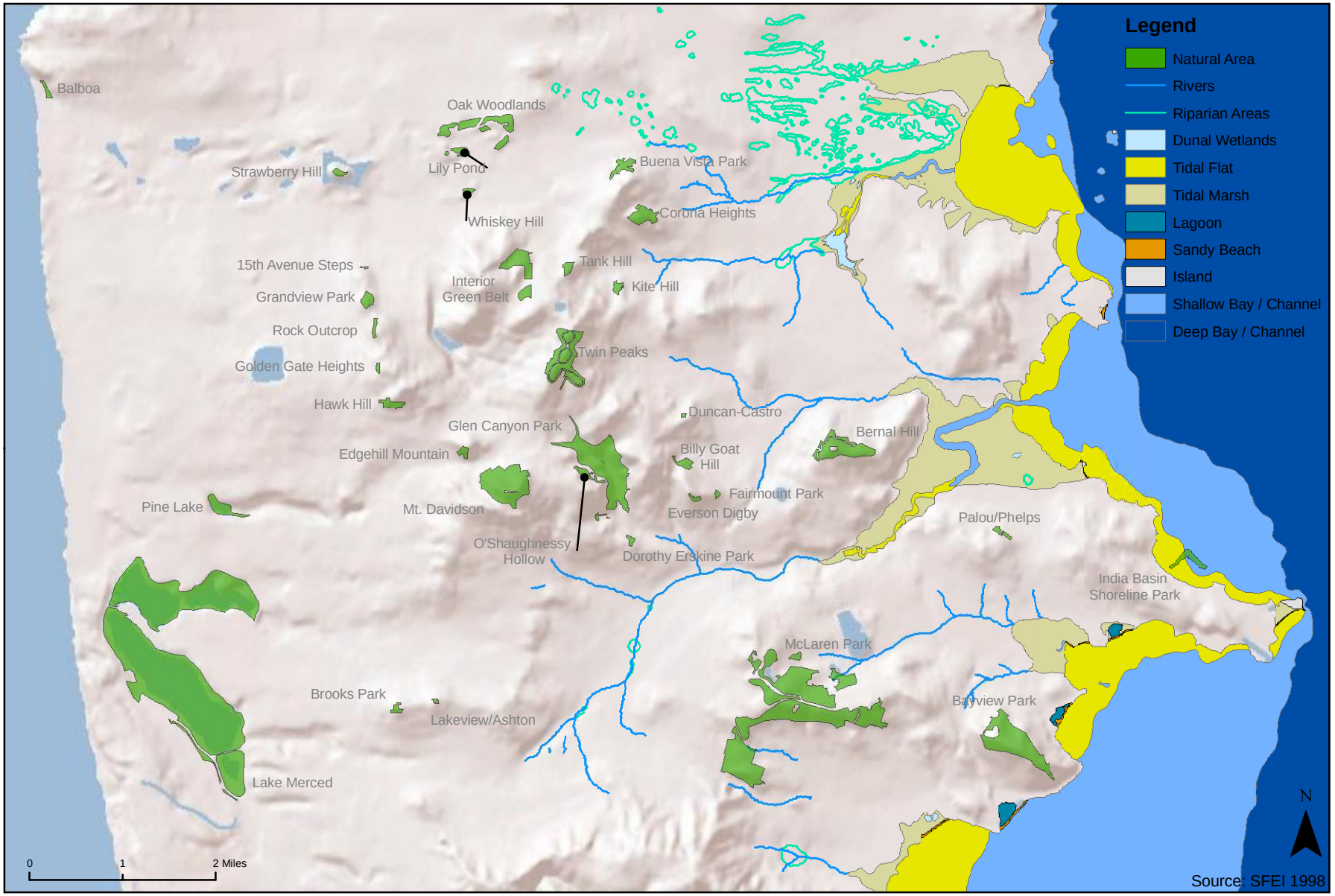
2.4 FLORA AND FAUNA

The C-APE encompasses some of the last vestiges of undeveloped land on the Peninsula, particularly within San Francisco. However, most of the habitats that are present within the Natural Areas today were altered historically by planting forests or landscaping. Further, numerous nonnative and invasive species occur in the areas today. The Natural Areas are surrounded by a modern landscape of paved streets, golf courses, and residential neighborhoods. Approximately 95 percent of the natural lands, wetlands, and shorelines within the Franciscan landscape have been altered in some way or have been destroyed altogether. Much of these areas were used historically for cattle grazing that led to nonnative and invasive vegetation or were planted with nonindigenous conifer and eucalyptus forests during the historic period. These practices have resulted in a highly fragmented and minimal natural or native landscape (SFRPD 2006:3-4).

Originally, as part of the South Coast Range, the region was dominated by a Southern Oak Woodland environment (Baumhoff 1978: 19). Acorns and other plant resources would have been available to the south in an area dominated by oak woodland plant community. Additionally, tule and coastal dune scrub communities, still found in the area today, would have been available along watercourses and in the dune complex (NPS 2002; Shoup and Baker 1981:9). Such vegetation, including maritime chaparral, costal scrub, manzanita, and perennial grasslands, would have stabilized the sand dune complex once the communities developed (SFRPD 2006:3-4).

The presence of freshwater in some Natural Areas likely made them attractive to various terrestrial fauna and birds, including elk and migratory birds along the Pacific Flyway. Additionally, marine mammals and pinnipeds would have been available along the coast. Shorelines would have also offered opportunities for nearshore fishing and shellfish collecting historically and prehistorically (Moratto 1984: 221; Shoup and Baker 1981: 8-9).

SFRPD (2006:Appendix E) documents vegetation and animal species that were likely historically present within each Natural Area. In general, forests, grasslands, scrub, mixed herbaceous vegetation, and nonnative species are present at each today. Wetlands and marsh habitat exist in Natural Areas with significant hydrological features, such as Lake Merced, Sharp Park, Pine Lake, and Golden Gate Park Oak Woodlands (Strawberry Hill). The San Francisco Estuary Institute's (SFEI) (SFEI 2010) has reconstructed the historic bay shore vegetation of the San Francisco Bay, including the eastern half of the city (Figure 2-1; no data available for western extent of Peninsula). The Natural Areas in the central area of San Francisco are near the heads of several creeks that empty into the bay, while the most north-central Natural Areas, such as Buena Vista Park and Golden Gate Park Oak Woodlands, are close to an extensive riparian environment. Bernal Hill, Palou-Phelps, and Bayview Park are next to historic tidal marshes and flats. Bayview Park is also next to several lagoons and sandy beaches. India Basin Shoreline Park is the only Natural Area that is not on the historic shoreline. It is instead in a tidal flat and a shallow bay environment. The SFEI has also mapped the modern bay shore vegetation (Figure 2-2) to illustrate the vast changes that have occurred since the historic period.



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Note: SFEI data are for the San Francisco Bayshore only. Therefore, no data exists for the western half of the Peninsula.

Historic Bayshore Environments

Tetra Tech, Inc

Figure 2-1



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Note: SFEI data are for the San Francisco Bayshore only. Therefore, no data exists for the western half of the Peninsula.

Modern Bayshore Environments

Tetra Tech, Inc

Figure 2-2

3. ARCHAEOLOGICAL RECORD

Tetra Tech completed records searches through the NWIC of the California Historical Resources Information System at Sonoma State University for each of the Natural Areas and a quarter-mile buffer around each (NWIC file numbers 07-1792, 08-0414, and 09-0630). The records search is done to determine whether a subject parcel or its immediate environs have been previously surveyed for cultural resources and whether any sites have been identified and recorded. In addition historic maps were consulted, and the Office of Historic Preservation's Historic Properties Directory and the California Inventory of Historical Resources were reviewed. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (Mayfield 1978). Cultural resources overviews (general discussions of resources that did not include formal surveys) and pedestrian surveys have been conducted within nine of the Natural Areas.

Tetra Tech staff also reviewed the records search results and conducted additional research at San Francisco MEA's archaeology library. This included a review of MEA's GIS database, historic maps, site records, reports, and general history library.

The following discussions describe information specific to each Natural Area obtained through the records search, research at MEA, and other research at local libraries.

3.1 SURVEYS AND OVERVIEWS WITHIN OR NEAR THE NATURAL AREAS

Cultural resource overviews (general discussions of resources that did not include formal surveys) and pedestrian surveys have been conducted within nine of the Natural Areas. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (Mayfield 1978). Table 3-1 summarizes the studies completed within specific Natural Areas. No archaeological surveys have been conducted at 23 of the Natural Areas: 15th Avenue Steps, Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, Glen Canyon Park, Golden Gate Heights, Golden Gate Park Oak Woodlands (including Lily Pond, Strawberry Hill, and Whiskey Hill), Grandview Park, Interior Green Belt, Kite Hill, Lakeview/Ashton Mini Park, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Rock Outcrop, Tank Hill, and Twin Peaks.

Table 3-1
Previous Surveys Conducted in the Natural Areas

Study No.	Date	Author	Title	Notes/Results*
Balboa				
S-5382	1979	Roger Olmstead, Nancy Olmstead	*Ocean Beach Study: A Survey of Historic Maps and Photographs*	Records/literature search. No archaeological resources identified within Natural Area.
S-18341	1995	Martin T. Mayer	*Archaeological Clearance Survey Form: Parkwide Traffic Counter Installation, Golden Gate National Recreation Area, Marin and SF Counties*	Linear survey. No archaeological resources identified within Natural Area.
S-18364	1979	David Chavez, Eleanor Ramsey	*Preliminary Cultural Resources Evaluations of the Richmond Transport Sewer Alternatives*	Linear survey. One site, P-38-21, documented within 400 meters of the Natural Area.
Bayview Park				
S-25045	2001	Jan Hupman, David Chavez	*Archaeological Resources Investigations for the Bayview-Hunters Point Redevelopment Plan,*	Regional overview that covered entire Natural Area, in addition to

Table 3-1
Previous Surveys Conducted in the Natural Areas

Study No.	Date	Author	Title	Notes/Results*
			San Francisco, California	larger Bayview-Hunters Point APE. No archaeological resources identified within Natural Area.
S-28766	2004	Jan Hupman, David Chavez	*Archaeological Resources Investigations for the Bayview-Hunters Point Redevelopment Plan*	Linear survey. No archaeological resources identified within Natural Area.
Everson/Digby				
S-6160	1982	Mark Ogden Rudo	*The Prehistory of San Francisco*	Regional overview that covered entire Natural Area, in addition to larger MA thesis study area. No archaeological resources identified within Natural Area.
S-9580	1983	Randall T. Milliken	*The Spatial Organization of Human Populations on Central California's San Francisco Peninsula at the Spanish Arrival*	Regional overview that covered entire Natural Area, in addition to larger MA thesis study area. No archaeological resources identified within Natural Area.
S-15529	1993	Robert L Gearhart, II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson	*California, Oregon, and Washington: Archaeological Resource Study*	Regional overview that covered entire Natural Area, in addition to larger APE. No archaeological resources identified within Natural Area.
Hawk Hill				
S-9585	1987	City & County of San Francisco	*Subdivision and Rezoning of Vacant Lot on 2200 Block of Funston Avenue, Draft EIR*	Archaeological survey of entire Hawk Hill Natural Area. No archaeological resources identified within Natural Area.
India Basin Shoreline Park				
S-15602	1987	Kathryn Gualtieri and Lou Wall	Correspondence Concerning Proposed Homeporting of a Battleship Battlegroup and a Cruiser Destroyer Group in the San Francisco Bay Area (Letter Report)	Regional overview that covered entire Natural Area, in addition to larger APE. No archaeological resources identified within Natural Area.
S-16555	1994	Adrian Praetzellis, Greg White, R. B.G. Naidu, and Nancy Olmstead	San Francisco Energy Company, Application for Certification, Cultural and Paleontological Resources	Archaeological survey that partially covered the Natural Area. No archaeological resources recorded within Natural Area, but noted that historic resources are within the

Table 3-1
Previous Surveys Conducted in the Natural Areas

Study No.	Date	Author	Title	Notes/Results*
				survey's project area.
S-16882	1995	Jan Hupman and David Chavez	*Archaeological Resources Investigations for the Waterfront Plan ER, San Francisco, California: Southern Waterfront*	Linear survey through western end of Natural Area. No archaeological resources identified within Natural Area, but noted that unrecorded historic wharfs, shipyards, mills, iron works buildings, and buried ships are in the survey's project area.
Lake Merced				
S-3240	1957	Cristy W. Willer and Alan D. Albee	*Archaeological Survey of Proposed Southwest Outfall and Southwest Water Pollution Control Plant*	Archaeological survey covering northwest corner of Natural Area. No archaeological resources identified within Natural Area.
S-3242	1964	James Heid	*San Francisco Waste Water Management Archaeological Report*	Linear survey through northwest corner of Natural Area. No archaeological resources identified within Natural Area.
S-3247	1981	Laurence Shoup and Suzanne Baker	*Cultural Resource Overview: Lake Merced Transport, San Francisco Clean Water Management Program*	Regional overview that covered western shoreline of Lake Merced along John Muir Drive and Skyline Blvd., in addition to larger APE. Identified three historic archaeological sites, CA-SFR-101H (P-38-92), CA-SFR-102H (P-38-93), and CA-SFR-103H (P-38-94), in and next to Natural Area.
S-4899	Unknown. Not included in NWIC survey bibliography. Appears to have focused on CA-SFR-102H (P-38-93).			
S-10168	1988	David Chavez	*Subsurface Archaeological Investigations at Ingalls Street and Fitzgerald Avenue—Yosemite and Fitch Outfalls Consolidation Project, San Francisco*	Archaeological testing in northwest corner of Natural Area. No archaeological resources identified.
S-19127	1993	David Chavez & Associates	*Cultural Resources Investigation for the Bayside Phase III Discharge Alternatives EIR, San Francisco, California*	Linear survey along western edge of Natural Area that cuts through southern end of park and covers a small portion of the eastern edge of the park. Identified three historic archaeological sites, CA-SFR-101H (P-38-92), CA-SFR-102H (P-38-93), and CA-SFR-103H (P-38-94), in and next to Natural Area.
Palou-Phelps				
S-11396	1989	BioSystems Analysis, Inc.	*Technical Report of Cultural Resources Studies for the Proposed WTG-WEST, Inc. Los Angeles to San Francisco and*	Linear survey that bisects Natural Area. No archaeological resources identified within Natural Area.

Table 3-1
Previous Surveys Conducted in the Natural Areas

Study No.	Date	Author	Title	Notes/Results*
			Sacramento, California, Fiber Optic Cable Project	
S-22657	2000	Izaak Sawyer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	*Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project*	Linear survey that bisects Natural Area. No archaeological resources identified within Natural Area.
S-29657	2002	Wendy J. Nelson, Tammara Norton, Larry Chiea, and Reinhard Pribish	*Archaeological Inventory for the Caltrain Electrification Program Alternative in San Francisco, San Mateo, and Santa Clara Counties, California*	Linear survey that bisects Natural Area. No archaeological resources identified within Natural Area.
Pine Lake				
S-32271	2006	EDAW, Inc. and Ward & Associates	*Archaeological Survey Report, Pine Lake Trail*	Small survey in western portion of Natural Area. No archaeological resources identified.
S-32280	2004	Denise Bradley and Michael Corbett	*Final Draft Cultural Landscape Report and National Register and California Register Evaluation for the Stern Grove and Pine Lake Park Historic District*	Landscape survey of entire Natural Area. No archaeological resources identified.
Sharp Park				
S-3039	1977	Mara Melandry	*Cultural Resources Survey, 04-SMa-1, Shoulder Improvements for Bicycle Use, Bikepath and Pedestrian Walkway on Route 1 in Pacifica, San Mateo County*	Linear survey along western perimeter of the eastern portion of the Natural Area. One unrecorded site noted, but it is unknown if the site was in the Natural Area.
S-4877	1974	Michael J. Moratto	*Archaeological Reconnaissance of Proposed Route 380, between Hwy. 280 on the East and Hwy. 1 on the West*	Linear survey that cut through the southeast corner of the Natural Area. No archaeological resources identified in Natural Area.
S-6717	1984	Robert Cartier	*Cultural Resources Evaluation of the Sharp Park Road Expansion Project in the City of Pacifica*	Linear survey along Sharp Park Road in the eastern portion of the Natural Area. No archaeological resources identified.
S-8917	1986	Miley Paul Holman	*Archaeological Reconnaissance of the Mori Point Project, San Mateo County, California*	Field survey covering a small portion of the southwest corner of the western portion of the Natural Area. No archaeological resources identified.
S-15828	1994	Robert L. Orlins and Rae Schwaderer	*The Archaeological Survey and Extended Survey for the City of Pacifica Wastewater Treatment Plant, San Mateo County*	Field survey in the northwest corner of the eastern portion of the Natural Area south of Sharp Park Road. No archaeological resources identified within Natural Area.

Table 3-1
Previous Surveys Conducted in the Natural Areas

Study No.	Date	Author	Title	Notes/Results*
S-31602	2006	Matthew R. Clark	*Historic Properties Inventory Research for National Historic Preservation Act Section 106 Compliance for North Coast County Water District*	Linear survey through the southern half of the eastern portion of the Natural Area. No archaeological resources identified within Natural Area; however, Pastron (2008:11) notes that survey S-31602 found possible evidence of a prehistoric cultural deposits over one meter below the surface along Archery Range Road, not included in the Natural Area's management area.
S-34499	2007	Matthew R. Clark	*Historic Properties Inventory Research for National Historic Preservation Act Compliance North Coast County Water District, Pacifica Recycled Water Project*	Field survey in the central area of the eastern portion of the Natural Area, near the Sharp Park Rifle Range. No archaeological resources identified in Natural Area.

*Tetra Tech did not obtain reports for each survey identified by the records searches, but the NWIC bibliographies contain resources identified in each survey.

3.2 ARCHAEOLOGICAL SITES WITHIN OR NEAR THE NATURAL AREAS

Fifteen Natural Areas contain or are near documented and undocumented archaeological resources (Table 3-2). Those indicated as "unrecorded" are potential resources identified in SFRPD (2006), the MEA GIS database, or survey reports, but not identified in the NWIC site records database. No archaeological resources were found to be in or near any of the remaining 17 Natural Areas: Billy Goat Hill, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Everson/Digby, Fairmount Park, Glen Canyon Park, Golden Gate Heights, Grandview Park, Hawk Hill, Interior Greenbelt, Kite Hill, Lakeview/Ashton Mini Park, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, and Rock Outcrop.

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
15th Avenue Steps		
"Chert Quarry"	Unrecorded (based on SFRPD 2006:6.16-1; see discussion in Section 2.2 of this report).	The Natural Areas Management Plan indicates the presence of a former chert quarry in the southern Natural Area. The age of the quarry or its history is unknown.
Balboa		
CA-SFR-5 (P-38-5)	N. C. Nelson, 1910; MEA GIS Database	Shellmound site, "Nelson 397." To the north of Balboa Natural Area, along the coast.
CA-SFR-20 (P-38-20)	N. C. Nelson, 1910; MEA GIS Database	Shellmound site, "Nelson 396." To the north of Balboa Natural Area, along the coast.

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
CA-SFR-21H (P-38-21)	Michael Meyer and Bryan Mischke, 2008	Remains of Sutro Baths, constructed in the 1890s. There is also a prehistoric site at this location that was impacted and removed when the baths were constructed. This site was a large, loosely packed shell heap.
CA-SFR-164H (P-38-4466)	Michael Meyer, 2006	Architectural remains and refuse deposits associated with buildings of Ocean Terrace, a residential and commercial complex of buildings that existed between 1890 and 1910. A portion of a headstone and brick piers also found at the site. May be potential for redeposited human bone at this site.
Possible redeposited materials from Midwinter International Exposition	Unrecorded (based on SFRPD 2006:6.22-1; see discussion in Section 2.2 of this report).	Sand from beneath the current De Young Museum in Golden Gate Park was redeposited in this Natural Area (SFRPD 2006:6.22-1). Based on the site record for CA-SFR-167H (P-38-4625), there is a potential that archaeological deposits associated with the Midwinter International Exposition are throughout undisturbed portions of Golden Gate Park (see discussion under Golden Gate Park Oak Woodlands below). It is therefore considered possible that the redeposited material now in Balboa Natural Area, originally from Golden Gate Park, included archaeological materials associated with the Midwinter International Exposition.
Bayview Park		
CA-SFR-7 (P-38-7)	N. C. Nelson, 1910	Shellmound site, "Nelson 387." Also known as Bayshore Mound, Crocker Mound, and Johnson's Landing Mound. Buried, intact prehistoric shellmound, 2.1 to 2.7 meters deep; human burials, one hearth, several concentrations of ash, fish scales, and rocks. Attributed to Middle to Late Period. Located south of Natural Area, along shoreline. Disturbed by construction of docks.
CA-SFR-8 (P-38-8)	P. Nichols, 1979, from N. C. Nelson, 1910	Shellmound site, "Nelson 388." Located east of southern end of Natural Area along shoreline, based on Nelson (1910). Possibly destroyed or buried.

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
CA-SFR-9 (P-38-9)	P. Nichols, 1979, from N. C. Nelson, 1910	Shellmound site, "Nelson 389." Located east of southern end of Natural Area along shoreline, based on Nelson (1910). Possibly destroyed or buried.
CA-SFR-10 (P-38-10)	P. Nichols, 1979, from N. C. Nelson, 1910	Shellmound site, "Nelson 387A." Located northeast of the northern point of the Natural Area, based on Nelson (1910). Possibly destroyed or buried. MEA's GIS database includes another CA-SFR-10, also to the northeast, along Ingalls Street, recorded at 75 to 90 centimeters below ground surface during monitoring activities and interpreted as a secondary deposit.
CA-SFR-111H (P-38-109)	John Foster and James Delgado, 1986; MEA GIS Database	Historic burnt hull of a wooden sailing vessel in mudflat south of Candlestick Point; associated large wooden post found on beach. The hull may have been a nineteenth century lumber schooner. Possibly one of two shipwrecks, *Carmel* and *Gray's Harbor*, identified in MEA's GIS database in this area.
"Rock Quarry"	Unrecorded (based on SFRPD 2006:6.17-1–6.17-2; see discussion in Section 2.2 of this report).	The Natural Areas Management Plan indicates a former rock quarry in the northern section of the Natural Area. The age of the quarry and its history are unknown, but stockpiles of soils and sediments on the quarry floor are presumably associated with it.
"Chinese Shrimp Camps"	Unrecorded (based on Hamusek-McGann 1998).	The archaeological inventory of the Hunters Point Shipyard to the east of the Natural Area indicates that several Chinese shrimp fisheries/camps existed in the Hunters Point area. Such activities may have extended west along the shoreline, in the vicinity of the Natural Area.
Bernal Hill		
"Anderson Shellmound"	MEA GIS Database; Miley Holman, 2007	Shellmound site, approximately 290 meters to the south of the Bernal Hill Natural Area. Originally noted by Miley Holman in 1990 and reported to MEA in 2007. The site was exposed during removal of a fence in the backyards of the residences at 225 and 233 Anderson Street. Shell was dense, and large deposits of fish remains were observed. Depth of this primary deposit was on average 61 centimeters.
"Bernal's Stone Wall"	MEA GIS Database	Depicted on historic maps, including the County Recorder map for Precita Valley Lands (1856), the County Recorder map for the Pioneer Race Course Tract (1864), and the1886 Sanborn map. The wall was located along the base of the northern slope of Bernal Hill.
"Jose C. Bernal Adobe/Reserve"	MEA GIS Database	Depicted on historic maps, including the US Coast Survey (1857) and County Recorder map for RJ Tiffany and BD Dean (1864), as well as in Hendry

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
		and Bowman (1940). Today, the location is the site of St. Luke's Hospital, bounded by Cesar Chavez Street, Guerrero Street/San Jose Avenue, and Mission Street.
"Rock Quarry"	Unrecorded (based on SFRPD 2006:6.21-1; see discussion in Section 2.2 of this report).	The Natural Areas Management Plan indicates the presence of a former rock quarry in the southern portion of the Natural Area. The age of the quarry and its history are unknown.
Brooks Park		
"Sandstone Quarry"	Unrecorded (based on SFRPD 2006:6.6-1–6.6-2; see discussion in Section 2.2 of this report).	The Natural Areas Management Plan indicates the exposed sandstone bedrock in the northwest and southeast corners of the Natural Area have been quarried. The age of the quarrying and its history are unknown.
Buena Vista Park		
"Potrero Stone Wall"	MEA GIS Database	Depicted on historic maps in Hendry and Bowman (1940). The wall was east of the base of the eastern slope of the Buena Vista Park Natural Area.
"Mission Acequia"	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Buena Vista Park Natural Area.
"Guerrero Adobe"	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Buena Vista Park Natural Area.
"Bernal's Unfinished Adobe"	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of Buena Vista Park Natural Area.
"DeHaro Adobe" and associated buildings and structures	MEA GIS Database	Depicted in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Buena Vista Park Natural Area.
Mission Dolores and associated buildings and structures, including cemetery and garden area	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Buena Vista Park Natural Area.
Corona Heights		
"Potrero Stone Wall"	MEA GIS Database	Depicted on historic maps in Hendry and Bowman (1940). The wall was east of the base of the eastern slope of the Corona Heights Natural Area.
"Mission Acequia"	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Corona Heights Natural Area.
"Guerrero	MEA GIS Database	Depicted on historic maps and in Hendry and

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
Adobe"		Bowman (1940). The site is east of the base of the eastern slope of the Corona Heights Natural Area.
"Bernal's Unfinished Adobe"	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Corona Heights Natural Area.
"DeHaro Adobe" and associated buildings and structures	MEA GIS Database	Depicted in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Corona Heights Natural Area.
Mission Dolores and associated buildings and structures, including cemetery and garden area	MEA GIS Database	Depicted on historic maps and in Hendry and Bowman (1940). The site is east of the base of the eastern slope of the Corona Heights Natural Area.
"Rock Quarry"	Unrecorded (based on SFRPD 2006:6.11-1; see discussion in Section 2.2 of this report).	The Natural Areas Management Plan indicates a quarry once existed where an amphitheater sits today in the middle of the park. The age of the quarry and its history are unknown.
Golden Gate Park Oak Woodlands (Lily Pond, Oak Woodlands, Strawberry Hill, and Whiskey Hill)		
CA-SFR-167H (P-38-4625)	Aimee Arrigoni, 2007	Three features attributed to the 1894 Midwinter International Exposition. Historic trash deposits that correspond to the location of the Oriental Village, as well as a brick and mortar footing associated with Thompson's Scenic Railway. Located approximately 400 meters west of the Lily Pond area near the California Academy of Sciences building. (Slightly over 400 meters southwest of Oak Woodlands, approximately 800 meters east of Strawberry Hill, and just over 400 meters northwest of Whiskey Hill.) Construction of the Academy destroyed deposits in this location, but it is possible that intact deposits related to the Fair exist in other undisturbed portions of Golden Gate Park, such as the Oak Woodlands, Strawberry Hill, and Whiskey Hill management areas.
India Basin Shoreline Park		
CA-SFR-11 (P-38-11)	N. C. Nelson, 1909; MEA GIS Database	Shellmound site, "Nelson 390." Likely destroyed. Location based on Nelson (1909). Multiple site locations are documented, though, including near the intersection of Crisp Road and Griffith Street and at the intersection of Palou Avenue and Fitch Street.
CA-SFR-12 (P-38-12)	N. C. Nelson, 1909; MEA GIS Database	Shellmound site, "Nelson 391." Likely destroyed. Located on southern shoreline of Hunters Point, based on Nelson (1909).

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
CA-SFR-14 (P-38-14)	N. C. Nelson, 1909; MEA GIS Database	Shellmound site, "Nelson 392A." Likely destroyed. Located at northern point of Hunters Point, based on Nelson (1909).
CA-SFR-15 (P-38-15)	N. C. Nelson, 1909; MEA GIS Database	Shellmound site, "Nelson 389A." Likely destroyed. Location based on Nelson (1909). Multiple site locations are documented, though, including intersection of Jerrold Avenue and Phelps Street (more north and inland) and along Ingalls Street, between Oakdale Avenue and Palou Avenue (on Hunters Point).
TEMP-HPS-IR07	Karisa Miller, 2010	An area of historic refuse and debris was recently recorded along a sandy beach within Hunters Point Shipyard, southeast of the Natural Area. The site is likely redeposited imported fill and has become deflated after being covered by riprap. Materials include glass and ceramic shards, building debris (including carved sandstone and marble), children's toys, a marble tombstone fragment, metal fragments, bottles, dishes, and personal items.
Various shipwrecks	MEA GIS Database	Four shipwrecks, including the ships *Janette*, *Viola*, *TH Allen*, and *Major Tomkins*, have been recorded offshore from the Natural Area. Further, Hamusek-McGann (1998) identified the shoreline of Hunters Point Shipyard as sensitive for buried "maritime resources" such as these.
Lake Merced		
CA-SFR-101H (P-38-92)	L. Shoup, 1980	Likely a concrete and rock well. The well is 84 cm deep, 67 centimeters aboveground on the south side, and is filled with glass. The feature may have been associated with a 1890s lifeguard station, an 1898 Spanish-American War cantonment, or a World War I-era Fort Funston battery bluff, all of which were in this area, within 400 meters of the northwest Lake Merced Natural Area.
CA-SFR-102H (P-38-93)	S. Baker and L. Shoup, 1980	A brick-lined diversion canal constructed by the Spring Valley Water Company for wastewater. The canal is 1,158 meters long, 1.7 meters deep, and 2.6 meters wide. The canal was built in 1897 as part of the Spring Valley Water Company's water system to carry runoff to the Lake Merced Pump Station. Located along the southwestern boundary of the Natural Area.
CA-SFR-103H (P-38-94)	S. Baker and L. Shoup, 1980	Concrete coal bin foundations that measure 15.5 meters by 15.5 meters. Concrete chunks are present as well as metal strips that are 15 centimeters wide by 5 centimeters thick. It is believed these strips were used for reinforcing the concrete foundations. The site was

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
		likely associated with a 1940s coal bin at nearby Fort Funston. The adjacent barracks near the now-destroyed Battery Howe was one of the oldest barracks at Fort Funston. Approximately 400 meters west of the northwest corner of the Natural Area.
CA-SFR-25 (P-38-25)	Dietz and Jackson, 1970; MEA GIS Database	Possible sand midden on ground surface, with some shell and no charcoal. Hardly any shells found, except for one large oyster. One stone pestle found. Slight surface erosion. East of the Natural Area, in the vicinity of the San Francisco State University football field.
CA-SFR-106 (P-38-97)	Bjelajac, 1982; MEA GIS Database	Surface archaeological site of unknown date, discovered accidentally, on Fort Funston directly west of the south end of the Natural Area.
"Lake Merced Site"	Fentress, 2007; MEA GIS Database	Prehistoric midden deposit at high point of drainage into Lake Merced at the northeast corner of Natural Area.
Various shipwrecks	MEA GIS Database	One shipwreck, the *King Phillip*, has been recorded offshore of the Natural Area. A second, the *Cornelius W. Lawrence*, is documented as on the beach to the west of the Natural Area.
Palou-Phelps		
CA-SFR-15 (P-38-15a)	N. C. Nelson, 1909; MEA GIS Database	See description under India Basin Shoreline Park. This is the alternate location at Jerrold Avenue and Phelps Street.
CA-SFR-124 (P-38-123)	Holman and Associates, 1991; MEA GIS Database	Surface archaeological site of unknown date discovered accidentally. Extends up to 90 centimeters deep and contains both primary and secondary deposits with historic materials that were possibly relocated from Hunters Point. Located just over 400 meters southeast of the Natural Area.
CA-SFR-171	Philip Kaijankoski, 2009	Buried prehistoric archaeological site to the north of Natural Area. The site consists of a 60 cm-thick deposit of prehistoric archaeological materials identified in a 2-inch diameter geoarchaeological core. The deposit is situated atop a terrestrial deposit adjacent to the former extent of the Islas Creek Marsh. It is overlain by artificial fill and is buried between 2.4 and 3.0 meters (8 to 10 feet) below surface. It is interpreted as a relatively intact prehistoric archaeological deposit.
Pine Lake		
CA-SFR-25 (P-38-25)	Dietz and Jackson, 1970; MEA GIS Database	See description under Lake Merced. Located just over 1,600 meters southeast of Natural Area.
"Lake Merced Site"	Fentress, 2007; MEA GIS Database	See description under Lake Merced. Located just over 400 meters southeast of Natural Area.

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
Sharp Park		
CA-SMA-114 (P-41-116)	S. Humphreys, 1969	Shell midden with bone, chert chippage, and fire-fractured rock, along with broken historic glass bottles. Located next to southwest corner of Natural Area. Site has been destroyed by erosion and construction. Subsequent surveys have not been able to locate archaeological materials in the mapped site location (Pastron 2008:11).
CA-SMA-162/C-116	C. S. Desgrandchamp, 1978 (based on Pastron 2008:9-10).	Secondary prehistoric midden deposit originally from the Sharp Park area, redeposited to the south along Reina Del Mar Road. Original location in Sharp Park was along Highway 1. Subsequent surveys by Caltrans along Highway 1 did not relocate remnants of CA-SMA-162. C-116 is thought to be the original location from which midden was taken and redeposited at CA-SMA-162. It is north of the Natural Area, near the intersection of Paloma Avenue and Highway 1.
CA-SMA-268 (P-41-264)	Caltrans, 1986 (based on Pastron 2008:9-10).	Midden exposed in the bank of Calera Creek. Includes human remains, obsidian projectile point, and a possible groundstone pestle. Extends to approximately 70 centimeters. Located south of the Natural Area, near Calera Creek. Subsurface testing as part of survey S-15828 documented chert debitage, fire-affected rock, mammal bone, and shell extending to 110 centimeters. Up to 70 centimeters of overburden may cover the site.
"State Relief Camp"	Unrecorded (based on Pastron 2008:9-10).	As part of a survey of the Sharp Park Rifle Range (an area excluded from the Natural Area) Pastron (2008 and 2009) found that Sharp Park housed a series of Quonset huts in the 1930s associated with a public assistance facility for San Franciscans struggling through the Great Depression. Camp residents were paid to plant trees within the park and other planted gardens in the area. Pastron (2008:13) describes a historical society member who has noted isolated concrete stairs that may be related to the camp or the detention station (described below).

Table 3-2
Archaeological Sites Within or Near the Natural Areas

Trinomial (Primary No.)	Recorder, Year Recorded	Description
"Sharp Park Temporary Detention Station"	Unrecorded (based on Pastron 2008:9-10).	As part of a survey of the Sharp Park Rifle Range (an area outside the Natural Area), Pastron (2008 and 2009) found that the range was the site of a World War II-era detention facility for suspected "enemy aliens." Sharp Park was one of two California detention stations that held the largest number of Japanese individuals (in addition to smaller populations of other nationalities). The station was closed in early 1946, and it is not clear when the buildings were cleared or to what extent. Pastron (2008:13) describes a historical society member who has noted isolated concrete stairs that may be related to the camp or the detention station.
"Sharp Park Rifle Range"	Pastron, 2008	Three large earthen embankments, possible target mounds, along with shotgun shells were documented by Pastron (2008:12) in the area of the former Sharp Park Rifle Range, established in 1952 and closed in 1988.
Undocumented Resources	Matthew R. Clark, 2006 (based on Pastron 2008:9-10).	According to Pastron (2008:11) survey S-31602 by Clark, documented reports from archers using the archery range in Sharp Park of prehistoric artifacts observed and sometimes collected from the surface of the park.
Tank Hill		
"Spring Valley Water Company Water Tank Foundation"	Unrecorded (based on SFRPD 2006:6.14-1; see discussion in Section 2.2 of this report).	The SNRAMP indicates a concrete foundation pad in the southern portion of the Natural Area. The foundation was for a former Spring Valley Water Company water tank.
Twin Peaks		
"Rancho San Miguel House"	MEA GIS Database	Depicted in Hendry and Bowman (1940) and historic maps, including the US Coast Survey (1857), Goddard (1869), and Sanborn (1899). The site is east of the base of the eastern slope of Twin Peaks, along Douglas Street, between 22nd and 23rd Streets.

3.3 ARCHAEOLOGICAL LANDSCAPE OF THE STUDY AREA AND C-APE

Relatively little archaeological research has been conducted within the study area compared to the rest of the San Francisco Bay Area. Most archaeological work in San Francisco has been within the city's historic core, the South of Market area, and along the northern and eastern shorelines. It has become clear from this work that the Peninsula in general witnessed significant occupations by prehistoric and historic Native American populations.

With the establishment of extensive tidal marshlands approximately 5,000 to 7,000 years ago (Bickel 1978), the San Francisco Bay shore became an attractive location for prehistoric Costanoan communities, with the

varied resources available there (Hylkema 2002). Attesting to this are the numerous large shellmounds documented around the margins of the bay. In the early 1900s, N. C. Nelson recorded 49 of these sites along the San Mateo County and southern San Francisco County bay shorelines (Nelson 1909); however, most if not all of these sites have since been leveled or built over by modern construction (Heath 1996).

According to an overview of archaeology in San Mateo County (Moratto 1971), an entirely different situation is seen along the Pacific Ocean coastline of the Peninsula, where research was delayed until later in the century. Following enactment of the National Historic Preservation Act (1966), contract archaeology projects have tested or salvaged archaeological sites for many projects, but few large-scale investigations or analyses have occurred. It would seem that most work of this nature has occurred along the entire bay and coastline of the Peninsula, based on the distribution of recorded archaeological sites. However, archaeological salvage programs do commonly occur more inland as part of development projects.

Early Period archaeological sites are rare in the San Francisco region, most likely due to a combination of lower population, sedimentary deposition, and the natural effects of erosion, landform evolution, and sea level rise (Atwater et al. 1977; Bickel 1978; Erlandson 1994; Meyer and Rosenthal 2007; Porcasi et al. 1999; Stanley and Warne 1994; Stright 1990). Evidence for this period predominantly comes from burials found in the lower levels of shellmounds along the eastern bay shore (Suggs 1965). The best evidence is from the northern San Joaquin Valley, well away from the current project area, where burials are typically on low knolls in swampy delta regions. However, there is also evidence of an early presence in San Mateo County from the University Village site (CA-SMA-77) at the southwestern edge of San Francisco Bay, along San Francisquito Creek (Moratto 1984). Relatively little subsistence refuse was found at the site. It was not viewed as a site entirely of the Early or Middle Period; instead it has been interpreted as representative of an early Bay Area culture more similar to prehistoric cultures to the south than to those in the Sacramento and San Joaquin Rivers Delta and the Bay Area. If this is the case, Costanoans may not have settled the western Bay Area until after ca. 1000 BC and older archaeological sites may be more closely related to cultures to the south.

Several other sites on the Peninsula would seem to support this notion (Hylkema 2002:243; Moratto 1984). Middle and Late Period sites include more dietary refuse than these earlier sites, and artifacts are much less formal. Most of these are shell midden sites representing habitation and shellfish processing (Moratto 1984). Of sites discussed in the general archaeology literature found in public and university libraries, CA-SMA-100 is one of the more important deposits most often mentioned. It is a small shell midden with associated features dating to ca. AD 800 and is along San Bruno Creek (Van Dyke 1971). It was discovered during salvage excavation of a neighboring site, CA-SMA-101.

3.3.1 Prehistoric Archaeological Sites

The most common prehistoric archaeological property type in the project study area is shell middens, varying in size, depth, density, and associated artifacts and features. Sites attributed to nonhabitation activities, due to their ephemeral nature or lack of residential artifacts, are also common prehistoric site types and include temporary camps or activity loci. Nelson's (1909) early work in the region and Rudo's (1982) overview of San Francisco's prehistory also document the dominance of shell middens in and around the project study area. Given that Hylkema (2002) describes Early Period sites of the region as predominantly burials and Middle and Late Period sites as more habitation oriented, the dominance of large middens in the area should be expected. Early sites would have been more ephemeral and subjected to more deterioration or burial over time. Most recorded sites in the sample reviewed for King (2008) are most often attributed to the Middle and

Late Periods. However, as Meyer and Rosenthal (2007) note, the lack of early sites can be a bias that has resulted from landscape evolution.

Recorded sites discussed in the literature are mostly in the northern half of the project study area, but this may be due to a bias in archaeological work. However, the pattern of sites predominantly located on the eastern and northern shoreline of San Francisco is supported by Milliken's conclusion of a higher population along the bayshore of the Peninsula, as opposed to the windward western side (Milliken 1983).

While some of the prehistoric sites recorded in the study area are visible from the ground surface or eroding from creek banks within a modern urbanized setting, most were buried by natural deposition, historic activities, or modern development. Depths to these resources typically ranged from 1 to 23 meters. These subsurface sites are usually found and recorded as a result of testing or monitoring of construction projects in modern heavily developed areas.

Many of the records reviewed for subsurface sites specifically state that the deposits are intact, at least in lower depths (King 2008:3-12). Most sites are situated along the edges of historic lagoons and estuaries or are slightly inland, along creeks. Based on the work of Mayfield (1978), Shoup and Baker (1981), and SFEI (2010) and the reviewed historic maps, most of these environmental features have been filled or covered or have dried up. Sites along the northern shoreline of the project study area appear to be most commonly atop bluffs.

3.3.2 Historic Archaeological Sites

The dominant historic archaeological type in the study area is structural remains, primarily from construction, water development, recreation, and military activities. Other common historic archaeological resources are secondary deposits and refuse deposits. Subsurface historic-era archaeological resources have also been documented in urban areas, particularly in areas of early historic development. Unique to areas along the bay shoreline is the potential for buried ships (see Hamusek-McGann et al. 1998). Obviously these resources would be possible only in bayshore areas that have been filled historically to create new land surface.

Numerous historic activities, including early exploration, ranching, agriculture, water development, recreation, tourism, transportation, and military activities, may have left archaeological markers. Activities such as these involved localized areas of use, as well as construction of temporary camps and various permanent structures. Dispersed historic-era buildings are visible on historic topographic maps (USAMS 1947; USCOE 1939; USGS 1896, 1899, 1915) and General Land Office maps (GLO 1857, 1861, 1863, 1864, 1868, 1882a, 1882b, 1884). Early historic Sanborn maps (Sanborn 1915, 1926) indicate the western half of San Francisco was developed later than the eastern half of the city and other portions of the Peninsula. This is not to rule out the possibility of historic archaeological deposits in this portion of the study area. Over time, the few structures in early western San Francisco may have collapsed or deteriorated due to abandonment, or they may have been demolished but not completely removed, such as the coal bins of CA-SFr-103H. Many historic archaeological deposits simply may not be discovered yet due to modern development and a lack of archaeological investigations being carried out with the intent to identify these resources.

Localities of historic activities discussed in the literature are mostly in the northern and eastern portions of the project study area. This distribution makes sense, given the earlier development of San Francisco-proper in the northeast part of the project study area. On the other hand, ranchers would have been drawn to the western areas, given the availability of freshwater at Lake Merced and the availability of open space on this

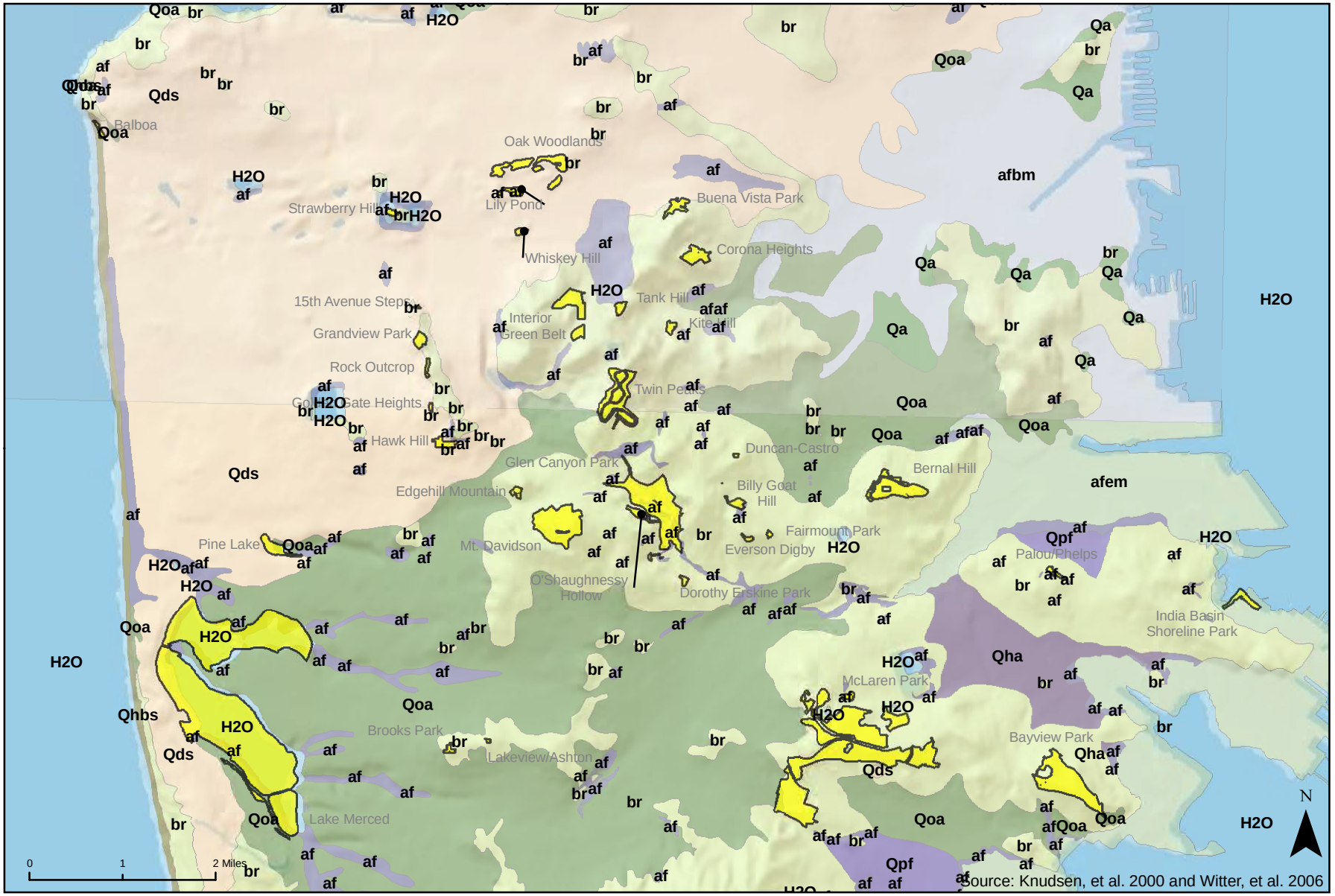
part of the Peninsula. Additionally, Lake Merced and the ocean would have drawn locals and tourists alike for recreation. Similarly, military activities would be expected to occur along the coastline for observation and defense.

3.3.3 Holocene Landforms of the C-APE and Subsurface Deposit Potential

As outlined in the methods above, landforms that date to the Holocene or later are more likely than earlier landforms to include archaeological resources. Meyer and Rosenthal (2007) used quaternary geology and liquefaction susceptibility studies of nine Bay Area counties completed by the USGS (Knudsen et al. 2000; Witter et al. 2006) to identify areas of increased potential for subsurface deposits associated with buried Holocene landforms. Meyer and Rosenthal (2007) identified at least three periods of landform stability in the San Francisco Bay Area: late Pleistocene (15,000 to 11,000 cal BP), early Holocene (10,500 to 7000 cal BP), and middle Holocene (6500 to 4000 cal BP). These periods are marked by buried soils separated by widespread depositional episodes that occurred around 11,500 and 7,000 years ago. More localized depositional periods are evident during the late Holocene, around 4,000, 2,800, and 650 years ago.

Typically, relatively intact archaeological resources are associated with buried soils that indicate these periods of landform stability (Meyer and Rosenthal 2007:8). Buried sites are also most common in lowland valleys of the Bay Area (Meyer and Rosenthal 2007:14). These areas contain the fans, floodplains, and dunes that formed during the Holocene and are the most likely environment to preserve archaeological remains (Meyer and Rosenthal 2007:19). Further, fans and floodplains are associated with freshwater sources that are likely to have drawn human populations to the area.

The same USGS studies and digital data used by Meyer and Rosenthal were reviewed for the current study. While Witter et al. (2006) is a more refined and detailed study of the Quaternary deposits, it does not cover the entire study area. As a result, Knudsen et al.'s (2000) more generalized data is used for the northern half of San Francisco. Due to the more localized application of this data, it is possible to focus this analysis on the specific locations of the Natural Areas. Of the eleven Quaternary deposits identified within the Natural Areas, nine developed during the Holocene (Figures 3-1 and 3-2). Table 3-3 summarizes the Quaternary deposits within each Natural Area and the ages of those deposits. Note that some deposits are either completely or partially buried beneath fill material.



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Legend

Natural Area

Quaternary Deposits - San Francisco Natural Areas

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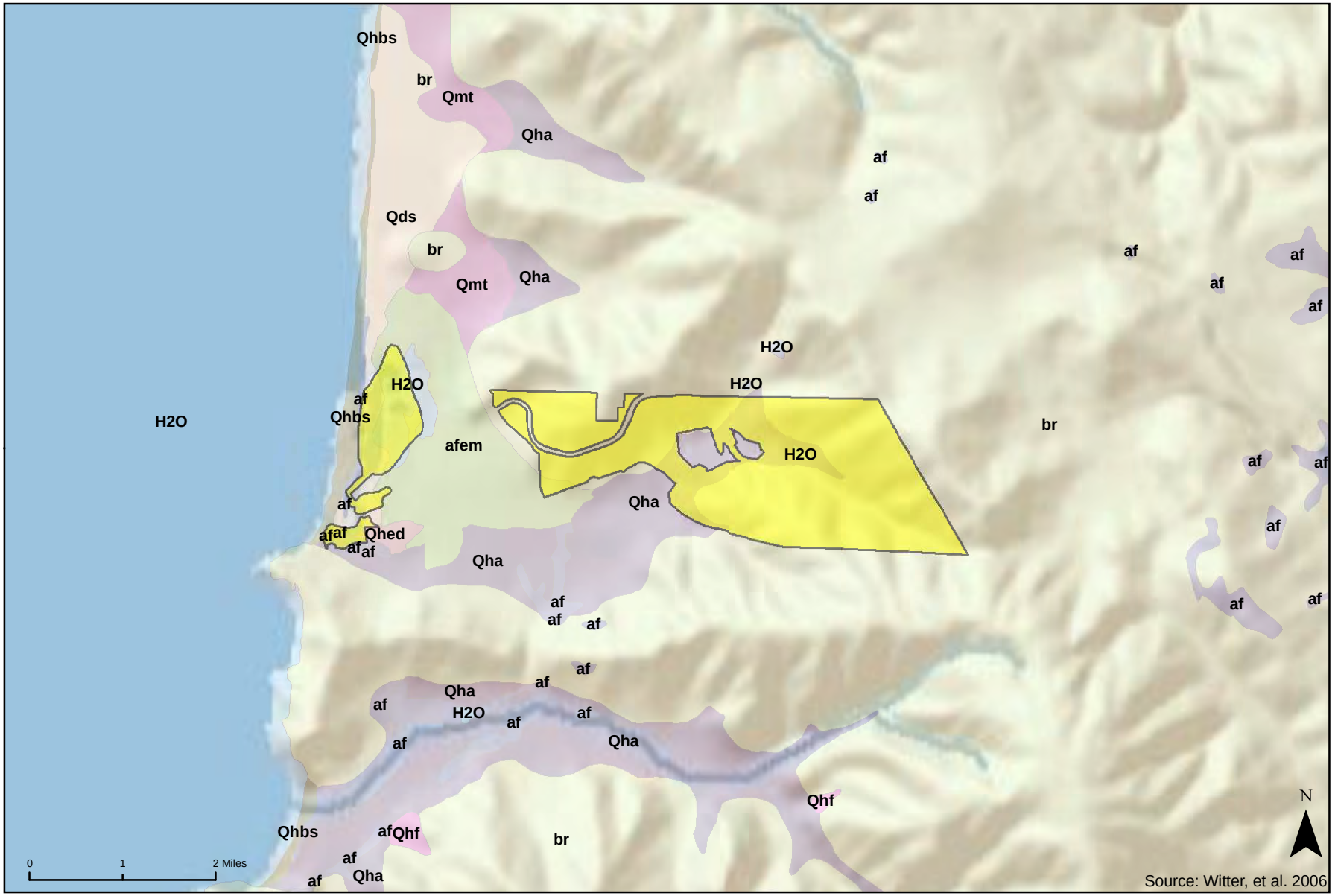
Figure 3-1



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Legend

Natural Area

Quaternary Deposits - Sharp Park Natural Area

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Figure 3-2

Table 3-3
Quaternary Deposits of the Natural Areas

Quaternary Deposits	Age
15th Avenue Steps	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Balboa	
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Qhds	Latest Pleistocene – Historical (30,000 yrs – present)
Bayview Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qoa	Early to Late Pleistocene (30,000 yrs – 1.8 Million yrs)
Bernal Hill	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Billy Goat Hill	
af	Historical (<150 yrs)
br (also beneath af)	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Brooks Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Buena Vista Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Corona Heights	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Dorothy Erskine Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Duncan-Castro	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Edgehill Mountain	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Everson/Digby	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Fairmount Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Glen Canyon Park	
af	Historical (<150 yrs)
br (also beneath af)	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Golden Gate Heights Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 Million yrs])
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Golden Gate Park Oak Woodlands	
Lily Pond	
af	Historical (<150 yrs)
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Oak Woodlands	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Strawberry Hill	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])

Table 3-3
Quaternary Deposits of the Natural Areas

Quaternary Deposits	Age
Whiskey Hill	
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Grandview Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Hawk Hill	
af	Historical (<150 yrs)
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qds (also beneath af)	Latest Pleistocene – Historical (30,000 yrs – present)
India Basin Shoreline Park	
afem	Historical (<150 yrs)
Qhbm (underlies afem)	Holocene – Historical (11,800 yrs – present)
Interior Greenbelt	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Kite Hill	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Lake Merced	
af	Historical (<150 yrs)
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Qha (beneath af)	Latest Pleistocene – Historical (30,000 yrs – present)
Qhay (beneath af)	Latest Holocene – Historical (1,000 yrs – present)
Qoa (also beneath af)	Early to Late Pleistocene (30,000 yrs – 1.8 million yrs)
Lakeview/Ashton Mini Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
McLaren Park	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qoa	Early to Late Pleistocene (30,000 yrs – 1.8 Million yrs)
Mount Davidson	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
O'Shaghnessy Hollow	
af	Historical (<150 yrs)
br (also beneath af)	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Palou-Phelps	
af	Historical (<150 yrs)
br (also beneath af)	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Pine Lake	
af	Historical (<150 yrs)
Qds	Latest Pleistocene – Historical (30,000 yrs – present)
Qoa (also beneath af)	Early to late Pleistocene (30,000 yrs – 1.8 Million yrs)
Rock Outcrop	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Sharp Park	
af	Historical (<150 yrs)
afem	Historical (<150 yrs)
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qds (also beneath af)	Latest Pleistocene – Historical (30,000 yrs – present)
Qds-Qhbs (beneath af)	Latest Pleistocene – Historical (30,000 yrs – present)
Qha (also beneath af)	Latest Pleistocene – Historical (30,000 yrs – present)

Table 3-3
Quaternary Deposits of the Natural Areas

Quaternary Deposits	Age
Qhbm (beneath af)	Holocene – Historical (11,800 yrs – present)
Qhbs	Latest Holocene – Historical (1,000 yrs – present)
Qhed (also beneath afem)	Holocene – Historical (11,800 yrs – present)
Tank Hill	
af	Historical (<150 yrs)
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Twin Peaks	
br	Pre-Quaternary (early Quaternary and older [>1.4 million yrs])
Qoa	Early to late Pleistocene (30,000 yrs – 1.8 million yrs)

af: artificial fill
afem: artificial fill over estuarine mud
br: Early Quaternary and older (>1.4 million yrs) deposits and bedrock
Qds: Late Pleistocene to Holocene dune sand
Qha: Holocene alluvium, undifferentiated
Qhay: Latest Holocene alluvial deposits, undifferentiated
Qhbs: Latest Holocene beach sand
Qhbm: Holocene San Francisco Bay mud
Qhds: Holocene dune sand
Qhed: Holocene estuarine delta deposits
Qoa: Early to middle Pleistocene undifferentiated alluvial deposits (includes Colma Formation)

4. ARCHAEOLOGICAL SENSITIVITY OF THE NATURAL AREAS

This section outlines the overall archaeological sensitivity of each Natural Area. An intuitive approach was used in the assessment, based primarily on the qualities of archaeologically sensitive areas discussed in Section 1.2.3. In general, an area is considered to be sensitive based on the following factors:

- Presence of Holocene landforms of suitable depositional environments to preserve archaeological resources;
- Limited natural and human disturbances (although it is possible that historic human disturbances would constitute archaeological resources in and of themselves);
- Productive prehistoric and historic natural environment, including elements that would draw fauna, and proximity to freshwater, riparian corridors, and shoreline;
- Extent of previous survey coverage of the area; and
- Relatively high density of archaeological resources within or near the Natural Area.

The discussion below summarizes the factors affecting each Natural Area's archaeological sensitivity. Although the assessments are primarily intuitive, based on the summarized factors, an area is considered to have low archaeological sensitivity if it meets only one or none of the factors outlined above; a moderate level of sensitivity is designated for areas that meet two to three of the factors; areas of high sensitivity are those that meet four to five of the factors. Sensitivity levels for each Natural Area are provided in Table 4-1, which follows the summary discussions. Note that this evaluation is meant only as a preliminary assessment of surface and subsurface sensitivity for planning purposes and use in the associated project EIR (Tetra Tech 2010). Ground-truthing or additional, more detailed site-specific research may prove otherwise.

15th Avenue Steps: The 15th Avenue Steps Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain primarily by dune sands that are 30,000 years old or less, as well as a pre-Quaternary bedrock landform in its western end. Landslides have been noted to occur in the northeast portion. No significant freshwater sources are documented nearby. No archaeological surveys have occurred at this Natural Area, and no archaeological sites have been documented within the area boundaries or nearby; however, a chert quarry once existed in the southern portion of the Natural Area. Other Natural Areas, including Grandview Park, Rock Outcrop, and Golden Gate Heights, along the same ridgeline as the 15th Avenue Steps also do not have archaeological sites recorded but have also not been previously surveyed. Hawk Hill Natural Area at the opposite southern end of the ridgeline has been completely surveyed, and no archaeological resources were identified.

Balboa: The Balboa Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by dune sands that are 30,000 years old or less. The surfaces today are still loose dune sand that was borrowed from beneath the De Young Museum in Golden Gate Park, where there was potential for Midwinter International Exposition-associated archaeological materials. The Natural Area's location, next to the Pacific Ocean, would have been a desirable location for prehistoric or historic fishing, hunting, or gathering of subsistence resources. Three surveys have partially covered the Natural Area, and no archaeological resources have been identified in the Natural Area. Four archaeological sites, including prehistoric and historic-era resources, have been documented nearby.

Bayview Park: The Bayview Park Natural Area overlies pre-Holocene landforms with chert and sandstone outcrops and other areas of exposed bedrock. Extensive human disturbance of the park is apparent, including terracing, soil slumps, stockpiling of sediments, and a former rock quarry. Natural disturbances are also apparent, including erosional areas and landslides. The hilltop Natural Area overlooks and is next to several productive historic environments, including two creeks, tidal marshes, tidal flats, sandy beaches, lagoons, and the shallow bay shore. Only one linear field survey has been conducted within the boundaries of the Natural Area, but no archaeological sites have been recorded within those boundaries. It is possible that the former rock quarry is historic. There is a high density of prehistoric shellmound sites recorded by N. C. Nelson (1910) at lower elevations along the shoreline here, as well as historic Chinese shrimp fishing camps. Historic shipwrecks have been documented offshore.

Bernal Hill: The Bernal Hill Natural Area overlies a pre-Quaternary bedrock landform with chert outcrops and an ancient terrace. Sediments are primarily thin deposits of sand, slope debris, and decomposed bedrock. Human disturbance of the Natural Area is evidenced by a former rock quarry, while natural disturbances include erosion and a soil slip. The hilltop Natural Area overlooks several productive historic environments, including two creeks, tidal marshes, a tidal flat, a channel through the marshes, and the shallow bay shore. The Natural Area has not been surveyed for archaeological resources, but three unrecorded archaeological resources are near the park: one prehistoric shellmound remnant at lower elevations to the south and two historic locations associated with Jose C. Bernal at the northern base of the hill. It is possible that the former rock quarry in the Natural Area is also historic.

Billy Goat Hill: The Billy Goat Hill Natural Area overlies a pre-Quaternary bedrock landform with historic artificial fill cover in areas. Overall, however, sediments in the Natural Area consist of thin slope debris. Outcrops of greenstone and chert occur, as do soil slips and other incidents of extensive erosion. The hilltop Natural Area is between three tributaries of creeks. The Natural Area has not been surveyed for archaeological resources, and no resources have been identified within or near the Natural Area. The nearest Natural Areas to Billy Goat Hill, Duncan-Castro, Everson/Digby, and Fairmount Park, also do not include archaeological resources but have not been included in any field surveys (Everson/Digby has been covered by three regional overviews).

Brooks Park: The Brooks Park Natural Area overlies a pre-Quaternary bedrock landform with thin sandy soils at the top and thicker at the base of slopes. Slope debris is present along the slopes and at their bases. The sandstone bedrock is exposed throughout the park, and several locations have been quarried in the past. An area of thin fill material is in the southwest portion of the park where a soil slip is present. The park overlooks Lake Merced a few miles to the west. The Natural Area has not been surveyed for archaeological resources. No archaeological resources have been recorded in the area, but the quarried areas of the park may be historic.

Buena Vista Park: The Buena Vista Park Natural Area is next to the historic sand dune complex that once covered the western half of San Francisco. The management areas primarily overlie a pre-Quaternary bedrock landform, but a sand dune formation 30,000 years old or less underlies the most northern portion of the Natural Area. In fact, soils are composed predominantly of historic dune sand that is moderately eroded by natural and modern cultural processes. The park is just south of a historic creek tributary and riparian areas. The area has not been surveyed for archaeological resources, but an area of concentrated historic activity, including several adobes, Mission Dolores, and features associated with these historic buildings, are immediately east of the park.

Corona Heights: The Corona Heights Natural Area is underlain by a pre-Quaternary bedrock landform. Sediments consist of thin slope debris over most of the area. Soils slips are apparent in areas of steep slopes where bedrock is exposed. An amphitheater has been constructed in the middle of the Natural Area, a location that had been a quarry. The park is next to the headwaters of three historic creek tributaries and riparian areas. The area has not been surveyed for archaeological resources, but an area of concentrated historic activity, including several adobes, Mission Dolores, and features associated with these historic buildings, are immediately northeast and east of the Natural Area. Additionally, the former quarry area may be historic.

Dorothy Erskine Park: The Dorothy Erskine Natural Area is underlain by a pre-Quaternary bedrock landform. Sediments consist of thin slope debris over most of the area. Soil slips are apparent in some areas, and bedrock outcrops occur along two perimeters of the Natural Area. The park is between the headwaters of two creek tributaries as well as the creek itself. The Natural Area has not been surveyed for archaeological resources, and none have been recorded in the vicinity.

Duncan-Castro: The Duncan-Castro Natural Area is underlain by a pre-Quaternary bedrock landform. Sediments are thin to nonexistent throughout the area. Shallow soil slips are common as are bedrock exposures and escarpments. The park is on a hill between the headwaters of two creek tributaries. The Natural Area has not been surveyed for archaeological resources, and none have been recorded in the vicinity.

Edgehill Mountain: The Edgehill Mountain Natural Area is underlain by a pre-Quaternary bedrock landform. Sediments are thin throughout the area. The hill slope is steep, creating soil slips and rock falls throughout the area, which exposes the bedrock. Several roads have been graded and cut into the slopes. Historical environmental data for the Edgehill Mountain area is unavailable, but it is slightly east of the historic sand dune area. The Natural Area has not been surveyed for archaeological resources, and none have been recorded in the vicinity.

Everson/Digby: The Everson/Digby Natural Area is a steep hill slope underlain by a pre-Quaternary bedrock landform. Sediments are thin throughout the area. The Natural Area is between the headwaters of two historic creek tributaries. No archaeological field surveys have occurred within the Natural Area, and no archaeological resources have been recorded in the vicinity.

Fairmount Park: The Fairmount Park Natural Area is underlain by a pre-Quaternary bedrock landform. Sediments vary in depth across the park and include loamy soils, slope debris, and sandy soils. Slopes have evidence of erosion in some areas and roadcuts have been graded into other areas. The Natural Area is between the headwaters of two historic creek tributaries. No archaeological field surveys have occurred within the Natural Area, and no archaeological resources have been recorded in the vicinity.

Glen Canyon Park: The Glen Canyon Park Natural Area is underlain by a pre-Quaternary bedrock landform with areas of historic-era artificial fill. Large areas of bedrock outcrops occur at the rim of the canyon and elsewhere in the vicinity. Soils are thin, with the exception of lower elevations where eroded and fill materials can be deep. The steep canyon is bisected by historic Islais Creek, which originates here. Seeps within the hillsides contribute to erosion and sedimentation, and the sedimentation contributes to episodic flooding and alluvial deposition. The Natural Area has not been previously surveyed for archaeological resources and none have been recorded in the vicinity.

Golden Gate Heights Park: The Golden Gate Heights Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain primarily by dune sands that are 30,000 years old or less, which overlie a pre-Quaternary bedrock landform. Bedrock outcrops occur in several areas and soils are primarily sandy and prone to erosion No significant freshwater sources are documented nearby. No archaeological surveys have occurred in this Natural Area, and no archaeological sites have been documented in the vicinity. Hawk Hill Natural Area immediately south of Golden Gate Heights Park on the same ridgeline has been completely surveyed, and no archaeological resources were identified.

Golden Gate Park Oak Woodlands:

Lily Pond Area: The Lily Pond area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a Holocene dune sand landform and historic-era artificial fill. The dune sand is easily eroded. Although stabilized dune formations are found throughout Golden Gate Park, much of the area's topography was likely altered historically by park landscaping and continuing management. Lily Pond is a relatively flat dune. Lily Pond itself is a quarried lake, date unknown. No prehistoric freshwater sources are documented nearby. The area has not been surveyed for archaeological resources, but one historic-era archaeological resource associated with the 1894 Midwinter International Exposition has been recorded nearby. Additional archaeological resources associated with this historic event are considered to be possible throughout Golden Gate Park.

Oak Woodlands Area: The Oak Woodlands area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a Holocene dune sand landform and historic-era artificial fill. The dune sand is easily eroded. Although stabilized dune formations are found throughout Golden Gate Park, much of the area's topography was likely altered historically by park landscaping, including planting of the oaks for which this Natural Area is named, and continuing management. No prehistoric freshwater sources are documented nearby. The area has not been surveyed for archaeological resources, but one historic-era archaeological resource associated with the 1894 Midwinter International Exposition has been recorded nearby. Additional archaeological resources associated with this historic event are considered to be possible throughout Golden Gate Park.

Strawberry Hill Area: The Strawberry Hill area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management area is underlain by a pre-Quaternary bedrock landform overlain by dune sand. The area consists of a hill surrounded by Stow Lake. The dune sand ranges from thin at the hilltop to thick at its base, but it is easily eroded. Bedrock outcrops are also present. Although stabilized dune formations are found throughout Golden Gate Park, much of the area's topography was likely altered historically by park landscaping and continuing management. No prehistoric freshwater sources are documented as nearby. The area has not been surveyed for archaeological resources, but one historic-era archaeological resource associated with the 1894 Midwinter International Exposition has been recorded nearby. Additional archaeological resources associated with this historic event are considered to be possible throughout Golden Gate Park.

Whiskey Hill Area: The Whiskey Hill area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a Holocene dune

sand landform with compacted to loose silty sand soils. The loose sand is easily eroded. Borings suggest that the sand is at least 46 meters deep. Stabilized dune formations are found throughout Golden Gate Park, and Whiskey Hill is a prime example. However, much of the area's topography was likely altered historically by park landscaping and continuing management. No prehistoric freshwater sources are documented nearby. The area has not been surveyed for archaeological resources; however, one historic-era archaeological resource associated with the 1894 Midwinter International Exposition has been recorded nearby. Additional archaeological resources associated with this historic event are considered to be possible throughout Golden Gate Park.

Grandview Park: The Grandview Park Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a pre-Quaternary bedrock landform overlain by sandy soils that erode easily. Bedrock exposures occur in several areas. No significant freshwater sources are documented nearby. No archaeological surveys have occurred at this Natural Area, and no archaeological sites have been documented in the vicinity. Hawk Hill Natural Area at the opposite southern end of the same ridgeline has been completely surveyed, and no archaeological resources were identified.

Hawk Hill: The Hawk Hill Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a pre-Quaternary bedrock landform overlain by Holocene dune sand and historic-era artificial fill in certain areas. The dune sand is easily eroded, and retaining walls have been constructed to limit the natural process. No significant freshwater sources are documented nearby. The entirety of the Natural Area was surveyed for archaeological resources in 1987, but no archaeological sites were documented.

India Basin Shoreline Park: The India Basin Shoreline Park Natural Area is underlain by Holocene San Francisco Bay mud and historic-era artificial fill over estuarine mud. A salt marsh has been constructed in the park. Mudflats in the area are exposed at low tide, and tidal action affects the eastern boundaries of the Natural Area. Before being filled, the park was an area of tidal flat and shallow bay. Two archaeological surveys have partially covered the Natural Area. Surveys noted that unrecorded historic-era archaeological resources were in the area, but no recorded archaeological sites are in the Natural Area. Several prehistoric and historic archaeological sites have been documented in the vicinity with the same setting: a historic refuse scatter along the sandy shoreline immediately south of the Natural Area, four prehistoric shellmound sites along the bayshore, and several shipwrecks offshore. The shoreline of Hunters Point has been identified as an area with potential for subsurface maritime resources, including shipwrecks.

Interior Greenbelt: The Interior Greenbelt Natural Area is underlain by a pre-Quaternary bedrock landform covered by sandy soils in most areas. Loamy soils near the middle of the Natural Area vary in depths. Bedrock outcrops and small scarps are present in portions of the area. A prominent valley bisects a portion of the area, formed by a tectonic shear zone that causes shallow soil slips along the valley walls. A seasonal creek has also formed within this valley. No archaeological surveys have occurred at this Natural Area, and no archaeological sites have been documented in the vicinity.

Kite Hill: The Kite Hill Natural Area is underlain by a pre-Quaternary bedrock landform covered by thin soils in most areas. Shallow slips and landslide scarps occur on most hillsides of the Natural Area, with debris deposits at the base of terraces and slopes. Bedrock outcrops occur in portions of the Natural Area. The

Natural Area overlooks the headwaters of two tributaries of a historic creek. No archaeological surveys have occurred at this Natural Area and no archaeological sites have been documented in the vicinity.

Lake Merced: The Lake Merced Natural Area, historically an open bay, is underlain by a pre-Holocene alluvium landform, Holocene dune sand, Holocene alluvium, and areas of historic-era artificial fill. Sandy soils are comparatively deep in portions of the Natural Area. The area has historically experienced periods of sedimentation that would close the bay, only to be reopened by floods. The lake was fed historically by several creeks and is the largest wetland and freshwater lake in San Francisco. The area has experienced cultural disturbances associated with modifications of the shorelines, rechanneling, and lake filling. The Natural Area has been partially surveyed by five archaeological surveys, primarily focused in the northwest quarter. The area is dominated by historic-era archaeological resources along the lakeshore, in the sand dune beach to the west, and in the developed urban area to the east. Two shipwrecks, one offshore and one on the beach directly west of the Natural Area, have been documented.

Lakeview/Ashton Mini Park: The Lakeview/Ashton Mini Park Natural Area overlies a pre-Quaternary landform with thin sandy soils around the edges. Slope debris with weathered bedrock thinly covers the slopes of the park's peak. At the top of the peak are bedrock outcrops. The park overlooks Lake Merced a few miles to the west. The Natural Area has not been surveyed for archaeological resources, and none have been recorded in the area.

McLaren Park: The McLaren Park Natural Area is underlain by pre-Quaternary bedrock and pre-Holocene alluvium landforms. The hilly park includes loamy and rocky soils, as well as sandy and silty sediments that vary in depth. Bedrock exposures have been noted throughout the park. Soil creep has also been noted along the ridgetop and slopes and in the fire-prone eastern portions. A bedrock quarry of unknown age is within the northwest quarter, and documented historic quarries are in other, terraced areas. A golf course has been constructed in the southern half of the Natural Area, which is at the head of several creeks, including Yosemite and Sunnydale Creeks. Four springs and a marsh associated with Yosemite Creek are still present within the area, as well as several ponds. Seeps are throughout the park. The Natural Area overlooks extensive tidal flats and marshes along the bayshore, as well as sandy beaches and lagoons. The Natural Area has not been surveyed for archaeological resources, and none have been recorded in the area.

Mount Davidson: The Mount Davidson Natural Area is underlain by a pre-Quaternary bedrock landform. The park is the highest point in San Francisco, and bedrock outcrops occur throughout. Soils consist of sandy and gravelly loams of unknown depths. The headwaters of one creek tributary is south of the Natural Area, which has not been surveyed for archaeological resources, and none have been recorded in the area.

O'Shaughnessy Hollow: The O'Shaughnessy Hollow Natural Area is underlain by a pre-Quaternary bedrock landform with areas of historic-era artificial fill. Large areas of bedrock outcrops occur, and soils are thin, with the exception of lower elevations, where eroded and fill materials can be deep. The hydrologic features of adjacent Glen Canyon Park Natural Area would have been easily accessible from O'Shaughnessy Hollow. The Natural Area has not been previously surveyed for archaeological resources, and none have been recorded in the vicinity.

Palou-Phelps: The Palou-Phelps Natural Area overlies a pre-Quaternary bedrock landform, with areas of historic-era artificial fill. Soils here are typically thin and rocky, and erosion is common. The hilltop Natural Area overlooks several productive historic environments, including four creek tributaries, tidal marshes, tidal

flats, a channel through the marshes, and the shallow bayshore. The Natural Area has been partially surveyed by three linear archaeological surveys, all of which focused on the rail line that runs through the hill on which the Natural Area is situated. Two prehistoric and one historic archaeological site have been documented in the vicinity, at elevations lower than the Natural Area.

Pine Lake: The Pine Lake Natural Area is underlain by a pre-Holocene alluvium landform, Holocene dune sand, and areas of historic-era artificial fill. The sandy soils of the area are easily eroded. The Natural Area includes an elongated valley with wooded walls and an escarpment. Natural Pine Lake is on the valley floor, historically fed by a stream to the east. Lake Merced and its habitats are also to the south. Cultural disturbances include a modern dog play area next to the Natural Area. One archaeological survey has occurred within the Natural Area, as well as a landscape survey of the entire park, focused on historic features, that resulted in the Stern Grove and Pine Lake Park Historic District. One historic-era and one prehistoric archaeological site have been documented in the vicinity of the Natural Area.

Rock Outcrop: The Rock Outcrop Natural Area is within the historic-era sand dune complex that once covered the western half of San Francisco. The management areas are underlain by a pre-Quaternary bedrock landform. The park is composed primarily of outcrops of this bedrock, which has contributed to the minimal amount of erosion in the Natural Area. No significant freshwater sources are documented nearby. No archaeological surveys have occurred at this Natural Area, and no archaeological sites have been documented in the vicinity. Hawk Hill Natural Area at the southern end of the same ridgeline has been completely surveyed, and no archaeological resources were identified.

Sharp Park: The Sharp Park Natural Area includes a pre-Quaternary bedrock landform, along with Holocene dune sand, beach sand, alluvium, mud flats, and estuarine delta deposits. Deposits of historic-era artificial fill and fill over estuarine mud are also present. Gravelly, sandy loam soils approximately 30 centimeters deep are in the extensive canyon of the eastern portion of the Natural Area. Soils in the canyon become thinner in the farthest reaches of the canyon. Erosion is active and extensive in this area and includes landslides and soil creep. In the western portion of the Natural Area is a public historic golf course; creeks, a lagoon, and wetlands border a levee and beach. Creek banks have been reinforced, and soils in these lower elevations of the park are loamy sands but exhibit a greater degree of disturbance. Where not reinforced, the creeks easily erode the creek banks. Seeps occur throughout the park. Historically the lagoon would periodically connect to the ocean when water levels were high enough to top the adjacent sand dunes. The lagoon today has been highly modified by construction of the golf course. Seven surveys have partially covered the Natural Area, primarily along the western, northern, and southern boundaries of the eastern portion of the Natural Area. At least three prehistoric archaeological resources and three historic-era resources have been documented in the area: shell middens, collected surface artifacts, a State Relief Camp, the Sharp Park Temporary Detention Center, and the Sharp Park Rifle Range. Features of the three historic resources (the camp, detention center, and rifle range) are still present in the Natural Area.

Tank Hill: The Tank Hill Natural Area is underlain by a pre-Quaternary bedrock landform with areas of historic-era artificial fill. The area is covered by thin soils and slope debris. Landslide scarps occur on the steep hillsides of the park, with debris deposits from common shallow soil slips and slope raveling at the base of the hill. Bedrock outcrops and weathered exposures occur in portions of the Natural Area. The Natural Area is overlooks the headwaters of two tributaries of a historic creek. No archaeological surveys have occurred at this Natural Area, and no archaeological sites have been recorded in the vicinity; however, a

concrete foundation pad described in the SNRAMP is associated with the historic Spring Valley Water Company.

Twin Peaks: The Twin Peaks Natural Area overlies pre-Quaternary bedrock and pre-Holocene alluvium landforms. The park is the second highest point in San Francisco. Thin sandy loam soils cover the peaks. Roadcuts have been created throughout the Natural Area and the excavated materials placed on the downslope sides of the roads. Erosion is limited to areas of high use. No archaeological surveys have been conducted within the Natural Area. One area of historic activity, the Rancho San Miguel House, has been documented as being just east of the base of the eastern hillside.

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
15th Avenue Steps	• Low comparative site density in surrounding area. • Possible historic rock quarry; possibility for prehistoric use as well. • No survey coverage. • Limited natural resources. • Holocene landform. • Moderate natural and human disturbances.	Moderate
Balboa	• High comparative site density in surrounding area. • Redeposition of Golden Gate Park fill may include subsurface archaeological resources associated with the Midwinter International Exposition. • Evidence of high rate of historic activity. • Partial survey coverage. • Active Holocene landform. • Extensive natural and human disturbances.	High
Bayview Park	• High comparative site density in surrounding area. • Possible historic rock quarry; possibility for prehistoric quarrying of outcrops as well. • Evidence of high rate of historic activity. • Minimal survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Extensive natural and human disturbances. • Productive surrounding natural environment, including freshwater source and associated productive riparian habitats.	Moderate
Bernal Hill	• Low comparative site density in surrounding area. • Possible historic rock quarry; possibility for prehistoric quarrying of outcrops as well. • Evidence of high rate of historic activity. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Moderate natural and human disturbances. • Productive surrounding natural environment, including freshwater source and associated riparian habitats.	Moderate

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
Billy Goat Hill	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Minimal natural and human disturbances. • Between three historic freshwater sources and associated productive riparian habitats.	Low
Brooks Park	• Low comparative site density in surrounding area. • Possible historic rock quarry; possibility for prehistoric quarrying of outcrops as well. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Minimal natural and human disturbances. • Near freshwater source and associated productive riparian habitats.	Low
Buena Vista Park	• Comparatively moderate site density in surrounding area. • No survey coverage. • Minimal soil/sediment depth over Holocene landform. • Moderate natural and human disturbances. • Next to freshwater source, associated productive riparian habitats, and other productive environments.	Moderate
Corona Heights	• Comparatively moderate site density in surrounding area. • Possible historic rock quarry; possibility for prehistoric quarrying of outcrops as well. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Moderate natural and human disturbances. • Next to freshwater sources, associated productive riparian habitats, and other productive environments.	Moderate
Dorothy Erskine Park	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Minimal natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	Low
Duncan-Castro	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops and exposures. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform.	Low

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• Minimal natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	
Edgehill Mountain	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops and exposures. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Moderate natural and human disturbances.	Low
Everson/Digby	• Low comparative site density in surrounding area. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Minimal natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	Moderate
Fairmount Park	• Low comparative site density in surrounding area. • No survey coverage. • Varied soil/sediment depth over pre-Holocene landform. • Moderate natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	Low
Glen Canyon Park	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Thin to deep sediments and soils over pre-Holocene landform; alluvial deposition. • Minimal natural and human disturbances. • Includes and is next to freshwater sources and associated productive riparian habitats.	High
Golden Gate Heights Park	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Limited natural resources. • Holocene landform. • Moderate natural and human disturbances.	Low
Golden Gate Park Oak Woodlands		
Lily Pond Area	• Low comparative site density in surrounding area. • Quarried lake may be historic in nature and Midwinter International Exposition-related deposits are possible. • No survey coverage. • Minimal soil/sediment depth over Holocene landform. • High degree of natural and human disturbances. • Limited natural resource availability.	Low
Oak Woodlands Area	• Low comparative site density in surrounding area.	Low

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• Midwinter International Exposition-related deposits are possible. • No survey coverage. • Minimal soil/sediment depth over Holocene landform. • High degree of natural and human disturbances. • Limited natural resource availability.	
Strawberry Hill Area	• Low comparative site density in surrounding area. • Midwinter International Exposition-related deposits are possible. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • High degree of natural and human disturbances. • Limited natural resource availability.	Low
Whiskey Hill Area	• Low comparative site density in surrounding area. • Midwinter International Exposition-related deposits are possible. • No survey coverage. • Extremely deep soil/sediment depth over Holocene landform. • High degree of natural and human disturbances. • Limited natural resource availability.	Moderate
Grandview Park	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of exposures. • No survey coverage. • Limited natural resources. • Pre-Holocene landform. • Moderate natural and human disturbances.	Low
Hawk Hill	• Low comparative site density in surrounding area. • Complete survey coverage. • Limited natural resources. • Holocene landform and historic artificial fill. • Moderate natural and human disturbances.	Low
India Basin Shoreline Park	• Low comparative site density in surrounding area. • Partial survey coverage. • Historic fill material over Holocene bay and estuarine mud. • Minimal natural and human disturbances of historic fill.	Moderate
Interior Greenbelt	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of exposures. • No survey coverage. • Pre-Holocene landform with soils varying in depth. • Minimal natural and human disturbances of historic fill. • Includes seasonal freshwater source and associated productive riparian habitats.	High

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
Kite Hill	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Thin soils over pre-Holocene landform. • Minimal natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	Low
Lake Merced	• High comparative site density in Natural Area and surrounding area. • Partial survey coverage. • Holocene landforms with historic-era fill materials. • Moderate natural and human disturbances. • Includes major freshwater source and associated productive riparian/wetland habitats.	High
Lakeview/Ashton Mini Park	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Minimal soil/sediment depth over pre-Holocene landform. • Minimal natural and human disturbances. • Near freshwater source and associated productive riparian habitats.	Low
McLaren Park	• Low comparative site density in surrounding area. • Historic quarries are within the Natural Area; possibility for prehistoric quarrying of outcrops. • No survey coverage. • Varied soil/sediment depth over pre-Holocene landforms. • Moderate overall degree of natural and human disturbances. • Comparatively numerous freshwater sources and associated riparian habitats within park. Productive resource areas available.	High
Mount Davidson	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • Highest peak in area likely to draw human activity. • No survey coverage. • Unknown soil/sediment depth over pre-Holocene landform. • Minimal degree of natural and human disturbances. • Near freshwater source and associated productive riparian habitats.	Moderate

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
O'Shaughnessy Hollow	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of outcrops. • No survey coverage. • Thin to deep sediments and soils over pre-Holocene landform. • Minimal natural and human disturbances. • Next to freshwater sources and associated productive riparian habitats.	High
Palou-Phelps	• Moderate to high comparative site density in surrounding area. • Minimal survey coverage. • Minimal soil/sediment depth over pre-Holocene landform and historic fill materials. • Moderate natural and human disturbances. • Productive surrounding natural environment, including freshwater source and associated riparian habitats.	High
Pine Lake	• Moderate comparative site density in surrounding area. • Partial survey coverage. • Holocene landforms with historic-era fill materials. • Minimal natural and human disturbances. • Includes freshwater source and associated productive riparian/wetland habitats. Next to major natural resources.	High
Rock Outcrop	• Low comparative site density in surrounding area. • Possibility for prehistoric quarrying of exposures. • No survey coverage. • Limited natural resources. • Pre-Holocene landform with almost no soils. • Minimal natural and human disturbances.	Low
Sharp Park	• High comparative site density in and around Natural Area. • Partial survey coverage. • High degree of available natural resources. • Holocene landforms with soils no deeper than 30 centimeters. • High degree of human disturbances; moderate natural disturbances.	High
Tank Hill	• Low comparative site density in surrounding area. • Unrecorded Spring Valley Water Company water tank foundation pad is within the Natural Area. • No survey coverage. • Thin soils over pre-Holocene landform and historic-era fill materials. • Moderate natural and human disturbances. • Near freshwater sources and associated productive riparian habitats.	Moderate
Twin Peaks	• Low comparative site density in surrounding area.	Low

Table 4-1
Archaeological Sensitivity of Natural Areas

Natural Area	Considerations	Archaeological Sensitivity
	• No survey coverage. • Thin soils over pre-Holocene landforms. • Extensive natural and human disturbances. • Limited natural resource availability.	

5. RECOMMENDATIONS

As presented in Table 5-1 below, the research outlined in the preceding sections suggest that nine Natural Areas have a high level of sensitivity for archaeological sites, nine have a moderate level as well as the Whiskey Hill portion of the Golden Gate Park Oak Woodlands Natural Area, and 14 have a low level (including the Lily Pond, Oak Woodlands, and Strawberry Hill portions of Golden Gate Park Oak Woodlands Natural Area).

Table 5-1
Distribution of the Natural Areas Across Archaeological Sensitivity Levels

Archaeological Sensitivity	Natural Areas	
Low	1. Billy Goat Hill 2. Brooks Park 3. Dorothy Erskine Park 4. Duncan-Castro 5. Edgehill Mountain 6. Fairmount Park 7. Golden Gate Heights Park 8. Golden Gate Park Oak Woodlands (Lily Pond, Oak Woodlands, and Strawberry Hill areas only)	9. Grandview Park 10. Hawk Hill 11. Kite Hill 12. Lakeview/Ashton Mini Park 13. Rock Outcrop 14. Twin Peak
Moderate	1. 15th Avenue Steps 2. Bayview Park 3. Bernal Hill 4. Buena Vista Park 5. Corona Heights	6. Everson/Digby 7. Golden Gate Park Oak Woodlands (Whiskey Hill area only) 8. India Basin Shoreline Park 9. Mount Davidson 10. Tank Hill
High	1. Balboa Park 2. Glen Canyon Park 3. Interior Greenbelt 4. Lake Merced	5. McLaren Park 6. O'Shaughnessy Hollow 7. Palou-Phelps 8. Pine Lake 9. Sharp Park

Several of the general and site-specific management activities proposed in the SNRAMP (SFRPD 2006) could adversely affect archaeological resources. These management activities primarily include ground-disturbing activities, such as vegetation removal, livestock grazing, and activities associated with trail development and maintenance and erosion control.

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July 17, 2008

Ms. Ramona Garibay
Representative
The Trina Marine Ruano Family
16010 Halmar Lane
Lathrop CA 95330

Subject: San Francisco Significant Natural Resource Areas Management Plan, San Francisco County, California

Dear Ms. Garibay:

The purpose of this letter is to inform The Trina Marine Ruano Family about a natural resource management plan developed to preserve, restore, and enhance 31 remnant Natural Areas within the City and County of San Francisco and managed by the San Francisco Recreation and Park Department (SFRPD), and to promote environmental stewardship of these areas. Natural Areas are remnants of San Francisco's historic landscape and contain the City's natural heritage. These areas support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and mission blue butterfly. The opportunity exists in these areas to protect and restore sensitive species and natural habitats for future generations. Pursuant to Government Code §65352.3(a)(2), the SFRPD is inviting your participation in government-to-government consultation as part of the CEQA process to identify possible cultural resources impacts associated with implementation of the management plan. Your participation in this process is important.

As envisioned, the *Significant Natural Resource Areas Management Plan* (SNRAMP) will provide the framework for long-term management of the identified Natural Areas. The 31 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately 4 percent of the total city area; one Natural Area is located in Pacifica. A map of the Natural Areas has been provided with this letter. They range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Others include striking geologic formations. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some remnant natural areas are managed by other public and private entities. Some of these properties may eventually be transferred to SFRPD. The objectives of the SNRAMP are:

- to inventory the biological resources in Natural Areas to provide background information for planning, restoration, and management activities;
- to develop a Geographic Information System (GIS) database containing baseline information for each of the Natural Areas;
- to identify issues and impacts adversely affecting habitats, enhance biological diversity, and maintain populations of sensitive species;
- to identify and prioritize restoration, management, and monitoring actions;
- to provide guidelines and amenities for passive recreational uses compatible with natural resources; and

Golden Gate Park Conservatory (CA-SFR-37H [P-38-0037]) is adjacent to the Golden Gate Park Natural Areas. Historic canal features associated with the Spring Valley Water Company's water system (CA-SFR-102H [P-38-0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is a part of the historic district of Stern Grove and Pine Lake Park (P-38-4472). An archaeological site containing "shell midden with some bone, chert chipage, and fire fractured rock" as well as some noted historic-era glass bottles and recorded in 1969 by S. Humphreys is adjacent to the Sharp Park Natural Area. At the time of its recording, it was remarked that the site was almost entirely destroyed by erosion and construction. Additionally, though not indicated in the records search, Golden Gate Park, including Oak Woodland, Lily Pond, Whiskey Hill, and Strawberry Hill Natural Areas, has been listed on the NRHP since 2004 as a historic district and would therefore be included on the CRHR as well. This would bring the total number of natural areas with documented cultural resources to ten. It should be noted that Geographic Information System (GIS) data received from SFRPD indicates there are additional cultural resources within and adjacent to the Natural Areas that have not been previously documented or evaluated. For instance, the Mount Davidson Cross in the Mount Davidson Natural Area was not indicated in the NWIC records search as a documented resource, but it is indicated as a historic-aged architectural resource in the SFRPD GIS.

No cultural resources survey has been conducted for this project. However, several cultural resources overviews and pedestrian surveys have been conducted within most of the 31 Natural Areas. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (S-9583). The Balboa Natural Area has been partially addressed in two overviews (S-5382 and S-18364) and one linear field surveys (S-18341). The Bayview Park Natural Area has been completely covered by a regional overview (S-25045) and partially covered by a linear field survey (S-28766). The Hawk Hill Natural Area has been fully covered by an archaeological field survey (S-9585). The India Basin Shoreline Park Natural Area has been addressed by one cultural resource overview (S-15602), one archaeological field survey (S-16555), and one linear archaeological field survey (S-16882). The Lake Merced Natural Area has been partially addressed in one regional cultural resource overview (S-3247), three field surveys (S-3240, S-3242, and S-19127), and one subsurface testing project (S-10168). The Palou-Phelps Natural Area has been partially covered by three linear archaeological field surveys (S-11396, S-22657, and S-29657). The Pine Lake Natural Area has been entirely covered by a cultural landscape report with register evaluations that included both archaeological and architectural field surveys (S-32280) and partially covered by a separate archaeological field survey (S-32271). The Sharp Park Natural Area has had nine overviews and surveys within and adjacent to it. The Natural Area itself has been partially covered by three archaeological field surveys (S-3039, S-6717, and S-15828), two linear archaeological field surveys (S-4877 and S-31602), and one archaeological field survey with a historic study and register evaluation (S-34499). The Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, 15th Avenue Steps, Glen Canyon Park, Golden Gate Heights, Grandview Park, Kit Hill, Interior Green Belt, Lakeview/Ashton, Lily Pond, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Oak Woodlands, Rock Outcrop, Strawberry Hill, Tank Hill, Twin Peaks, and Whiskey Hill Natural Areas have not been covered by any field survey or a cultural resource overview specific to those areas.

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July 17, 2008

Mr. Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Mission San Jose, CA 94539

Subject: San Francisco Significant Natural Resource Areas Management Plan, San Francisco County, California

Dear Mr. Galvan:

The purpose of this letter is to inform the Ohlone Indian Tribe about a natural resource management plan developed to preserve, restore, and enhance 31 remnant Natural Areas within the City and County of San Francisco and managed by the San Francisco Recreation and Park Department (SFRPD), and to promote environmental stewardship of these areas. Natural Areas are remnants of San Francisco's historic landscape and contain the City's natural heritage. These areas support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and mission blue butterfly. The opportunity exists in these areas to protect and restore sensitive species and natural habitats for future generations. Pursuant to Government Code §65352.3(a)(2), the SFRPD is inviting your participation in government-to-government consultation as part of the CEQA process to identify possible cultural resources impacts associated with implementation of the management plan. Your participation in this process is important.

As envisioned, the *Significant Natural Resource Areas Management Plan* (SNRAMP) will provide the framework for long-term management of the identified Natural Areas. The 31 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately 4 percent of the total city area; one Natural Area is located in Pacifica. A map of the Natural Areas has been provided with this letter. They range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Others include striking geologic formations. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some remnant natural areas are managed by other public and private entities. Some of these properties may eventually be transferred to SFRPD. The objectives of the SNRAMP are:

- to inventory the biological resources in Natural Areas to provide background information for planning, restoration, and management activities;
- to develop a Geographic Information System (GIS) database containing baseline information for each of the Natural Areas;
- to identify issues and impacts adversely affecting habitats, enhance biological diversity, and maintain populations of sensitive species;
- to identify and prioritize restoration, management, and monitoring actions;
- to provide guidelines and amenities for passive recreational uses compatible with natural resources; and
- to provide guidelines for educational, research, and stewardship programs.

0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is a part of the historic district of Stern Grove and Pine Lake Park (P-38-4472). An archaeological site containing "shell midden with some bone, chert chipage, and fire fractured rock" as well as some noted historic-era glass bottles and recorded in 1969 by S. Humphreys is adjacent to the Sharp Park Natural Area. At the time of its recording, it was remarked that the site was almost entirely destroyed by erosion and construction. Additionally, though not indicated in the records search, Golden Gate Park, including Oak Woodland, Lily Pond, Whiskey Hill, and Strawberry Hill Natural Areas, has been listed on the NRHP since 2004 as a historic district and would therefore be included on the CRHR as well. This would bring the total number of natural areas with documented cultural resources to ten. It should be noted that Geographic Information System (GIS) data received from SFRPD indicates there are additional cultural resources within and adjacent to the Natural Areas that have not been previously documented or evaluated. For instance, the Mount Davidson Cross in the Mount Davidson Natural Area was not indicated in the NWIC records search as a documented resource, but it is indicated as a historic-aged architectural resource in the SFRPD GIS.

No cultural resources survey has been conducted for this project. However, several cultural resources overviews and pedestrian surveys have been conducted within most of the 31 Natural Areas. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (S-9583). The Balboa Natural Area has been partially addressed in two overviews (S-5382 and S-18364) and one linear field surveys (S-18341). The Bayview Park Natural Area has been completely covered by a regional overview (S-25045) and partially covered by a linear field survey (S-28766). The Hawk Hill Natural Area has been fully covered by an archaeological field survey (S-9585). The India Basin Shoreline Park Natural Area has been addressed by one cultural resource overview (S-15602), one archaeological field survey (S-16555), and one linear archaeological field survey (S-16882). The Lake Merced Natural Area has been partially addressed in one regional cultural resource overview (S-3247), three field surveys (S-3240, S-3242, and S-19127), and one subsurface testing project (S-10168). The Palou-Phelps Natural Area has been partially covered by three linear archaeological field surveys (S-11396, S-22657, and S-29657). The Pine Lake Natural Area has been entirely covered by a cultural landscape report with register evaluations that included both archaeological and architectural field surveys (S-32280) and partially covered by a separate archaeological field survey (S-32271). The Sharp Park Natural Area has had nine overviews and surveys within and adjacent to it. The Natural Area itself has been partially covered by three archaeological field surveys (S-3039, S-6717, and S-15828), two linear archaeological field surveys (S-4877 and S-31602), and one archaeological field survey with a historic study and register evaluation (S-34499). The Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, 15th Avenue Steps, Glen Canyon Park, Golden Gate Heights, Grandview Park, Kit Hill, Interior Green Belt, Lakeview/Ashton, Lily Pond, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Oak Woodlands, Rock Outcrop, Strawberry Hill, Tank Hill, Twin Peaks, and Whiskey Hill Natural Areas have not been covered by any field survey or a cultural resource overview specific to those areas.

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July 17, 2008

Ms. Jakki Kehl
Cultural Resource Coordinator
The Ohlone/Costanoan Tribal Band
720 North 2nd Street
Patterson, CA 95363

Subject: San Francisco Significant Natural Resource Areas Management Plan, San Francisco County, California

Dear Ms. Kehl:

The purpose of this letter is to inform The Ohlone/Costanoan Tribal Band about a natural resource management plan developed to preserve, restore, and enhance 31 remnant Natural Areas within the City and County of San Francisco and managed by the San Francisco Recreation and Park Department (SFRPD), and to promote environmental stewardship of these areas. Natural Areas are remnants of San Francisco's historic landscape and contain the City's natural heritage. These areas support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and mission blue butterfly. The opportunity exists in these areas to protect and restore sensitive species and natural habitats for future generations. Pursuant to Government Code §65352.3(a)(2), the SFRPD is inviting your participation in government-to-government consultation as part of the CEQA process to identify possible cultural resources impacts associated with implementation of the management plan. Your participation in this process is important.

As envisioned, the *Significant Natural Resource Areas Management Plan* (SNRAMP) will provide the framework for long-term management of the identified Natural Areas. The 31 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately 4 percent of the total city area; one Natural Area is located in Pacifica. A map of the Natural Areas has been provided with this letter. They range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Others include striking geologic formations. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some remnant natural areas are managed by other public and private entities. Some of these properties may eventually be transferred to SFRPD. The objectives of the SNRAMP are:

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- to identify issues and impacts adversely affecting habitats, enhance biological diversity, and maintain populations of sensitive species;
- to identify and prioritize restoration, management, and monitoring actions;

Hollow, Dorothy Erskine Park, McLaren Park, Brooks Park, Lakeview/Ashton, 15th Avenue Steps, Grandview Park, Rock Outcrop, Golden Gate Heights, Twin Peaks, or Bayview Park Natural Areas. One historic building, the Golden Gate Park Conservatory (CA-SFR-37H [P-38-0037]) is adjacent to the Golden Gate Park Natural Areas. Historic canal features associated with the Spring Valley Water Company's water system (CA-SFR-102H [P-38-0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is a part of the historic district of Stern Grove and Pine Lake Park (P-38-4472). An archaeological site containing "shell midden with some bone, chert chipage, and fire fractured rock" as well as some noted historic-era glass bottles and recorded in 1969 by S. Humphreys is adjacent to the Sharp Park Natural Area. At the time of its recording, it was remarked that the site was almost entirely destroyed by erosion and construction. Additionally, though not indicated in the records search, Golden Gate Park, including Oak Woodland, Lily Pond, Whiskey Hill, and Strawberry Hill Natural Areas, has been listed on the NRHP since 2004 as a historic district and would therefore be included on the CRHR as well. This would bring the total number of natural areas with documented cultural resources to ten. It should be noted that Geographic Information System (GIS) data received from SFRPD indicates there are additional cultural resources within and adjacent to the Natural Areas that have not been previously documented or evaluated. For instance, the Mount Davidson Cross in the Mount Davidson Natural Area was not indicated in the NWIC records search as a documented resource, but it is indicated as a historic-aged architectural resource in the SFRPD GIS.

No cultural resources survey has been conducted for this project. However, several cultural resources overviews and pedestrian surveys have been conducted within most of the 31 Natural Areas. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (S-9583). The Balboa Natural Area has been partially addressed in two overviews (S-5382 and S-18364) and one linear field surveys (S-18341). The Bayview Park Natural Area has been completely covered by a regional overview (S-25045) and partially covered by a linear field survey (S-28766). The Hawk Hill Natural Area has been fully covered by an archaeological field survey (S-9585). The India Basin Shoreline Park Natural Area has been addressed by one cultural resource overview (S-15602), one archaeological field survey (S-16555), and one linear archaeological field survey (S-16882). The Lake Merced Natural Area has been partially addressed in one regional cultural resource overview (S-3247), three field surveys (S-3240, S-3242, and S-19127), and one subsurface testing project (S-10168). The Palou-Phelps Natural Area has been partially covered by three linear archaeological field surveys (S-11396, S-22657, and S-29657). The Pine Lake Natural Area has been entirely covered by a cultural landscape report with register evaluations that included both archaeological and architectural field surveys (S-32280) and partially covered by a separate archaeological field survey (S-32271). The Sharp Park Natural Area has had nine overviews and surveys within and adjacent to it. The Natural Area itself has been partially covered by three archaeological field surveys (S-3039, S-6717, and S-15828), two linear archaeological field surveys (S-4877 and S-31602), and one archaeological field survey with a historic study and register evaluation (S-34499). The Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, 15th Avenue Steps, Glen Canyon Park, Golden Gate Heights, Grandview Park, Kit Hill, Interior Green Belt, Lakeview/Ashton, Lily Pond, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Oak Woodlands, Rock Outcrop, Strawberry Hill, Tank Hill, Twin Peaks, and Whiskey Hill Natural Areas have not been covered by any field survey or a cultural resource overview specific to those areas.

City and County of San Francisco
Recreation and Park Department

McLaren Lodge in Golden Gate Park
501 Stanyan Street, San Francisco, CA 94117
TEL: 415.831.2700 FAX: 415.831.2096 WEB: http://parks.sfgov.org

July 17, 2008

Ms. Ann Marie Sayers
Chairperson
The Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister CA 95024

Subject: San Francisco Significant Natural Resource Areas Management Plan, San Francisco County, California

Dear Ms. Sayers:

The purpose of this letter is to inform the Indian Canyon Mutsun Band of Costanoan about a natural resource management plan developed to preserve, restore, and enhance 31 remnant Natural Areas within the City and County of San Francisco and managed by the San Francisco Recreation and Park Department (SFRPD), and to promote environmental stewardship of these areas. Natural Areas are remnants of San Francisco's historic landscape and contain the City's natural heritage. These areas support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and mission blue butterfly. The opportunity exists in these areas to protect and restore sensitive species and natural habitats for future generations. Pursuant to Government Code §65352.3(a)(2), the SFRPD is inviting your participation in government-to-government consultation as part of the CEQA process to identify possible cultural resources impacts associated with implementation of the management plan. Your participation in this process is important.

As envisioned, the *Significant Natural Resource Areas Management Plan* (SNRAMP) will provide the framework for long-term management of the identified Natural Areas. The 31 Natural Areas are scattered mostly throughout the central and southern portions of San Francisco and constitute approximately 4 percent of the total city area; one Natural Area is located in Pacifica. A map of the Natural Areas has been provided with this letter. They range in size from less than one acre to almost 400 acres and include such popular locations as Twin Peaks and portions of Glen Canyon Park. Many of these areas support sensitive plant and animal species and habitats. Others include striking geologic formations. Most are used as recreational open spaces by residents and visitors. While mostly owned by the SFRPD, some remnant natural areas are managed by other public and private entities. Some of these properties may eventually be transferred to SFRPD. The objectives of the SNRAMP are:

- to inventory the biological resources in Natural Areas to provide background information for planning, restoration, and management activities;
- to develop a Geographic Information System (GIS) database containing baseline information for each of the Natural Areas;
- to identify issues and impacts adversely affecting habitats, enhance biological diversity, and maintain populations of sensitive species;
- to identify and prioritize restoration, management, and monitoring actions;
- to provide guidelines and amenities for passive recreational uses compatible with natural resources; and

Golden Gate Park Conservatory (CA-SFR-37H [P-38-0037]) is adjacent to the Golden Gate Park Natural Areas. Historic canal features associated with the Spring Valley Water Company's water system (CA-SFR-102H [P-38-0093]) are within the Lake Merced Natural Area. The Pine Lake Natural Area is a part of the historic district of Stern Grove and Pine Lake Park (P-38-4472). An archaeological site containing "shell midden with some bone, chert chipage, and fire fractured rock" as well as some noted historic-era glass bottles and recorded in 1969 by S. Humphreys is adjacent to the Sharp Park Natural Area. At the time of its recording, it was remarked that the site was almost entirely destroyed by erosion and construction. Additionally, though not indicated in the records search, Golden Gate Park, including Oak Woodland, Lily Pond, Whiskey Hill, and Strawberry Hill Natural Areas, has been listed on the NRHP since 2004 as a historic district and would therefore be included on the CRHR as well. This would bring the total number of natural areas with documented cultural resources to ten. It should be noted that Geographic Information System (GIS) data received from SFRPD indicates there are additional cultural resources within and adjacent to the Natural Areas that have not been previously documented or evaluated. For instance, the Mount Davidson Cross in the Mount Davidson Natural Area was not indicated in the NWIC records search as a documented resource, but it is indicated as a historic-aged architectural resource in the SFRPD GIS.

No cultural resources survey has been conducted for this project. However, several cultural resources overviews and pedestrian surveys have been conducted within most of the 31 Natural Areas. All of the Natural Areas were covered by a study of pre-Spanish ecology of the Bay Area (S-9583). The Balboa Natural Area has been partially addressed in two overviews (S-5382 and S-18364) and one linear field surveys (S-18341). The Bayview Park Natural Area has been completely covered by a regional overview (S-25045) and partially covered by a linear field survey (S-28766). The Hawk Hill Natural Area has been fully covered by an archaeological field survey (S-9585). The India Basin Shoreline Park Natural Area has been addressed by one cultural resource overview (S-15602), one archaeological field survey (S-16555), and one linear archaeological field survey (S-16882). The Lake Merced Natural Area has been partially addressed in one regional cultural resource overview (S-3247), three field surveys (S-3240, S-3242, and S-19127), and one subsurface testing project (S-10168). The Palou-Phelps Natural Area has been partially covered by three linear archaeological field surveys (S-11396, S-22657, and S-29657). The Pine Lake Natural Area has been entirely covered by a cultural landscape report with register evaluations that included both archaeological and architectural field surveys (S-32280) and partially covered by a separate archaeological field survey (S-32271). The Sharp Park Natural Area has had nine overviews and surveys within and adjacent to it. The Natural Area itself has been partially covered by three archaeological field surveys (S-3039, S-6717, and S-15828), two linear archaeological field surveys (S-4877 and S-31602), and one archaeological field survey with a historic study and register evaluation (S-34499). The Bernal Hill, Billy Goat Hill, Brooks Park, Buena Vista Park, Corona Heights, Dorothy Erskine Park, Duncan-Castro, Edgehill Mountain, Fairmont Park, 15th Avenue Steps, Glen Canyon Park, Golden Gate Heights, Grandview Park, Kit Hill, Interior Green Belt, Lakeview/Ashton, Lily Pond, McLaren Park, Mount Davidson, O'Shaughnessy Hollow, Oak Woodlands, Rock Outcrop, Strawberry Hill, Tank Hill, Twin Peaks, and Whiskey Hill Natural Areas have not been covered by any field survey or a cultural resource overview specific to those areas.

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July 17, 2008

Ms. Irene Zwierlein
Chairperson
The Amah/Mutsun Tribal Band
789 Canada Road
Woodside CA 94062

Subject: San Francisco Significant Natural Resource Areas Management Plan, San Francisco County, California

Dear Ms. Zwierlein:

The purpose of this letter is to inform the Amah/Mutsun Tribal Band the about a natural resource management plan developed to preserve, restore, and enhance 31 remnant Natural Areas within the City and County of San Francisco and managed by the San Francisco Recreation and Park Department (SFRPD), and to promote environmental stewardship of these areas. Natural Areas are remnants of San Francisco's historic landscape and contain the City's natural heritage. These areas support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and mission blue butterfly. The opportunity exists in these areas to protect and restore sensitive species and natural habitats for future generations. Pursuant to Government Code §65352.3(a)(2), the SFRPD is inviting your participation in government-to-government consultation as part of the CEQA process to identify possible cultural resources impacts associated with implementation of the management plan. Your participation in this process is important.

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STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
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Web Site www.nahc.ca.gov

June 19, 2008

Erin King, MA, RPA
Archaeologist
180 Howard Street, Suite 250
San Francisco, CA 94105

Sent by Fax: 415-974-5914
Number of Pages: 2

Re: Proposed Significant Natural Resources Areas Management Plan project, San Francisco County.

Dear Ms. King:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
San Francisco County
June 18, 2008

Jakki Kehl
720 North 2nd Street
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(209) 892-2436
(209) 892-2435 - Fax

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
16010 Halmar Lane
Lathrop , CA 95330

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/MutsunTribal Band
Irene Zwierlein, Chairperson
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Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
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Ohlone/Costanoan

The Ohlone Indian Tribe
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chochenyo@AOL.com
(510) 882-0527 - Cell
(510) 687-9393 - Fax

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Significant Natural Resource Areas Management Plan project, San Francisco County.

APPENDIX D

Biological Resources

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Birds			
Aechmophorus clarkii	Clark's Grebe	SLC	Few breeding records from Lake Merced. Also occurs at Sharp Park and India Basin on occasion.
Podilymbus podiceps	Pied-billed Grebe	SLC	Breeds at Lake Merced and Pine Lake. Also present at Sharp Park
Phalacrocorax auritus	Double-crested Cormorant	CSC (rookeries)	Presently nests at Lake Merced
Phalacrocorax penicillatus	Brandt's Cormorant	SLC	Found only at India Basin.
Phalacrocorax pelagicus	Pelagic Cormorant	SLC	Found only at India Basin.
Nycticorax nycticoraz	Black-crowned Night Heron	-	Locally uncommon, may breed at Lake Merced. Observed at Sharp Park, India Basin, and McLaren Park.
Butorides striatus	Green Heron	SLC	Presently occurs at Golden Gate Park and Pine Lake. Presently nests at Lake Merced.
Areda herodias	Great Blue Heron	Sens	Presently nests at Lake Merced
Anas strepera	Gadwall	SLC	Historically bred within San Francisco. Now a winter resident at Lake Merced, Pine Lake, Sharp Park, India Basin, and McLaren Park.
Rallus limicola	Virginia Rail	SLC	Presently occurs at Lake Merced
Porzana carolina	Sora	SLC	Presently occurs at Lake Merced
Laterallus jamaicensis coturniculus	Black Rail	SLC	Historically reported, not recently observed in the City
Haematopus bachmani	Black Oystercatcher	SLC	Occurs in India Basin only
Charadrius alexandrinus	Snowy Plover	FT, CSC	Presently occurs at Ocean Beach
Cepphus columba	Pigeon Guillemont	SLC	Occurs in India Basin only
Buteo lineatus	Red-shouldered Hawk	SLC	Lake Merced, Pine Lake, Palau Phelps, Golden Gate Heights, Billy Goat Hill, and Dorothy Erskine Park. Breeds at Sharp Park, Bayview Hill, McLaren Park, Buena Vista Park, and Glen Canyon.
Buteo jamaicensis	Red-tailed Hawk	SLC	Found in most Natural Areas. Breeds at Sharp Park, Bayview Hill, McLaren Park, Buena Vista Park, Dorothy Erskine Park, Glen Canyon Park, Mt. Davidson, Tank Hill, and Twin Peaks.
Pandion haliaetus	Osprey	SLC	Observed at Lake Merced, India Basin, and McLaren Park.
Falco sparverius	American Kestrel	SLC	Lake Merced, Sharp Park, Bayview Hill, India Basin, and Mt. Davidson. Breeds at McLaren Park.
Falco peregrinus	Peregrine Falcon	SLC	Likely forages in most Natural Areas. No breeding habitat in any of the Natural Areas.
Callipepla californica	California Quail	SLC	Presently occurs at the Presidio and the Arboretum in Golden Gate Park
Columba fasciata	Band-tailed Pigeon	SLC	Sharp Park, Buena Vista. Breeds in Glen Canyon, Mt. Davidson, and Twin Peaks
Bubo virginianus	Great Horned Owl	SLC	Found in Sharp Park. Breeds at Lake Merced, Pine Lake, McLaren Park, and Glen Canyon.
Tyto alba	Barn Owl	SLC	Presently occurs at Lake Merced. Historically reported from Golden Gate Park.
Otus kennicottii	Western Screech Owl	SLC	Presently occurs at Oak Woodlands (Golden Gate Park)

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Aeronautes saxatalis	White-throated Swift	SLC	Found at Edgehill Mtn, Fairmount Park, Glen Canyon, Interior Greenbelt, Kite Hill, and Mt. Davidson.
Picoides villosus	Hairy Woodpecker	SLC	Found in Sharp Park.
Contopus borealis	Olive-sided Flycatcher	SLC	Currently nests at Lake Merced, Golden Gate Park, Buena Vista, and the Presidio
Sayornis saya	Say's Phoebe	SLC	Winter resident at Sharp Park, Bayview Hill, Bernal Heights, India Basin, McLaren Park, and Mt. Davidson.
Empidonax difficilis	Pacific-slope Flycatcher	SLC	Found in Sharp Park, Bayview Hill, McLaren Park, Billy Goat Hill, Corona Heights, Duncan-Castro, Glen Canyon Park, Mt. Davidson, Oak Woodlands, Tank Hill, and Twin Peaks.
Eremophila alpestris	Horned Lark	SLC	Occurs during migration only. Historic breeding records.
Tachycineta bicolor	Tree Swallow	SLC	Found in Sharp Park, Bayview Hill, and Golden Gate Heights. Breeds in Glen Canyon Park and McLaren Park.
Tachycineta thalassina	Violet-green Swallow	SLC	Found in Sharp Park, Bayview Hill, Golden Gate Heights, Glen Canyon Park, Kite Hill, Mt. Davidson, and Twin Peaks.
Riparia riparia	Bank Swallow	ST	Currently nest at Fort Funston and forage over Lake Merced
Hirundo pyrrhonota	Cliff Swallow	SLC	Currently nests at Lake Merced and Golden Gate Park
Hirundo rustica	Barn Swallow	SLC	Found in most Natural Areas. Breeds at Lake Merced, Pine Lake, McLaren Park, Buena Vista Park, Billy Goat Hill, Corona Heights, Glen Canyon Park, and Mt. Davidson.
Cyanocitta stelleri	Steller's Jay	SLC	Foung at Sharp Park, Buena Vista, Glen Canyon Park. Breeds at Mt. Davidson and Oak Woodlands.
Chamaea fasciata	Wrentit	SLC	Presently occurs at McLaren Park, and Bayview Hill.
Sitta canadensis	Red-breasted Nuthatch	SLC	Winter resident at Lake Merced, Pine Lake, Bayview Hill, McLaren Park, Golden Gate Heights, Corona Heights, Dorothy Erskine Park, Glen Canyon Park, Mt. Davidson, and Oak Woodlands.
Sitta pygmaea	Pygmy Nuthatch	SLC	Breeds at Brooks Park, Lake Merced, Pine Lake, Bayview Hill, McLaren Park, Buena Vista, Golden Gate Heights, Corona Heights, Dorothy Erskine Park, Edgehill Mtn, Fairmount Park, Glen Canyon, Interior Greenbelt, Mt. Davidson, Oak Woodland, Tank Hill, and Twin Peaks. Also found at Kite Hill.
Thryomanes bewickii	Bewick's Wren	SLC	Presently nests at Lake Merced and Fort Funston
Catharus ustulatus	Swainson's Thrush	SLC	Breeds at Sharp Park. Also found at Buena Vista, Golden Gate Heights, Glen Canyon, McLaren Park, Oak Woodlands, and Twin Peaks.
Lanius ludovicianus	Loggerhead Shrike	SLC	Occurs during migration only. Historic breeding records.
Vireo huttoni	Hutton's Vireo	SLC	Found at Sharp Park, Bayview Hill, McLaren Park, Pine Lake, and Buena Vista. Likely breeds in San Francisco.

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Vermivora celata	Orange-crowned Warbler	SLC	Found at Lake Merced, Pine Lake, Bayview Hill, McLaren Park, Buena Vista, Billy Goat Hill, Edgehill Mt., Glen Canyon Park, Mt. Davidson, Oak Woodlands, and Twin Peaks. Likely breeds in San Francisco at Mt. Davidson.
Dendroica petechia	Yellow Warbler	CSC (nesting)	Observed at Lake Merced in spring 2000, breeding undocumented
Wilsonia pusilla	Wilson's Warbler	SLC	Found at Bernal Heights, Bayview Hill, McLaren Park, Buena Vista, Golden Gate Heights, Corona Heights, Dorothy Erskine, Glen Canyon Park, Oak Woodlands, and Twin Peaks. Breeds at lake Merced, Pine Lake, and Mt. Davidson.
Geothlypis trichas	Common Yellowthroat	CSC	Presently occurs at Lake Merced and Sharp Park
Pipilo maculatus	Spotted Towhee	SLC	Presently occurs at Mount Davidson, Presideo, Oak Woodlands (Golden Gate Park), McLaren Park, Glen Canyon Park, and Twin Peaks.
Junco hyemalis	Dark-eyed Junco	-	Breeding population limited, wintering birds widespread in parks and yards of San Francisco
Zonotrichia leucophrys	White-crowened Sparrow	-	Breeding population limited, wintering birds widespread in parks and yards of San Francisco
Icterus cucullatus	Hooded Oriole	SLC	Breeds at Lake Merced and Glen Canyon Park. Also found at McLaren Park, Buena Vista, and Mt. Davidson.
Carduelis tristis	American Goldfinch	SLC	Breeds at Lake Merced, Sharp Park, Bayview Hill, and McLaren Park. Also found at Glen Canyon, Mt. Davidson, and Twin Peaks.
Carduelis psaltria	Lesser Goldfinch	SLC	Breeds at Bayview Hill, McLaren Park, Gilly Goat Hill, Corona Heights, Glen Canyon Park, Mt. Davidson, and Twin Peaks. Also found at Brooks Park, Dorothy Erskine Park, and Farimount Park.
Loxia curvirostra	Red Crossbill	SLC	Winter resident found at Lake Merced, McLaren Park, Buena Vista, Golden Gate Heights, Oak Woodlands, and Twin Peaks.
Carpodacus purpureus	Purple Finch	SLC	Breeds at Lake Merced, Glen Canyon, Mt. Davidson, Oak Woodlads, and Twin Peaks. Also found at Pine Lake, Sharp Park, Bayview Hill, McLaren Park, Buena Vista, Golden Gate Heights, Corona Heights, and Dorothy Erskine Park.

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Fish			
Eucyclogobius newberryi	Tidewater Goby	FPD (FE), CSC	Historically collected (1895), not recently observed in the City
Reptiles and Amphibians			
Clemmys marmorata	Western Pond Turtle	CSC	Presently occurs at Lake Merced. Presumed extant at Pine Lake but not recently observed.
Rana aurora draytonii	California Red-legged Frog	FT	Historically observed at Lake Merced. Recently observed at Sharp Park.
Thamnophis sirtalis elegans	San Francisco Garter Snake	FE, SE, SFP	Historically reported from Sharp Park
Invertebrates			
Caecuditea tomalensis	Tomales Isopod	FSC	Collected in 1984 from Lake Merced (CNDDB 2000)
Euphydryas editha bayensis	Bay Checkerspot Butterfly	FT	Reported from Mt. Davidson and Twin Peaks in 1980. Not currently present at either Natural Area.
Icaricia icarioides missionensis	Mission Blue Butterfly	FE	Reported at Sharp Park and McLaren Park in 1988 and from Bayview Park in 2001. Currently breeds on Twin Peaks
Incisalia mossii bayensis	San Bruno Elfin Butterfly	FE	
Ischnura gemina	San Francisco Forktail Damselfly	-	Not observed since 1989, presumed present in Glen Canyon. Presently occurs in McLaren Park.
Lichnanthe ursina	Bumblebee Scarab Beetle	FSC	1980 report from dunes near Laguna Salada, presumed present
Speyeria callippe callippe	San Francisco Silverspot Butterfly	FE	
Plants			
Amsinckia menziesii var. *intermedia*	Common Fiddleneck	LS	Presently occurs at Bayview Park, and Twin Peaks
Aquilegia formosa	Red Columbine	LS	Presently occurs at Glen Canyon, O'Shaughnessy Hollow, and Mount Davidson
Arabis blepharophylla	Coast Rock Cress	CNPS List 4	Presently occurs at Mt. Davidson, O'Shaughnessy Hollow, and Twin Peaks
Arctostaphylos hookeri ssp. *franciscana*	Franciscan manzanita	CNPS List 1A	Historically occurred at Mt. Davidson
Arctostaphylos hookeri ssp. *ravenii*	Raven's manzanita	FE, SE, CNPS List 1B	Historically occurred at Mt. Davidson
Aristolochia californica	California Pipevine	-	Presently occurs at occur at Lake Merced
Aster radulinus	Broadleaf Aster	LS	Presently occurs at Bayview Park
Astragalus nutalli var. *virgatus*	Nuttall's Milk Vetch	LS	Historically occurred at Lake Merced
Blennosperma nanum	Common Stickyseed	LS	Presently occurs at Bayview Park
Calamagrostis nutkaensis	Pacific Reed Grass	LS	Southern range limit, presently occurs at Mt. Davidson, Twin Peaks, and Edgehill Mtn.
Castilleja exserta	Purple Owl's Clover	LS	Presently occurs at Mount Davidson and Glen Canyon
Castilleja wightii	Paintbrush	LS	Presently occurs at Hawk Hill, Lake Merced, and Balboa Natural Area.

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Cerastium arvense	Meadow White	LS	Presently occurs at Twin Peaks and Rock Outcrop
Chenopodium californicum	California Goosefoot	LS	Historically occurred at Lake Merced
Chorizanthe cuspidata var. *cuspidata*	San Francisco Spineflower	FSC, CNPS List 1B	Presently occurs at Ft. Funston, Golden Gate Heights, and Lake Merced
Clarkia rubicunda	Farewell-to-Spring	-	Presently occurs at Tank Hill, Bayview Hill, and Lakeview/Ashton Mini Park
Collinsia multicolor	San Francisco Collinsia	CNPS List 1B	Presently occurs at Bayview Hill
Croton californica	California Croton	LS	Northern distributional limit, presently occurs at Hawk Hill
Delphinium californicum	Larkspur	LS	Presently occurst at Bayview Park
Delphinium decorum	Coast Larkspur	LS	Presently occurs at Bayview Park
Deschampsia danthonioides	Annual Hairgrass	LS	Presently occurs at Corona and Rock Outcrop
Disporum hookeri	Fairy Bells	LS	Presently occurs at Interior Green Belt
Dodecatheon clevelandii	Shooting Star	LS	Presently occurs at Bernal Hill.
Elymus multisetus	Big Squirrel Tail	LS	Presently occurs at Bayview Park, Bernal Hill and McLaren Park
Erigeron foliosus	Leafy Daisy	LS	Presently occurs in O'Shaughnessey Hollow
Erysimum franciscanum	San Francisco Wallflower	FSC, CNPS List 4	Presently occurs at Grandview Park, Golden Gate Heights, Hawk Hill, and Rock Outcrop
Euthamia occidentalis	Western Goldenrod	LS	Historically reported not recently observed in the City.
Festuca californica	California Fescue	LS	Presently occurs at Bayview Park, Edgehill Mtn. and Mt. Davidson
Frankenia salina	Alkali-Heath	LS	Presently occurs at India Basin Shoreline Park.
Fritillaria liliacea	Fragrant Fritillary	CNPS 1B	Presently occurs at Bernal Heights
Gallium porrigens	Climbing Bedstraw	LS	Presently occurs in Bayview Park , O'Shaughnessy Hollow, and Twin Peaks
Garrya elliptica	Silk Tassel Bush	LS	Presently found in Glen Canyon Park
Gilia capitata ssp. *chamissonis*	Dune Gilia	CNPS List 1B	Presently occurs at Hawk Hill and Lake Merced
Gilia clivorum	Grassland Gilia	LS	Historically reported not recently observed in the City.
Grindelia hirsutula var. *maritima*	San Francisco Gumplant	FSC, CNPS List 1B	Presently occurs at Mount Davidson, Twin Peaks, Corona Heights, and Balboa Natural Area.
Grindelia stricta var. *augustifolia*	Marsh Gumplant	-	Presently occurs at India Basin Shoreline Park.
Heuchera micrantha	Alumroot	LS	Presently occurs at O'Shaughnessy,and Glen Canyon
Juncus xiphiodes	Iris Leaf Rush	LS	Historically reported not recently observed in the City.
Layia carnosa	Beach Layia	FE, SE, CNPS List 1B	Historically reported from San Francisco, location not well mapped, presumed extirpated
Lessingia germanorum	San Francisco Lessingia	FE, SE, CNPS List 1B	Only current population found on the Presidio.
Leymus x vancouverensis	Vancouver's Ryegrass	LS	Presently occurs at Lake Merced
Lilaea scilloides	Flowering Quillwort	LS	Presently occurs at McLaren Park (is likely extripated)

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Linaria canadensis	Canadian or Blue Toad-Flax	LS	Presently occurs at Hawk Hill
Lithophragma heterophylla	Prarie Star, Woodland Star	LS	Presently occurs in Bayview Park
Marah oreganus	Wild Cucumber, Man-root	LS	Presently occurs at McLaren Park and Lake Merced
Monardella undulata	Curly-leaved Monardella	CNPS List 4	Not known to occur in the City
Muilla maritima	Common Muilla	LS	Presently occurs at Corona Heights, Tank Hill, Bernal Hill and Mount Davidson
Navarretia squarrosa	Skunkweed	LS	Presently occurs at Hawk Hill and McLaren Park
Osmorhiza chilensis	Sweet Cicely	LS	Presently occurs at Interior Greenbelt.
Pellaea andromedifolia	Coffee Fern	LS	Historically reported not recently observed in the City.
Prunus emarginata	Bitter Cherry	LS	Presently occurs at Bayview and Glen Canyon
Prunus ilicifolia	Holly-leaved Cherry Islais Cherry	LS	Presently occurs at Bayview Park, Glen Canyon
Prunus virginiana var. demissa	Western Choke Cherry	LS	Presently occurs at Tank Hill and Bayview Park
Quercus chrysolepis	Canyon Live Oak	LS	Presently occurs at Lake Merced
Rhamnus crocea	Spiny Redberry	LS	Presently occurs at Glen Canyon
Ribes divaricatum	Coastal Black Gooseberry	LS	Presently occurs at Lake Merced
Ribes menziessi	Canyon Gooseberry	LS	Presently occurs at Bayview Park
Rosa gymnocarpa	Wood Rose	LS	Presently occurs at Bayview Park, O'Shaughnessy and Mount Davidson
Rubus parviflorus	Thimbleberry	LS	Presently occurs at Lake Merced and Interior Green Belt
Salvia spathacea	Hummingbird Sage	LS	Presently occurs at Bernal Hill.
Saxifraga californica	California saxifrage	LS	Presently occurs at Billy Goat Hill
Sedum spathulifolium	Broadleaf Stonecrop	-	Larval food plant for San Bruno elfin butterfly, presently occurs at Glen Canyon, Mt. Davidson, O'Shaughnessy Hollow, Tank Hill, and Twin Peaks
Senecio aronicoides	Groundsel	LS	Presently occurs at Bayview Park and Mount Davidson
Silene scouleri ssp. *grandis*	Scouler's Large Campion	LS	Presently occurs at Bayview Hill
Silene verecunda ssp. *verecunda*	San Francisco Campion	FSC, CNPS List 1B	Presently occurs at Mt. Davidson and Rock Outcrop
Sisyrinchium californicum	Yellow-eyed Grass	LS	Only San Francisco population in Glen Canyon
Tanacetum camphoratum	Dune Tansy	-	Southern distributional limit. Presently occurs at Grandview Park, Golden Gate Heights, Hawk Hill, Rock Outcrop, Lake Merced, and Balboa Natural Area.
Triphysaria eriantha var. *rosea*	Johnny-tuck	LS	Presently occurs at McLaren Park

Table 3-5. Sensitive species presently and historically known to occur at Significant Natural Areas.

Species	Common Name	Status Federal, State, CNPS, Local	Local Significance
Vaccinium ovatum	California or Evergreen Huckleberry	LS	Presently occurs at Mount Davidson
Viola adunca	Blue Violet	LS	Presently occurs at Glen Canyon, Twin Peaks and O'Shaugnessy
Viola pedunculata	Johnny-Jump-Up	-	Larval food plant for San Francisco silverspot butterfly, presently occurs at Bayview Hill, McLaren Park, Tank Hill, Duncan-Castro, and Corona Heights
Woodwardia fimbriata	Giant Chain Fern	LS	Presently occurs at Glen Canyon
Zigadenus fremontii	Star Lily	LS	Presently occurs at Bernal Hill

Status Key:

Federal Status

FE Endangered. Species in danger of extinction throughout all or significant portion of its range.

FT Threatened. Species likely to become endangered within foreseeable future throughout all or a significant portion of its range.

FPE Proposed for listing as endangered.

FC Candidate for listing as endangered. Candidate information now available indicates that listing may be appropriate with supporting data currently on file.

FSC Species of Concern. Former Category 2 Candidate for listing as endangered.

FPD Proposed de-listing.

California State Status

SE Endangered. Species whose continued existence in California is jeopardized.

ST Threatened. Species, although not presently threatened with extinction, that is likely to become endangered in the foreseeable future.

SSC Species of Concern.

SFP State Fully Protected under Sections 3511 and 4700 of the Fish and Game Code.

Sens Considered a sensitive species by the California Department of Forestry.

California Native Plant Society

1A Plants presumed extinct in California

1B Plants that are rare or endangered in California and elsewhere.

2 Plants that are endangered in California, but more common elsewhere.

3 Plants about which more information is needed.

4 Plants of limited distribution (a watch list).

LS Locally Significant.

Golden Gate Audubon Society

SLC Species of Local Concern

Appendix Table C-1. Bird species found within the San Francisco Significant Natural Areas (Based on Cotter [1998] as annotated by Josiah Clark, 2002).

	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	Natural Area																																
						Southwest				Southeast					Central West						Central																	North
						BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
1	Red-throated Loon	*Gavia stellata*			w							X																									
2	Pacific Loon	*Gavia pacifica*			w							X																									
3	Common Loon	*Gavia immer*			w		x					X																		x							
4	Yellow-billed Loon	*Gavia adamsii*			v																																
5	Pied-billed Grebe	*Podilymbus podiceps*			r/m		*X	X*	X			x																									
6	Horned Grebe	*Podiceps auritus*			w		X					x																									
7	Red-necked Grebe	*Podiceps grisegena*			w							x																									
8	Eared Grebe	*Podiceps nigricollis*			w		X					X	x																								
9	Western Grebe	*Aechmophorus occidentalis*			w		X(*)		X			X																									
10	Clark's Grebe	*Aechmophorus clarkii*			w		X(*)		X			X																									
11	American White Pelican	*Pelecanus erythrorhynchos*			m																																
12	Brown Pelican	*Pelecanus occidentalis*			pb		x					X																		x							
13	Double-crested Cormorant	*Phalacrocorax auritus*			r/m		X	x	X			X	x																	x							
14	Brandt's Cormorant	*Phalacrocorax penicillatus*			r/m							X																									
15	Pelagic Cormorant	*Phalacrocorax pelagicus*			r/m							X																									
16	American Bittern	*Botaurus lentiginosus*		1	m		x		x																												
17	Least Bittern	*Ixobrychus exilis*			v																																
18	Great Blue Heron	*Ardea herodias*		3+	r/m		X*	X	X			X	X																	x							
19	Great Egret	*Ardea alba*		3+	r/m		X*	X	X			X	X																	x							
20	Snowy Egret	*Egretta thula*			r/m		X	x	X			X																									
21	Cattle Egret	*Bubulcus ibis*			v																																
22	Green Heron	*Butorides virescens*		2+	s		X	x*	x				x																								
23	Black-crowned Night-Heron	*Nycticorax nycticorax*		3+	r/m		X	x	x			X	X																	x							
24	White-faced Ibis	*Pegadis chihi*			v																																
25	Turkey Vulture	*Cathartes aura*			m/w		x	x	X	x	x	x	x		x	x	x	x	x				x				x	x			x		x	x	x	x	
26	Tundra Swan	*Cygnus columbianus*			w		?																														
27	Greater White-fronted Goose	*Anser albifrons*			w		x																								x						
28	Snow Goose	*Chen caerulescens*			w		x																								x						
29	Ross's Goose	*Chen rossii*			w		x																														
30	Brant	*Branta bernicla*			w																																
31	Canada Goose	*Branta canadensis*			w		x					X																		x							
32	Wood Duck	*Aix sponsa*		3	w		x																														
33	Green-winged Teal	*Anas crecca*		4	w		x					x																									
34	Mallard	*Anas platyrhynchos*			r/m		X	X	X			X	X		x															x					x		
35	Northern Pintail	*Anas acuta*		4	w		x					x	x																						x		
36	Blue-winged Teal	*Anas discors*			w		x																														
37	Cinnamon Teal	*Anas cyanoptera*		4	w		x																														
38	Northern Shoveler	*Anas clypeata*		4	w		x	x	X			x																									
39	Gadwall	*Anas strepera*		2+	w(*)		X	x	X			x	x																									
40	Eurasian Wigeon	*Anas penelope*			w							x																									
41	American Wigeon	*Anas americana*			w		X	x	X			X																									
42	Canvasback	*Aythya valisineria*		4	w		x	x				x	x																								
43	Redhead	*Aythya americana*			w																																
44	Ring-necked Duck	*Aythya collaris*		4	w		X																														
45	Tufted Duck	*Aythya fuligula*			v		x																														
46	Greater Scaup	*Aythya marila*			w		X					X																									
47	Lesser Scaup	*Aythya affinis*			w		X					X																									
48	Harlequin Duck	*Histrionicus histrionicus*			w																																
49	Oldsquaw	*Clangula hyemalis*			w							x																									
50	Black Scoter	*Melanitta nigra*			w							x																									
51	Surf Scoter	*Melanitta perspicillata*			w		x					X																									
52	White-winged Scoter	*Melanitta fusca*		4	w							x																									
53	Common Goldeneye	*Bucephala clangula*			w		x					X																									
54	Barrow's Goldeneye	*Bucephala islandica*			w							x																									
55	Bufflehead	*Bucephala albeola*			w		X					X	x																								
56	Hooded Merganser	*Lophodytes cucullatus*			w		x																														
57	Common Merganser	*Mergus merganser*			w		x																														
58	Red-breasted Merganser	*Mergus serrator*			w		x					X																									
59	Ruddy Duck	*Oxyura jamaicensis*			w(*)		X*	x	X			X	X															x			x						
60	Osprey	*Pandion haliaetus*			r/m		x					x	x																		x						
61	White-tailed Kite	*Elanus leucurus*			r/m		x					x																			x						
62	Bald Eagle	*Haliaeetus leucocephalus*			m		x			x																					x						
63	Northern Harrier	*Circus cyaneus*			m		x					x			x	x		x								x				x					x	
64	Sharp-shinned Hawk	*Accipiter striatus*		4	w	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		x	x	x	x	x	x	

Appendix Table C-1. Bird species found within the San Francisco Significant Natural Areas (Based on Cotter [1998] as annotated by Josiah Clark, 2002).

						Natural Area																												
						Southwest				Southeast					Central West						Central													North
	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
65	Cooper's Hawk	*Accipiter cooperii*		4	w(*)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x		x	x	x	x	x	
66	Northern Goshawk	*Accipiter gentilis*			v																										x				
67	Red-shouldered Hawk	*Buteo lineatus*			r/m	x	X	X	X*	X*		x	X*	X	X*	x	X	x	x	x	X	x	X		x		X*			X					
68	Broad-winged Hawk	*Buteo platypterus*			v		x	x		x																					x					
69	Swainson's Hawk	*Buteo swainsoni*			v					x																										
70	Red-tailed Hawk	*Buteo jamaicensis*			r/m	X	X	X	X*	X*		X	X*	X	X*	X	X	X	X	X	X	X	X*	X	X	X	X*	X*	X	X*	X	X	X*	X*	X
71	Ferruginous Hawk	*Buteo regalis*			m																										x				
72	Rough-legged Hawk	*Buteo lagopus*			m																														
73	Golden Eagle	*Aquila chrysaetos*			m					x																					x				
74	American Kestrel	*Falco sparverius*		2+	r/m	x	X	x	X	X	x	X	X*	x	x	x	x	x	x	x		X								X					x
75	Merlin	*Falco columbarius*			w		x	x		x	x	x	x		x	x	x	x	x	x	x	X		x		x	x			x	x		x	x	
76	Peregrine Falcon	*Falco peregrinus*		3+	r/m		x		x	x	x	x	x		x												x			x			x		
77	Prairie Falcon	*Falco mexicanus*			m																														
78	California Quail	*Callipepla californica*		1	r		x			x			e		e							X*					x			x					
79	Black Rail	*Laterallus jamaicensis*			X		e																												
80	Clapper Rail	*Rallus longirostris*			r																														
81	Virginia Rail	*Rallus limicola*		3	w		X		x																										
82	Sora	*Porzana carolina*		3	w		X																												
83	Common Moorhen	*Gallinula chloropus*			w		x																												
84	American Coot	*Fulica americana*			r/m		X*	X	X*			X	X																						
85	Black-bellied Plover	*Pluvialis squatarola*			w		x					X																							X
86	American Golden-Plover	*Pluvialis dominica*			w																														
87	Pacific Golden-Plover	*Pluvialis fulva*			w		x					X																							
88	Snowy Plover	*Charadrius alexandrinus*		1	w(*)		x																												?
89	Semipalmated Plover	*Charadrius semipalmatus*			w		x					X																							x
90	Killdeer	*Charadrius vociferus*			r/m		X	x	X	x		X*	x		x	x				0		x			x				x		x				X
91	Black Oystercatcher	*Haematopus bachmani*			r							X																							
92	Black-necked Stilt	*Himantopus mexicanus*			r/m							x																							
93	American Avocet	*Recurvirostra americana*			r/m							X																							
94	Greater Yellowlegs	*Tringa melanoleuca*			w		x		x			X																							
95	Lesser Yellowlegs	*Tringa flavipes*			m							x																				x			
96	Solitary Sandpiper	*Tringa solitaria*			v																														
97	Willet	*Catoptrophorus semipalmatus*			w							X																							
98	Wandering Tattler	*Heteroscelus incanus*			w							x																							
99	Spotted Sandpiper	*Actitis macularia*		3	w		x					X																							
100	Whimbrel	*Numenius phaeopus*			w							X																							
101	Long-billed Curlew	*Numenius americanus*		4	w		x					X																							
102	Marbled Godwit	*Limosa fedoa*		4	w							X																							
103	Ruddy Turnstone	*Arenaria interpres*			w							x																							
104	Black Turnstone	*Arenaria melanocephala*			w							x																							
105	Surfbird	*Aphriza virgata*			w							x																							
106	Red Knot	*Calidris canutus*			w							x																							
107	Sanderling	*Calidris alba*			w							X																							
108	Semipalmated Sandpiper	*Calidris pusilla*			v																														
109	Western Sandpiper	*Calidris mauri*			w		x					X																							
110	Least Sandpiper	*Calidris minutilla*			w		x					X																							
111	Baird's Sandpiper	*Calidris bairdii*			m		x																												
112	Pectoral Sandpiper	*Calidris melanotos*			m		x																												
113	Dunlin	*Calidris alpina*			w		x					x																							
114	Curlew Sandpiper	*Calidris ferruginea**			v		x																												
115	Short-billed Dowitcher	*Limnodromus griseus*			w		x					X																							
116	Long-billed Dowitcher	*Limnodromus scolopaceus*			w		x					x																							
117	Common Snipe	*Gallinago gallinago*		3	w		x	x	x			x	x																						
118	Wilson's Phalarope	*Phalaropus tricolor*			m																														
119	Red-necked Phalarope	*Phalaropus lobatus*			m		x					x																							
120	Red Phalarope	*Phalaropus fulicaria*			m		x					x																							
121	Pomarine Jaeger	*Stercorarius pomarinus*			m																														
122	Parasitic Jaeger	*Stercorarius parasiticus*			m		x					x																							
123	Franklin's Gull	*Larus pipixcan*			v																														
124	Bonaparte's Gull	*Larus philadelphia*			w		x					x	x																						
125	Heermann's Gull	*Larus heermanni*			pb		X					X	x																						x
126	Mew Gull	*Larus canus*			w		X		X			X	X																		x				
127	Ring-billed Gull	*Larus delawarensis*			w		X		x			X	X		x																				
128	California Gull	*Larus californicus*			w(*)		X		X			X	X		x																			x	x

Appendix Table C-1. Bird species found within the San Francisco Significant Natural Areas (Based on Cotter [1998] as annotated by Josiah Clark, 2002).

	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	Natural Area																														
						Southwest				Southeast					Central West						Central															North
						BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
129	Herring Gull	*Larus argentatus*			w		x					x	x																	x					
130	Thayer's Gull	*Larus thayeri*			w		x					X																		x					
131	Western Gull	*Larus occidentalis*			r/m		X		x			X	X		x															x				x	x
132	Glaucous-winged Gull	*Larus glaucescens*			w		X		x			X	X		x															x					
133	Glaucous Gull	*Larus hyperboreus*			v		x																							x					
134	Black-legged Kittiwake	*Rissa tridactyla*			w																															
135	Sabine's Gull	*Xema sabini*			m																															
136	Caspian Tern	*Sterna caspia*			s		X					X																		x					
137	Elegant Tern	*Sterna elegans*			pb							X																								
138	Common Tern	*Sterna hirundo*			m		x					x																								
139	Arctic Tern	*Sterna paradisaea*			m																															
140	Forster's Tern	*Sterna forsteri*			m		x																													
141	Least Tern	*Sterna antillarum*			v																															
142	Black Tern	*Chlidonias niger*			v																															
143	Common Murre	*Uria aalge*			r/m																															
144	Pigeon Guillemot	*Cepphus columba*			s																															
145	Marbled Murrelet	*Brachyramphus marmoratus*			w																															
146	Ancient Murrelet	*Synthliboramphus antiquus*			w																															
147	Cassin's Auklet	*Ptychoramphus aleuticus*			w																															
148	Rhinoceros Auklet	*Cerorhinca monocerata*			w																															
149	Tufted Puffin	*Fratercula cirrhata*			w																															
150	Horned Puffin	*Fratercula corniculata*			v																															
151	Rock Dove	*Columba livia*			r	X	X	X		x	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	x	X	X	X	X	X	X	X	X	X	X
152	Band-tailed Pigeon	*Columba fasciata*		3	r/m	x	x	x	X	x		x	x		X	x		x		x	x		x		x	x	X*	x	x	X*	X	x	x	X*	
153	White-winged Dove	*Zenaida asiatica*			v																															
154	Mourning Dove	*Zenaida macroura*			r/m	X*	X*	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
155	Greater Roadrunner	*Geococcyx californianus*			X																															
156	Barn Owl	*Tyto alba*		3+	r/m		x		x	x		x	x		x				x		x	x		x			x			x		x			
157	Western Screech-Owl	*Otus kennicottii*		1	r																						X*	X*			e					
158	Great Horned Owl	*Bubo virginianus*			r	X	X*	X*	X	X			X		x		x				x	X*	x				X*			X*		X	X		
159	Snowy Owl	*Nyctea scandiaca**			v																															
160	Burrowing Owl	*Athene cunicularia*		1	m/w																	x														
161	Long-eared Owl	*Asio otus*			m																															
162	Short-eared Owl	*Asio flammeus*			m							x																								
163	Northern Saw-whet Owl	*Aegolius funereus*			m/w					x																										
164	Lesser Nighthawk	*Chordeiles acutipennis*			v																															
165	Common Poorwill	*Phalaenoptilus nuttallii*			m																															
166	Black Swift	*Cypseloides niger*			m								x																	X					
167	Chimney Swift	*Chaetura pelagica*			v																															
168	Vaux's Swift	*Chaetura vauxi*			m		x	x	x	x		x	x										x				x			x					
169	White-throated Swift	*Aeronautes saxatalis*			r/m	x	x		x	x		x	x	x	x		x	x	x		x	x	x	x	X	X	X	X	X	X	x			x	
170	Black-chinned Hummingbird	*Archilochus alexandri*			v																															
171	Anna's Hummingbird	*Calypte anna*			r/m	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
172	Rufous Hummingbird	*Selasphorus rufus*			m		x			x			x		x		x	x			x	x					x	x		x			x	x	
173	Allen's Hummingbird	*Selasphorus sasin*			s	X*	X*	X*	X*	X*		X	X*	X	X*	X	X*	X*	x	x	X*	X*	X*	X	X*	X*	X*	X*	X	X	X*	X*	X	X*	X*	X
174	Belted Kingfisher	*Ceryle alcyon*		3	w		X	x				X	x																	x					
175	Lewis's Woodpecker	*Melanerpes lewis*			v																															
176	Acorn Woodpecker	*Melanerpes formicivorus*			m		x			x					x															x					
177	Gila Woodpecker	*Melanerpes uropygialis*			v																															
178	Yellow-bellied Sapsucker	*Sphyrapicus varius*			v																									x					
179	Red-naped Sapsucker	*Sphyrapicus nuchalis*			v																															
180	Red-breasted Sapsucker	*Sphyrapicus ruber*			w		x	x	X	x			x		x		x								x		x			x		x			
181	Williamson's Sapsucker	*Sphyrapicus thyroideus*			v																															
182	Nuttall's Woodpecker	*Picoides nuttallii*			m		x			x			x		x												x			x		x			
183	Downy Woodpecker	*Picoides pubescens*			r	X	X*	X*	X*	X*		x	X*	X	X*		X*				X	X*	X*	x	X*	X*	X*	X*	X	X*	X*	x	x	x	
184	Hairy Woodpecker	*Picoides villosus*			r		x	x	X	x			x		x															x	x*			x	
185	Northern Flicker	*Colaptes auratus*			w	X	X	X	X?	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
186	Olive-sided Flycatcher	*Contopus cooperi*			m/s		x*	x	x	x*	x		x*		x		x						X			x	x	X*	x		x*	x		x	x*	
187	Western Wood-Pewee	*Contopus sordidulus*			m	x	x	x	x	x	x		x		x		x						x			x		x	x		x	x		x	x	
188	Willow Flycatcher	*Empidonax traillii*			m		x			x			x		x												x			x	x			x	
189	Least Flycatcher	*Empidonax minimus*			v		x	x		x			x																	x					
190	Hammond's Flycatcher	*Empidonax hammondii*			m		x			x			x														X			x					
191	Dusky Flycatcher	*Empidonax oberholseri*			m		x			x			x														X			x					
192	Gray Flycatcher	*Empidonax wrightii*			v																															

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						Natural Area																												
						Southwest				Southeast					Central West						Central													North
	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
193	Pacific-slope Flycatcher	*Empidonax difficilis*			m(*)	x	x	x	X?	X	x	x	X	x	x		x			x	X	X	X	x	x	x	X	x		X	X	x	X	X	
194	Black Phoebe	*Sayornis nigricans*			r/m	X	X*	X*	X*	X	X	X*	X*	X	X*	X	X	X	X		X*	X*	X*	X	X	X	X*	X		X*	X	X	X	X	X
195	Say's Phoebe	*Sayornis saya*			w	x	x		X	X	X	X	X	x	x	x	x	x			x	x		x	x	x	x	x		X		x	x		
196	Dusky-capped Flycatcher	*Myiarchus tuberculifer*			v			x							x		x																	
197	Ash-throated Flycatcher	*Myiarchus cinerascens*			m		x	x		x			x									X	x							X	x		x	x	
198	Tropical Kingbird	*Tyrannus melancholicus*			v		x						x																	x					
199	Cassin's Kingbird	*Tyrannus vociferans*			v																														
200	Thick-billed Kingbird	*Tyrannus crassirostris*			v								x																						
201	Western Kingbird	*Tyrannus verticalis*			m		x	x		x	x	x	x		x	x			x			X		x			x			x				x	
202	Eastern Kingbird	*Tyrannus tyrannus*			v																														
203	Loggerhead Shrike	*Lanius ludovicianus*		1	m					x			x																	x					
204	Northern Shrike	*Lanius excubitor*			v																														
205	Blue-headed Vireo	*Vireo solitarius*			v					x																				x					
206	Cassin's Vireo	*Vireo cassinii*			m		x	x		x			x		x		x						x				x			x					
207	Plumbeous Vireo	*Vireo plumbeus*			v					X			X												x		X*	x			x					
208	Hutton's Vireo	*Vireo huttoni*		2+	r		x	x	X	X			X		X								x	x						x*	x*		x	x	
209	Warbling Vireo	*Vireo gilvus*			m	x	x	x	X?	X			X		X		X				x	x	x	x	x	x	X	x		X	X		x	x	
210	Philadelphia Vireo	*Vireo philadelphicus*			v																														
211	Red-eyed Vireo	*Vireo olivaceus*			v		x			x			x																						
212	Yellow-green Vireo	*Vireo flavoviridis*			v																														
213	Steller's Jay	*Cyanocitta stelleri*			r		x	x	X	x			x		X							X					X			X*	X*			x	
214	Western Scrub-Jay	*Aphelocoma californica*			r	X*	X*	X*	X	X*	x		X*	X	X*	X*	X*	X*	X	X*	X*	X*	X*	X	x	X	X*	X*	X	X*	X*	X*	X*	X*	X*	X
215	Clark's Nutcracker	*Nucifraga columbiana*			v																														
216	Yellow-billed Magpie	*Pica nuttalli*			v																														
217	American Crow	*Corvus brachyrhynchos*			r	X	X*	X*	X	X*	X	X	X*	X	X*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*	X	X	X*	X*	X
218	Common Raven	*Corvus corax*			r/m	X	X*	X*	X?	X*	X	X	X*	X	X*	X	X*	X	X	X	X	X	X*	X	X*	X*	X*	X*	X	X*	X*	X	X	X	X	X
219	Horned Lark	*Eremophila alpestris*			m																														
220	Purple Martin	*Progne subis*			m																														
221	Tree Swallow	*Tachycineta bicolor*		2+	s	x	x*	x	X?	x	x	x	x*		X	x	X	x	x	x	x	x	x	x	x	x	X*		x	X*	x*		x	x	x
222	Violet-green Swallow	*Tachycineta thalassina*		2+	s	x	x	x	X?	x	x	x	x		X	x	X	x	x	x	x	x	x	x	x	x	X		X	X	x	x	x	X	x
223	Northern Rough-winged Swallow	*Stelgidopteryx serripennis*			m		x	x	x	x	x	x	x		x		x				x		x	x			x			x				x	x
224	Bank Swallow	*Riparia riparia*		2	s		x																												
225	Barn Swallow	*Hirundo rustica*			s		X*	X*	X	X	X	X	X*	X	X*	X	X	X	X	X	X*	X*	X	X	X	X	X*	X	X	X*	X	X	X	X	x
226	Cliff Swallow	*Petrochelidon pyrrhonota*			s	X	x*	x	X?	X	X	X	X*		X	x	x	x	X	x	x	X	x	x	X	X	X	x	x	X*	x		x	x	x
227	Chestnut-backed Chickadee	*Poecile rufescens*		4	r	X*	X*	X*	X*	X*	X*	x	X*	X	X*	x	X*	x	x	x	X*	X*	X*	x	X*	X*	X*	X*	X	X*	X*	X	X*	X*		
228	Oak Titmouse	*Baeolophus inornatus*			X																														
229	Bushtit	*Psaltriparus minimus*		4	r	X*	X*	X*	X*	X*	X	X	X*	x	X*	x*	X*	X*	x	X	x*	x*	x*	X	X*	X*	X*	x*	x*	X*	X*	x	x	x		
230	Red-breasted Nuthatch	*Sitta canadensis*			w		x	x		x			x		x		x					x	x				x			x	x				
231	White-breasted Nuthatch	*Sitta carolinensis*			v																														
232	Pygmy Nuthatch	*Sitta pygmaea*			r	X*	X*	X*		X*			X*	x	X*	x	X*	x	x	x	x	X*	X*		X*	X*	X*	X*	X	X*	X*	x	X*	X*		
233	Brown Creeper	*Certhia americana*			r	x	X*	X*	X*	X*			X*		X*	x	X*			x		X*	X*		X	x	X*	X	x	X*	X*	x	x	X*		
234	Rock Wren	*Salpinctes obsoletus*			m																														
235	Bewick's Wren	*Thryomanes bewickii*		1+	r		x		X*	x*			x		x	x		x				x					x			x	X?			x	
236	House Wren	*Troglodytes aedon*			m		x	x		x			x		x		x				x	x			x		x			x	x	x		x	
237	Winter Wren	*Troglodytes troglodytes*			r/m	x	X*	X*	X*	X			X*	x	X*	x	X			x	x	X	x		X	X	X*	X	x	x	X*	X	x	X*	x	
238	Sedge Wren	*Cistothorus platensis*			v																														
239	Marsh Wren	*Cistothorus palustris*		3	r/m		X*	x	X*			x	x																						
240	Blue-gray Gnatcatcher	*Polioptila caerulea*			m		x						x		x												x			x					
241	Golden-crowned Kinglet	*Regulus satrapa*			w	x	X	X	x	x			X		X	x	X			x	x	X	X			x	X	x		X	X		x	X	
242	Ruby-crowned Kinglet	*Regulus calendula*			w	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
243	Western Bluebird	*Sialia mexicana*			X																									x					
244	Townsend's Solitaire	*Myadestes townsendi*			v																									x					
245	Swainson's Thrush	*Catharus ustulatus*		3	s	x	x*	x	X*	x			x		X	x	X	x		x			x		x	x	X?	x		X?	X		x	X?	
246	Hermit Thrush	*Catharus guttatus*			w	X	X	X	X	X	X	X	X	X	X	x	X	x		X	X	X	X	x	X	X	X	X	x	X	X	X	X	X	
247	Wood Thrush	*Hylocichla mustelina*			v																														
248	American Robin	*Turdus migratorius*			r/m	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X	X*	X*	X*	X*	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X
249	Varied Thrush	*Ixoreus naevius*			w		x	x	X						X		X										X	X		x	X				
250	Wrentit	*Chamaea fasciata*		1	X		x		X*	e			e																						
251	Northern Mockingbird	*Mimus polyglottos*			r/m	X	x	x		x*	x	X*	x*	X	X	x	x	x	X	X*	X*	X*	X*	X	X	X	X*	X	X	X	x	X	X	X*	X
252	Sage Thrasher	*Oreoscoptes montanus*			v																									x					
253	Brown Thrasher	*Toxostoma rufum*			v																														
254	European Starling	*Sturnus vulgaris*			r/m	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X	
255	American Pipit	*Anthus rubescens*			m/w		x					x																		x					
256	Cedar Waxwing	*Bombycilla cedrorum*			w	X	X	X	X	X	X	X	X	X	X	x	X	x	x	x	X	X	X	x	X	X	X	X	x	X	x	x	X	X		

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						Natural Area																												
						Southwest				Southeast					Central West						Central													North
	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
257	Golden-winged Warbler	*Vermivora chrysoptera*			v												x																	
258	Tennessee Warbler	*Vermivora peregrina*			v		x	x					x																	x				
259	Orange-crowned Warbler	*Vermivora celata*		2+	m/w(*)	x	X	X	X*	X	x	x	X?		X	x	x	x		x	X	x	x		X	x	X?	x		X	X	x	x	X	
260	Nashville Warbler	*Vermivora ruficapilla*			m		x	x		x			x		x							x				x	x	x		X					
261	Virginia's Warbler	*Vermivora virginiae*			v																									x					
262	Lucy's Warbler	*Vermivora luciae*			v		x																												
263	Northern Parula	*Parula americana*			v		x						x								X	X	X							x					
264	Yellow Warbler	*Dendroica petechia*		1+	m	x	X	X	X	X	X	X	X	x	X	x	X	x	x	x	X	x	x		X	X	X	X	x	X	X	x	X	X	
265	Chestnut-sided Warbler	*Dendroica pensylvanica*			v		x																				x			x					
266	Magnolia Warbler	*Dendroica magnolia*			v		x																							x					
267	Black-throated Blue Warbler	*Dendroica caerulescens*			v																									x					
268	Yellow-rumped Warbler	*Dendroica coronata*			w	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
269	Black-throated Gray Warbler	*Dendroica nigrescens*			m	x	X	X	x						x		x			x		x						x		x	x			x	
270	Townsend's Warbler	*Dendroica townsendi*			w	X	X	X	X	X	x	x	X	X	X	X	X	x	x	x	X	X	X	x	X	X	X	X	x	X	X	X	x	X	
271	Hermit Warbler	*Dendroica occidentalis*			m/w		X	X		x			x		x		x										x			x	x			x	
272	Black-throated Green Warbler	*Dendroica virens*			v		x						x																						
273	Blackburnian Warbler	*Dendroica fusca*			v		x															x													
274	Yellow-throated Warbler	*Dendroica dominica*			v																														
275	Prairie Warbler	*Dendroica discolor*			v		x															x													
276	Palm Warbler	*Dendroica palmarum*			v		x	x							x												x			x					
277	Blackpoll Warbler	*Dendroica striata*			v		x	x		x					x												x			x					
278	Black-and-white Warbler	*Mniotilta varia*			v		x						x																	x					
279	American Redstart	*Setophaga ruticilla*			v		x						x														x			x					
280	Prothonotary Warbler	*Protonotaria citrea*			v		x																												
281	Ovenbird	*Seiurus aurocapillus*			v																														
282	Northern Waterthrush	*Seiurus noveboracensis*			v		x																							x					
283	Kentucky Warbler	*Oporornis formosus*			v																														
284	MacGillivray's Warbler	*Oporornis tolmiei*			m		x	x					x		x												x			x					
285	Common Yellowthroat	*Geothlypis trichas*		3+	r/m		X*	x	X*	x		x	x														x			X					
286	Hooded Warbler	*Wilsonia citrina*			v																									x					
287	Wilson's Warbler	*Wilsonia pusilla*		2+	m/s	x	X*	X*	X*	X	X		X?		X	x	X	x		x	x	X	X		x	x	X?	x	x	X*	X		x	X	
288	Canada Warbler	*Wilsonia canadensis*			v																														
289	Yellow-breasted Chat	*Icteria virens*			v		x																												
290	Summer Tanager	*Piranga rubra*			v		x	x					x																						
291	Western Tanager	*Piranga ludoviciana*			m		X	X		X	x		x		X	x	X	x		x	X	X	X		x	x	X	x		X	X	x	x	X	
292	Green-tailed Towhee	*Pipilo chlorurus*			v																														
293	Spotted Towhee	*Pipilo maculatus*		1+	r/m		x*			x			x		x	x		x				x					x			x	x*			x	x
294	California Towhee	*Pipilo crissalis*			r	X	X*	X*	X*	X	x	x	X	X	X*	X*	X*	X*	x	X*	X*	X*	X*	X	X	X*	X*	X	X	X*	x*		X*	X*	X	
295	American Tree Sparrow	*Spizella arborea*			v																														
296	Chipping Sparrow	*Spizella passerina*			m		x			x			x		x							x					x			x	x		x	x	
297	Clay-colored Sparrow	*Spizella pallida*			v		x						x		x															x					
298	Brewer's Sparrow	*Spizella breweri*			v																									x					
299	Vesper Sparrow	*Pooecetes gramineus*			v																														
300	Lark Sparrow	*Chondestes grammacus*			m		x			x			x														x			x	x			x	
301	Lark Bunting	*Calamospiza melanocorys*			v																														
302	Savannah Sparrow	*Passerculus sandwichensis*		2+	r/m		X		x	x	x	x	x					x		x		X	x				x			x			x	X
303	Grasshopper Sparrow	*Ammodramus savannarum*			v		x																												
304	Fox Sparrow	*Passerella iliaca*			w	x	X	X	X	X	x		X	x	X	X	X	x		x	x	X	X		X	X	X	X		X	X	x	X	X	x
305	Song Sparrow	*Melospiza melodia*		2+	r		X*	X*	X*	x		x	X*									x					X*			X*	x*			X*	x
306	Lincoln's Sparrow	*Melospiza lincolnii*			w		X	X	X	X	x	X	X		X	x	X	x		x	x	x	x			x	X	x		X	x		x	x	
307	Swamp Sparrow	*Melospiza georgiana*			v		x						x																	x					
308	White-throated Sparrow	*Zonotrichia albicollis*			w		x	x		x			x		x		x					X					x			x	x				
309	Harris's Sparrow	*Zonotrichia querula*			v																														
310	White-crowned Sparrow	*Zonotrichia leucophrys*		2+	r/w	X	X*	X	X*	X	X	X	X*	X	X	X*	X	X*	X	X	X	X*	X*	X	X	X	X	X*	X	X*	X*	X	X	X	X	X
311	Golden-crowned Sparrow	*Zonotrichia atricapilla*			w	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312	Dark-eyed Junco	*Junco hyemalis*			r/m	X	X*	X*	X*	X*	x	x	X*	x	X*	X	X*	X	X	X*	X	X*	X*	x		x	X	X*	X	X*	X*	x	X*	X*	X	X
313	Chestnut-collared Longspur	*Calcarius ornatus*			v																									x					
314	Snow Bunting	*Plectrophenax nivalis*			v																														
315	Rose-breasted Grosbeak	*Pheucticus ludovicianus*			v		x			x			x									x					x			x					
316	Black-headed Grosbeak	*Pheucticus melanocephalus*		3+	m(*)		x	x	X?	X			X		x	x	x			x	x	x					x			X*	X		x	X	
317	Blue Grosbeak	*Guiraca caerulea*			v																														
318	Lazuli Bunting	*Passerina amoena*			m(*)		x	x		x	x		x		x												x*			x				x	
319	Indigo Bunting	*Passerina cyanea*			v		x			x			x																	x					
320	Bobolink	*Dolichonyx oryzivorus*			v																														

Appendix Table C-1. Bird species found within the San Francisco Significant Natural Areas (Based on Cotter [1998] as annotated by Josiah Clark, 2002).

						Natural Area																												
						Southwest				Southeast					Central West						Central													North
	Common Name	*Species Name*	N/I	Sensitive	Resident/ Migrant	BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
321	Red-winged Blackbird	*Agelaius phoeniceus*			r/m	x	X*	X*	X*	x	x	X	x		X					x	x	x	x	x		x	X	X	X	X	x	x	x	X	
322	Tricolored Blackbird	*Agelaius tricolor*			m		x																											
323	Western Meadowlark	*Sturnella neglecta*			w	x	x	x	X	X	X	X	X	x	x	X	x	X	x	x	X	X				x	X		x	X	x		x	x	
324	Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*			v		x																											
325	Brewer's Blackbird	*Euphagus cyanocephalus*			r/m	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X	X*	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
326	Great-tailed Grackle	*Quiscalus mexicanus*			v																													
327	Brown-headed Cowbird	*Molothrus ater*			r/m	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
328	Orchard Oriole	*Icterus spurius*			v		x																							x				
329	Hooded Oriole	*Icterus cucullatus*			s		X*	x		x			X		X	x	x			x		x	x				X*			X	x			x	
330	Baltimore Oriole	*Icterus galbula*			v		x																											
331	Bullock's Oriole	*Icterus bullockii*			m(*)		x	x		X			X		x	x	x					x	x				X			X	x		x	x	
332	Scott's Oriole	*Icterus parisorum*			v																										x			
333	Purple Finch	*Carpodacus purpureus*			r/m	x	X*	X	X	X	x		X		X	x	X	x		x		X	X		x	x	X*	x		X*	X*		x	X*	
334	Cassin's Finch	*Carpodacus cassinii*			v																									x				
335	House Finch	*Carpodacus mexicanus*			r/m	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
336	Red Crossbill	*Loxia curvirostra*		4	w/m(*)		x						x		x		x					X								x	x			x	
337	Pine Siskin	*Carduelis pinus*			r/m	x	x*	x*	X	X			X*		X	X	X	x	x	X	x	X	X*	x							X*	X*			X*	X
338	Lesser Goldfinch	*Carduelis psaltria*			r/m	X	x*	x*	X	X*	x	x	X*	x	x*	x*	x	x	x	x	X*	X*	X	x	x	X	X*	x	x	X*	x			X*	X
339	Lawrence's Goldfinch	*Carduelis lawrencei*			v																									x				
340	American Goldfinch	*Carduelis tristis*			r/m	x	X*	x	X*	X*	x	x	X*		x	x	x	x		x	x	x	x	x		x	X	x	x	X	x			X	X
341	Evening Grosbeak	*Coccothraustes vespertinus*			v																													
342	House Sparrow	*Passer domesticus*			r/m	X*	X*	X*	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X

Notes

1	Once common, now very rare
2	Recently common but notably declining
3	Appears to be declining in recent years
4	Potentially at risk or declining
+	Rare breeder in San Francisco
X	Means expected at appropriate time of year and in appropriate habitat. This includes migrants.
x	Means recorded but not to be expected every visit or very rare- like recorded just once.
*	Indicates that the species breeds in the area.
r	Species that is resident with at least part of the population non-migratory and breeding in area
w	Species that regularly spends the winter in the area but migrates elsewhere to breed
m	Species seen during migration but neither breeds nor spends the winter
s	Species that migrate to the area to breed in the spring and summer months
v	Species that is very rare or a vagrant in the area and is far out of range or expected habitat
pb	Species regularly present post breeding as individuals disperse north to avoid competition for food around breeding colonies
(*)	Indicates that a few breeding records exist for this species in the area
r/m	Species that is primarily a resident but migrants of the species regularly pass through
m/w	Species that is primarily a migrant but winters with some regularity
m/s	Species that is primarily a migrant but some individuals do attempt to breed in the area

Note that birds that are indicated as W or S are also migrants during spring and fall.
Migrants, vagrants and spring breeding birds may occasionally overwinter.

This list was created using the official bird list for the City of San Francisco (Cotter, 1998) as annotated by Josiah Clark, SFRPD 2002.

Southwest
BP = Brooks Park, Lakeview/Ashton Mini Park
LM = Lake Merced
PL = Pine Lake
SP = Sharp Park

Southeast
VP = Bayview Park
BH = Bernal Hill
IB = India Basin Shoreline Park
MP = McLaren Park
PP = Palou/Phelps

Central West
BV = Buena Vista
GV = Grandview Park
GH = Golden Gate Heights
HH = Hawk Hill
RO = Rock Outcrop

Central
FI = 15th Avenue Steps
BG = Billy Goat Hill
CH = Corona Heights
DP = Dorothy Erskine Park
DC = Duncan-Castro
EM = Edgehill Mountain
FP = Fairmount Park
GC = Glen Canyon Park
IG = Interion Green Belt
KH = Kite Hill
MD = Mount Davidson
OW = Golden Gate Park (Oak Woodland and Strawberry Hill)
OH = O'Shaughnessy Hollow
TK = Tank Hill
TP = Twin Peaks

North
BA = Balboa Natural Area

Appendix Table C-2. Animal species found within the San Francisco Significant Natural Areas.

					Natural Area																															
					Southwest				Southeast					Central West						Central																North
					BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
	Common Name	***Species Name***	**N/I**	**Sensitive**																																
Frogs																																				
1	California red-legged frog	*Rana auroroa draytonii*	N	Yes		X		X				X														X									
2	Bullfrog	*Rana catesbeiana*	I			X						X																							
3	Pacific chorus frog	*Pseudacris (Hylla) regilla*	N			X						X																							
4	Western toad	*Bufo boreas*	N									X														X									
Turtles																																				
1	Western pond turtle	*Clemmys marmorata*	N	Yes		X	X																													
2	Spiny soft-shell turtle	*Apalone spinifera*	I			X	X																													
3	Red-ear slider	*Trachemys scripta*	I			X	X					X																								
Salamanders																																				
1	Arboreal salamander	*Aneides lugubris*	N		X				X			X														X										
2	California slender salamander	*Batrachoseps attenuatus*	N			X	X	X	X			X							X							X			X	X					
3	Yellow-eyed salamander	*Ensatina eschscholtzii*	N						X			X																								
4	Coast range newt	*Taricha torosa*	N									X															X									
Snakes																																				
1	Pacific ring-neck snake	*Diadophis punctatus*	N						X			X																								
2	Pacific gopher snake	*Pituophis melanoleucus*	N			X			X			X														X									
3	Pacific rubber boa	*Charina bottae bottae*	N									X														X									
4	Western yellow-bellied racer	*Coluber constrictor mormon*	N									X														X									
5	Western terrestrial garter snake	*Thamnophis elegans*	N																							X						X			
6	Coast gartner snake	*Thamnophis elegans terrestris*	N									X																								
7	San Francisco gartner snake	*Thamnophis sirtalis tetrataenia*	N	Yes				?																												
8	Gartner snake	*Thamnophis spp.*	N			X																														
9	California king snake	*Lampropeltis getulus californae*	N									X																								
Lizards																																				
1	San Francisco alligator lizard	*Elgaria coerulea coerulea*	N			X	X					X						X								X									
2	California alligator lizard	*Elgaria multicarinata multicarinata*	N						X										X										X						
3	Skilton skink	*Eumeces skiltonianus*	N			X						X																							
4	Western fence lizard	*Sceloporus occidentalis*	N			X			X			X																	X						
5	Northern alligator lizard	*Gerrhonotus multicarniatus*	N									X																								
6	Unknown lizard species																																			X
Mammals																																				
1	Broad-footed mole	*Scapanus latimanus*	N									X														X	X								
2	California meadow vole	*Microtus californicus*	N			X		X				X														X	X								X
3	House mouse	*Mus musculus*	I			X						?														X									X
4	Harvest mouse	*Reithrondontomys megalotis*	N			X			X			?																							
5	Pinion mouse	*Peromyscus truei*	N						X																										
6	Muskrat	*Ondatra zibethic*	I			X																													
7	Shrew	*Sorex spp*	N			X																													
8	Ornate shrew	*Sorex ornatus*	N																							X									
9	Trowbridge shrew	*Sorex trowbridgii*	N									?																							
10	Bat		N			X																				X									
11	Long-tailed weasel	*Mustela frenata*	N			X						?																							
12	Gray fox	*Urocyon cinereoargenteus*	N			X																													
13	Virginia oppossum	*Didelphis virginiana*	N									?														X									
14	Brush rabbit	*Sylvilagus bachmani*	N																							X									
15	California ground squirrel	*Spermophilus beecheyi*	N			X						X														X									
16	Eastern grey squirrel	*Sciurus carolinensis*	I									?															X								
17	Pocket gopher	*Thomomys bottae*	N				X		X	X		X									X					X		X				X			
18	Deer mouse	*Peromyscus maniculatus*	N									?														X									
19	Norway rat	*Rattus norvegicus*	I									?														X									
20	Black rat	*Rattus rattus*	I									?																							
21	Raccoon	*Procyon lotor*	N									X														X									
22	Striped skunk	*Mephitis mephitis*	N																							X									
23	Domestic cat	*Felis cattus*	N																							X									
24	Beechy ground squirrel	*Sparmophilus beecheyi*	N									X														X									
25	Palid bat	*Antrozous pallidus*	N																							?									
26	Townsend's big-eared bat	*Plecotus townsendii townsendii*	N																							?									
27	California mastif bat	*Eumops perotis californicus*	N																							?									
28	Red bat	*Lasiurus borealis*	N									?																							
29	Hoary bat	*Lasiurus cinereus*	N									?																							
30	Big brown bat	*Eptesicus fuscus*	N									?																							

Appendix Table C-2. Animal species found within the San Francisco Significant Natural Areas.

					Natural Area																														
					Southwest				Southeast					Central West						Central															North	
					BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN	
	Common Name	*Species Name*	N/I	Sensitive																															
Fish																																			
1	Goldfish	*Carassius auratus*	I			X	X																												
2	Common Carp	*Cyprinus carpio*	I			X	X																												
3	Hitch	*Lavinia exilicauda*	N			X																													
4	Hardhead	*Mylopharadon conocephalus*	N			X																													
5	Sacramento Blackfish	*Orthodon microlepidotus*	N			X																													
6	Sacramento Sucker	*Catostomus occidentalis*	N			X																													
7	White Catfish	*Ameiurus catus*	I			X																													
8	Brown Bullhead	*Ameiurus nebulosus*	N			X																													
9	Channel Catfish	*Ictalurus punctatus*	I			X																													
10	Muskellunge	*Esox masquinongy*	I			X																													
11	Coho Salmon	*Oncorhynchus kisutch*	N			X																													
12	Rainbow Trout	*Onchorynchus mykiss*	N/I			X																													
13	Sockeye Salmon (Kokanee)	*Oncorhynchus nerka*	I			X																													
14	Brook Trout	*Salvelinus fontinalis*	I			X																													
15	western mosquitofish	*Gambusia affinis*	I				X																												
16	Threespine Stickleback	*Gasterosteus aculeatus*	N			X	X																												
17	Prickly Sculpin	*Cottus asper*	N			X																													
18	Sacramento Perch	*Archoplites interruptus*	N			X																													
19	Green Sunfish	*Lepomis cyanellus*	I			X																													
20	Bluegill	*Lepomis macrochirus*	I			X																													
21	Largemouth Bass	*Micropterus salmoides*	I			X																													
22	Black Crappie	*Pomoxis nigromaculatus*	I			X																													
23	Tule Perch	*Hyserocarpus traski*	I			X																													
Crusteceans																																			
1	Crayfish		N				X																												
Insects																																			
1	Cabbage butterfly	*Pieris rapae*										X														X									
2	West Coast lady	*Vanessa annabella*										X														X									
3	Mission blue butterfly	*Icaricia icarioides missionensis*										X																							
4	California ringlet	*Coenonympha tullia californica*																								X									
5	Monarch butterfly	*Danaus plexippus*																								X			X						
6	Mourning cloak	*Nymphalis antiopa*																								X									
7	Satyr anglewing	*Polygonia satyrus*																								X									
8	Red admiral	*Vanessa atalanta*																								X									
9	Painted lady	*Vanessa cardui*																								X									
10	American painted lady	*Vanessa virginiensis*																								X									
11	Buckeye	*Junonia coenia*																								X									
12	Field crescent	*Phyciodes pratensis*																								X									
13	Chalcedon checkerspot	*Euphydryes chalcedon*																								X									
14	Anise swallowtail	*Papilio zlicaon*																								X									
15	Western tiger swallowtail	*Papilio rutulus*																								X									
16	Swallowtail spp.																															X			
17	Large marble	*Euchloe ausonides*																								X									
18	Orange sulfur	*Colias eurytheme*																								X									
19	Common hairstreak	*Colias philodice*																								X									
20	Acmon blue	*Plebeius acmon*																								X									
21	Echo blue	*Celastrina argiolus echo*																								X									
22	Umber skipper	*Poanes melane*																								X									
23	Woodland skipper	*Ochlodes sylvanoides*																								X									
24	Fiery skipper	*Hylephila phyleus*																								X									
25	Sandhill skipper	*Polites sabuleti*																								X									
26	Common checkered skipper	*Pyrgus communis*																								X									
27	Yellowtail	*Chaetodon xanthurus*																											X						
28	San Francisco Forktail damselfly	*Ischnura gemina*		Yes								X														X									
29	Western forktail	*Ischnura perparva*										X																							
30	Pacific forktail	*Ischnura cervula*										X																							
31	Swift forktail	*Ischnura erratic*										X																							
32	Vivid dancer	*Argia vivida*										X														X									
33	Cardinal meadowhawk	*Sympetrum illiotum*										X																							
34	Wingless cranefly	*Tipula vestigipennis*																								X									
35	Camel cricket	*Pristoceuthophilus sp.*																								X									
36	Hoverfly	*Volucella bombylans*																								X									
37	Robberfly	*Laphria sp.*																								X									
38	Pyralid moth	*Uresiphita reversalis*																								X									

Appendix Table C-2. Animal species found within the San Francisco Significant Natural Areas.

					Natural Area																											
					Southwest				Southeast					Central West						Central													North
					BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BN
	Common Name	***Species Name***	**N/I**	**Sensitive**																													
39	Banana slug	*Ariolimax columbianus*					X																							X			
40	Nymph	*Malenka sp.*																							X								
41	Stonefly	*Amphinemura sp.*																							X								
42	Waterbug	*Microvelia sp.*																							X								
43	Water strider	*Gerris sp.*																							X								
44	Cranefly	*Holorusia sp.*																							X								
45	Meniscus midges	*Dixella sp.*																							X								
46	Mosquito	*Culiseta sp.*																							X								
47	Mosquito	*Culex sp.*																							X								
48	Caddisfly	*Parapsyche sp.*																							X								
49	Caddisfly	*Lepidostoma sp.*																							X								
50	Bumblebee	*Bombus californicus*			X				X	X	X											X				X						X		
51	Bumblebee	*Bombus caligrnosus*																																
52	Bumblebee	*Bombus melanopygus*			X		X		X	X	X	X		X		X	X	X				X		X	X		X			X		X		
53	Bumblebee	*Bombus sitkensis*					X							X		X	X								X		X							
54	Bumblebee	*Bombus vosnesenskii*			X		X		X	X	X	X		X		X	X	X			X		X	X	X		X			X		X	X	

Notes

1 An "X" indicates presence and a "?" was used where it was uncertain if a species actually occurred within one of the Natural Areas.
2 "N/I" indicates if a species is native to San Francisco or if it has been introduced.
3 Information collected from the following sources: DPW 2001; Singer 2000, Paquin and Reading 2000, M. Vasey, SFSU, 1999, Personal Communication, EIP 2000, McFrederick 2004, and communications with SFRPD Staff.

Southwest
BP = Brooks Park, Lakeview/Ashton Mini Park
LM = Lake Merced
PL = Pine Lake
SP = Sharp Park

Southeast
VP = Bayview Park
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IB = India Basin Shoreline Park
MP = McLaren Park
PP = Palou/Phelps

Central West
BV = Buena Vista
GV = Grandview Park
GH = Golden Gate Heights
HH = Hawk Hill
RO = Rock Outcrop

Central
FI = 15th Avenue Steps
BG = Billy Goat Hill
CH = Corona Heights
DP = Dorothy Erskine Park
DC = Duncan-Castro
EM = Edgehill Mountain
FP = Fairmount Park
GC = Glen Canyon Park
IG = Interion Green Belt
KH = Kite Hill
MD = Mount Davidson
OW = Golden Gate Park (Oak Woodland, Strawberry Hill, and Whiskey Hill)
OH = O'Shaughnessy Hollow
TK = Tank Hill
TP = Twin Peaks

North
BA = Balboa Natural Area

Appendix Table C-3. Plant species found within the San Francisco Significant Natural Areas.

				Natural Area																												
				Southwest				Southeast					Central West						Central														North
				BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BA
			Number of Species	60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																													
1	*Abronia latifolia*	Yellow Sand Verbena	Yes				X																									
2	*Acacia longifolia*	Golden Wattle, Sydney Golden	No				X				X		X		X									X	X	X			X		X		
3	*Acacia mearnsii*	Black Wattle	No								X																						
4	*Acacia melanoxylon*	Blackwood Acacia	No		X								X		X													X					
5	*Acacia verticillata*	Star Acacia, Prickly Moses	No		X								X																				
6	*Acaena pinnatifida var. californica*	Acaena	Yes	X			X	X	X		X	X		X	X					X		X			X			X		X		X	
7	*Acanthomintha lanceolata*	Santa Clara Thornmint	No				X																										
8	*Acer macrophyllum*	Big-leaf Maple	Yes										X																				
9	*Acer negundo var. californica*	California Box Elder	Yes			X											X																
10	*Acer sp.*		No										X																				
11	*Achillea millefolium*	Yarrow	Yes		X		X	X	X		X	X		X	X	X	X	X	X	X	X	X			X		X	X		X	X	X	
12	*Achyrachaena mollis*	Blow-wives	Yes												X																		
13	*Actaea rubra*	Baneberry	Yes	X																													
14	*Adiantum jordanii*	California Maiden-hair Fern	Yes				X																										
15	*Aesculus califonica*	California Buckeye	Yes			X	X		X		X	X								X	X				X				X		X		
16	*Agapanthes africannus*	Agapanthes	No																										X				
17	*Agapanthes orientalis*	Agapanthes	No																X														
18	*Agapanthes sp.*	Agapanthes	No																						X								
19	*Agoseris apargioides var. apargioides*	Coast Dandelion	Yes	X				X	X		X					X									X			X					
20	*Agoseris grandiflora*	California Dandelion	Yes					X								X				X					X								
21	*Agoseris sp.*		No												X																		
22	*Agrostis exarata*	Bent Grass	Yes				X	X																									
23	*Agrostis hallii*	Hall's Bent Grass	Yes						X																							X	
24	*Agrostis pallens*	Leafy bent Grass	Yes					X																									
25	*Agrostis sp.*		No				X	X			X									X					X					X		X	
26	*Aira caryophyllea*	European hairgrass, Shiver Grass	No	X	X			X	X		X	X					X			X					X		X			X	X		
27	*Albizia lophantha*	Plume Acacia, Stink Bean	No		X				X																								
28	*Alchemilla occidentalis*	Alchelmilla	No									X													X								
29	*Allium dichlamydeum*	Coast Red Onion	Yes	X			X	X	X		X								X	X	X	X			X			X		X	X	X	
30	*Allium triquetrum*	Wild onion, White-flowered Onion	No					X			X														X				X		X	X	
31	*Alnus rhombifolia*	White Alder	No		X																				X								
32	*Alnus rubra*	Red Alder	Yes			X																											
33	*Alopecurus geniculatus*	Water Foxtail	No								X																						
34	*Alopecurus saccatus*		No																						X								
35	*Amaryllis belladonna*	Naked Lady	No						X																X								
36	*Ambrosia chamissonis*	Beach Bur, Silver Beachweed	Yes				X																										
37	*Amelanchier pallida*	Sevice Berry	Yes																									X		X			
38	*Amelanchier utahensis*	Utah Service Berry	No																						X							X	
39	*Amsinckia intermedia*	Fiddleneck, Rancher's Fireweed	Yes					X			X																						
40	*Anagallis arvensis*	Scarlet Pimpernel	No				X	X	X		X	X								X					X					X			
41	*Anaphalis margaritacea*	Pearly Everlasting	Yes	X			X	X	X											X					X		X	X		X		X	
42	*Angelica hendersonii*	Coast Angelica	Yes	X			X	X						X		X	X								X			X		X		X	
43	*Anthriscus caucalis*	Bur-Chervil	No					X			X							X							X				X			X	
44	*Aphanes mollis*		No								X																						
45	*Aphanes occidentalis*	Western Lady's Mantle	Yes					X	X		X			X																	X	X	
46	*Aptenia cordifolia*	Baby Sun Rose, Dew Plant	No								X																						
47	*Aquilegia formosa*	Columbine	Yes																						X					X			
48	*Arabis blepharophylla*	Coast Rock Cress	Yes						X													X			X			X		X		X	
49	*Arabis glabra*	Tower mustard	Yes		X			X																									
50	*Arbutus menziesii*	Pacific Madrone	Yes		X	X	X		X				X																			X	
51	*Arctotheca calendula*	Capeweed	No								X																					X	
52	*Aristolochia californica*	Calif. Pipe Vine, Dutchman's Pipe	Yes		X																								X				
53	*Armeria maritima ssp. californica*	Thrift, Sea-pink	Yes	X										X	X	X	X											X					
54	*Artemisia californica*	California Sagebrush	Yes		X		X	X			X			X						X			X		X			X	X	X	X	X	
55	*Artemisia douglasiana*	Mugwort, California Mugwort	Yes				X	X			X									X					X		X	X		X		X	
56	*Artemisia pycnocephala*	Beach or coastal Sagewort	Yes											X	X	X	X																
57	*Artemisia sp.*		No										X																				
58	*Aster chilensis*	California Aster	Yes	X		X	X	X	X		X									X					X		X	X		X		X	
59	*Aster radulinus*	Aster, Rough-leaved Aster	Yes					X																									
60	*Athyrium filix-femina var. cyclosorum*	Lady Fern	Yes			X	X																		X				X				
61	*Atriplex triangularis*	Spearscale	Yes				X																										
62	*Avena barbata*	Slender Wild Oat	No	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X			X	X		X	X			X	X	
63	*Avena fatua*	Wild Oat	No				X	X	X		X			X		X	X		X	X					X		X					X	
64	*Avena sp.*	Wild Oat	No																											X			
65	*Azolla filiculoides*	American Water Fern	Yes				X																										

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			Number of Species	60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																														
66	*Baccharis douglasii*	Marsh Baccharis	Yes					X																									
67	*Baccharis pilularis*	Coyote Brush	Yes	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X		X		X	X	X	X	X	X	
68	*Baccharis pilularis ssp. consanguinea*	Coyote Brush	Yes		X																												
69	*Barbarea orthoceras*	American Winter Cress	Yes					X																	X								
70	*Bellis perennis*	English Daisy	No								X														X							X	
71	*Berberis pinnata*	Coast barberry, Shiny-leaf Mahonia	Yes				X	X																	X			X		X	X	X	
72	*Brachypodium distachyon*	Purple False Brome	No				X																										
73	*Brassica nigra*	Black Mustard	No					X	X		X																						
74	*Brassica rapa*	Field Mustard, Turnip	No					X	X		X														X							X	
75	*Briza maxima*	Rattlesnake Grass, Big Quaking Grass	No		X			X	X		X					X	X			X					X		X	X		X	X	X	
76	*Briza minor*	Little Rattlesnake (Quaking) Grass	No		X		X	X			X														X					X			
77	*Brodiaea elegans*	Harvest Brodiaea	Yes									X													X								
78	*Brodiaea sp.*	Brodiaea sp.	No	X							X	X																					
79	*Brodiaea terrestris*	Dwarf Brodiaea, Earth Brodiaea	Yes					X	X		X														X			X		X	X	X	
80	*Bromus carinatus ssp. carinatus*	California Brome, Mountain Brome	Yes		X	X		X	X		X	X			X		X		X	X	X		X		X	X	X	X	X	X	X	
81	*Bromus carinatus ssp. maritimus*	California Brome, Seaside Brome	Yes	X										X	X	X	X	X															
82	*Bromus catharticus*	Rescue Grass	No																													X	
83	*Bromus diandrus*	Ripgut Brome	No	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X					X		X	X	X	X	X	
84	*Bromus hordeaceus*	Soft Chess	No		X			X	X		X	X								X	X					X		X	X		X	X	
85	*Bromus madritensis ssp. rubens*	Foxtail Chess	No		X			X																								X	
86	*Buddeja davidii*		No																						X								
87	*Cakile maritima*	Sea Rocket	No				X																										
88	*Calamagrostis nutkaensis*	Pacific Reed Grass	Yes				X				X																	X		X		X	
89	*Calandrinia ciliata*	Red Maids	Yes												X																	X	
90	*Calocedrus decurrens*	Incense Cedar	No																	X													
91	*Calochortus albus*	White Globe Lily, Fairy Lantern	Yes				X																										
92	*Calycanthus occidentalis*	Spice Bush	No																						X								
93	*Calystegia occidentalis*	Western or Bush Morning-glory	Yes					X	X		X														X							X	
94	*Calystegia purpurata ssp. purpurata*	Morning-glory	Yes				X	X	X											X	X		X		X		X	X		X		X	
95	*Calystegia subacaulis*	Hill Morning-glory	Yes					X	X		X									X					X		X			X		X	
96	*Camissonia cheiranthifolia*	Beach Evening Primrose	Yes		X		X							X		X																	
97	*Camissonia ovata*	Sun Cup	Yes					X	X		X									X					X			X		X			
98	*Capsella bursa-pastoris*	Shepherd's Purse	No						X																X							X	
99	*Cardamine californica var. integrifolia*	Milk maids, California Toothwort	Yes					X												X	X				X			X		X			
100	*Cardamine oligosperma*	Bitter-cress	Yes					X	X																X					X		X	
101	*Cardamine sp.*		No		X																												
102	*Cardionema ramosissimum*	Sandmat	Yes		X			X			X				X	X				X					X			X		X		X	
103	*Carduus pycnocephalus*	Italian Thistle	No				X	X	X		X								X						X					X	X	X	
104	*Carex barbarae*	Santa Barbara Sedge	Yes																						X								
105	*Carex brevicaulis*	Short-stemmed Sedge	Yes					X	X					X	X					X													
106	*Carex sp.*	Sedge	No				X				X																						
107	*Carpobrotus edulis*	Iceplant, Hottentot Fig	No		X	X	X	X	X					X	X	X	X								X							X	
108	*Castilleja densiflora*	Owl's Clover	Yes																	X													
109	*Castilleja exserta ssp. exserta*	Purple Owl's Clover	Yes																						X			X		X			
110	*Castilleja latifolia*	Seaside Paintbrush	Yes													X									X					X			
111	*Castilleja sp.*	Indian Paintbrush	No																													X	
112	*Castilleja wightii*	Beach Paintbrush	Yes				X									X																	
113	*Ceanothus "species nova"*		No										X																				
114	*Ceanothus thyrsiflorus*	Coast Blue Blossom, California Lilac	Yes								X								X	X									X			X	
115	*Centaurea solstitialis*	Yellow Star-thistle, Barnaby's Thistle	No				X		X																								
116	*Centaurium muehlenbergii*	Monterey Centaury	Yes																						X								
117	*Centranthus ruber*	Red Valerian	No					X	X		X	X							X	X					X					X		X	
118	*Cerastium arvense*	Field or Meadow Chickweed	Yes								X			X			X										X	X				X	
119	*Cerastium glomeratum*	Mouse-Ear Chickweed	No		X			X	X			X					X								X						X	X	
120	*Chamaesyce maculata*	spotted Spurge	No																						X								
121	*Chamomilla suaveolens*	Pineapple Weed	No					X	X																X								
122	*Chasmanthe floribunda*	Chasmanthe	No						X																								
123	*Chenopodium album*	Pigweed, Lamb's Quarters	No				X																		X								
124	*Chenopodium berlanderi*	Berlandier's or Pitseed Goosefoot	Yes						X																								
125	*Chenopodium multifidum*	Cutleaf Goosefoot	No				X																										
126	*Chenopodium murale*	Nettle-leaf Goosefoot	No																						X								
127	*Chenopodium sp.*		No							X																							
128	*Chlorogalum pomeridianum*	Soap Plant, Amole	Yes	X	X	X	X		X					X					X	X		X	X				X	X		X	X	X	
129	*Chlorogalum pomeridianum var. divaricatum*	Soap Plant	Yes					X			X	X									X				X							X	
130	*Chorizanthe cuspidata ssp. cuspidata*	San Francisco Spineflower	Yes		X																												
131	*Chrysanthemum leucanthemum*	Ox-Eye Daisy, Common Daisy	No				X																										

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	Species Name	Common Name	SF Native																														
132	*Chrysanthemum segetum*		No				X																										
133	*Cirsium arvense*	Canada Thistle	No								X																						
134	*Cirsium brevistylum*	Indian Thistle	Yes				X																		X								
135	*Cirsium occidentale var. californicum*	California Thistle	Yes		X																				X					X			
136	*Cirsium quercetorum*	Brownie Thistle	Yes					X	X		X									X					X					X		X	
137	*Cirsium vulgare*	Bull thistle	No				X	X			X														X					X		X	
138	*Clarkia rubicunda*	Farewell-to-Spring	Yes				X	X	X											X					X						X	X	
139	*Claytonia perfoliata*	Miner's Lettuce	Yes	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X		X		X		X	X	X	X	X	X	
140	*Clematis sp.*		No																							X							
141	*Collinsia multicolor*	Chinese Houses	Yes					X																									
142	*Conicosia pugioniformis*	Narrow-Leaf Ice Plant	No											X		X																	
143	*Conioselinum chinense*		Yes																													X	
144	*Conium maculatum*	Poison Hemlock	No		X	X	X											X							X				X	X		X	
145	*Convolvulus arvensis*	Morning-Glory, Field Bindweed	No						X		X														X								
146	*Conyza bilboana*		No																						X								
147	*Conyza bonariensis*	Horseweed	No								X														X							X	
148	*Conyza canadensis*	Horseweed	Yes			X	X				X																						
149	*Conyza sp.*	Horseweed	No				X																										
150	*Coprosma repens*	Mirror Plant	No			X	X				X		X		X		X											X					
151	*Cornus sericea ssp. sericea*	Creek or American Dogwood	Yes				X																										
152	*Coronopus didymus*	Wart, Swine Cress	No																						X								
153	*Cortaderia jubata*	Andean Pampas Grass	No	X		X	X	X	X		X					X	X		X	X						X				X		X	
154	*Cortaderia selloana*	Pampas Grass	No		X		X				X																						
155	*Corylus cornuta var. californica*	California Hazelnut	Yes				X																										
156	*Cotoneaster pannosa*	Cotoneaster	No						X		X	X			X										X								
157	*Cotoneaster sp.*	Cotoneaster	No					X					X	X					X									X	X	X		X	
158	*Cotula australis*	New Zealand Brass Buttons	No																						X								
159	*Cotula coronopifolia*	Brass Buttons	No				X																										
160	*Crassula argentea*	Jade Plant	No																									X					
161	*Crassula connata*	Sand Pygmy-weed	Yes					X	X							X	X								X							X	
162	*Crassula sp.*	(succulents)	No													X												X				X	
163	*Crocosmia masoniorum*	Crocosmia	No			X	X											X															
164	*Croton californicus*	California Croton	Yes													X																	
165	*Cupressus macrocarpa*	Monterey Cypress	No	X	X	X	X	X	X		X		X	X	X					X	X			X	X	X		X				X	
166	*Cuscuta salina var. major*	Salt marsh Dodder	Yes							X																							
167	*Cymbalaria muralis*	Kenilworth Ivy	No																												X		
168	*Cynodon dactylon*	Bermuda Grass	No																						X								
169	*Cynosurus echinatus*	Hedgehog Dogtail, Dogtail Grass	No								X																						
170	*Cyperus eragrostis*	Tall Cyperus	Yes				X		X		X														X				X				
171	*Cyperus esculentus*	Nutsedge, Galingale	Yes				X																										
172	*Cytisus scoparius*	Scotch Broom	No				X																		X								
173	*Dactylis glomerata*	Orchard Grass	No				X																		X								
174	*Danthonia californica var. americana*	California Oatgrass	Yes	X			X	X	X		X	X								X		X			X			X		X		X	
175	*Daucus carota*	Carrot	No				X																										
176	*Daucus pusillus*	Rattlesnake Weed	Yes																						X					X			
177	*Delairea odorata*	Cape-ivy, German-ivy	No	X		X	X	X			X		X					X			X				X	X		X	X			X	
178	*Delphinium californicum*	California Larkspur	Yes				X	X																									
179	*Delphinium decorum*	Coast Larkspur	Yes					X																									
180	*Deschampia cespitosa*	Tufted Hairgrass	Yes																						X							X	
181	*Deschampsia cespitosa ssp. holciformis*	Tufted Hairgrass	Yes					X																									
182	*Deschampsia danthonioides*	annual Hairgrass	Yes														X			X													
183	*Dichelostemma capitatum*	Blue Dicks, Wild Hyacinth	Yes	X				X	X		X	X							X	X	X	X	X		X		X	X		X	X	X	
184	*Dichondra donelliana*	Dichondra	Yes					X	X		X										X				X		X	X		X		X	
185	*Disporum hookeri*	Fairy Bells	Yes																									X					
186	*Distichlis spicata*	Saltgrass	Yes				X			X																							
187	*Dodecatheon clevelandii ssp. patulum*	Shooting Star	Yes					X	X																								
188	*Dodecatheon hendersonii*	Mosquito Bills, Sailor Caps	Yes					X	X		X																	X				X	
189	*Dryopteris arguta*	Spreading Coastal Wood Fern	Yes		X		X	X												X	X		X		X	X		X	X	X		X	
190	*Duchesnea indica*	Mock-strawberry	No																						X				X				
191	*Dudleya farinosa*	Live-forever	Yes		X		X	X			X			X	X	X	X			X			X		X			X		X	X	X	
192	*Echinocloa crus-galli*		No								X																						
193	*Echium candicans*	Echium	No																													X	
194	*Echium sp.*	Echium	No																													X	
195	*Ehrharta erecta*	Ehrharta Grass	No		X	X	X				X		X	X	X		X	X				X				X	X		X	X			
196	*Elymus californicus*	California Bottle-brush Grass	Yes																													X	
197	*Elymus glaucus ssp. glaucus*	Blue Wild Rye, Western Wild Rye	Yes	X			X	X	X		X	X		X					X	X	X					X		X	X		X		X	

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	Species Name	Common Name	SF Native																														
198	*Elymus multisetus*	Big Squirrel Tail	Yes					X	X																								
199	*Epilobium brachycarpum*	Willow-herb	Yes					X		X	X									X					X			X		X		X	
200	*Epilobium ciliatum*	Willow-herb	Yes								X																						
201	*Epilobium ciliatum ssp. ciliatum*	Northern Willow-herb	Yes					X	X																				X				
202	*Epilobium ciliatum ssp. watsonii*	Willow-herb	Yes				X																		X			X		X		X	
203	*Epipactis helleborine*		No																						X								
204	*Equisetum arvense*	Common Horsetail, Field Horsetail	Yes																						X								
205	*Equisetum sp.*	Horsetail	No				X																										
206	*Equisetum telmateia*	Giant Horsetail	Yes				X				X														X								
207	*Equisetum telmateia ssp. Braunii*	Giant horsetail, Horsetail fern	Yes								X																						
208	*Erechtites arguta*		No																						X								
209	*Erechtites glomerata*	New Zealand Fireweed	No					X																									
210	*Erechtites minima*	Australian Fireweed	No				X																		X			X					
211	*Erechtites prenanthoides*		No																						X								
212	*Erechtites sp.*		No																											X			
213	*Ericameria ericoides*	Mock Heather, Goldenbush	Yes		X									X	X	X	X	X															
214	*Erigeron blochmaniae*	Blochmans Leafy Daisy	No						X																								
215	*Erigeron foliosus*	Leafy Daisy	Yes					X												X					X					X			
216	*Erigeron glaucus*	SeasideDaisy	Yes	X			X							X			X								X			X		X	X	X	
217	*Erigeron sp.*	Fleebane Daisy	No								X														X								
218	*Eriogonum latifolium*	Coast Buckwheat	Yes	X	X		X	X	X		X	X		X	X	X	X		X	X	X	X		X	X	X		X	X	X	X	X	
219	*Eriogonum nudum*	Nude Buckwheat	Yes																						X								
220	*Eriophyllum confertiflorum*	Golden or Yellow Yarrow	Yes					X			X		X							X								X				X	
221	*Eriophyllum confertiflorum var. confertiflorum*	Lizardtail	Yes																						X					X		X	
222	*Eriophyllum staechadifolium*	Lizard-tail, Seaside Wooly Sunflower	Yes	X	X		X				X														X			X	X	X		X	
223	*Erodium botrys*	Broad-leaf Filaree, Long-beaked Filaree	No		X			X	X		X	X													X		X	X				X	
224	*Erodium cicutarium*	Red-stemmed Filaree, Storksbill	No					X	X		X	X					X			X					X		X					X	
225	*Erodium moschatum*	White-stemmed Filaree	No					X	X		X														X							X	
226	*Erodium sp.*	Filaree	No								X																						
227	*Erysimum franciscanum*	San Francisco Wallflower	Yes		X									X	X	X	X	X															
228	*Escallonia sp.*	Escallonia	No										X																				
229	*Eschscholzia californica*	California Poppy	Yes	X	X		X	X	X		X	X		X	X	X	X	X	X	X		X			X		X	X	X	X	X	X	
230	*Eucalyptus globulus*	Blue Gum Eucalyptus	No		X	X	X	X	X		X	X									X			X	X	X		X	X		X		
231	*Eucalyptus nicholii*	Eucalyptus	No					X																									
232	*Eucalyptus sp.*	Blue Gum	No				X				X		X															X					
233	*Eucalyptus viminalis*	manna Gum	No					X			X		X																				
234	*Euphorbia peplus*	Petty Spurge	No				X	X			X														X								
235	*Euphorbia spathulata*	Spurge	Yes																	X													
236	*Festuca arundinacea*	Tall Fescue, Alta Fescue, Reed Fescue	No								X														X								
237	*Festuca californica*	California Fescue	Yes				X	X			X														X			X					
238	*Festuca idahoensis*	Idaho Fescue	Yes					X						X		X						X			X			X		X		X	
239	*Festuca rubra*	Red Fescue	Yes	X			X	X	X		X	X		X	X	X	X	X	X	X		X					X	X			X	X	
240	*Festuca sp.*		No																													X	
241	*Filago gallica*	Herba Impia	No		X			X	X			X								X					X								
242	*Filago sp.*		No																											X			
243	*Foeniculum vulgare*	Sweet Fennel	No		X		X	X	X		X	X	X							X	X	X				X		X		X		X	
244	*Fragaria chiloensis*	Beach or Dune Strawberry	Yes	X			X							X	X	X	X			X	X					X			X				X	
245	*Fragaria sp.*	Strawberry	No																										X				
246	*Fragaria vesca*	Wild or Woodland Strawberry	Yes				X	X															X		X			X		X		X	
247	*Frankenia salina*	Alkali heath, Yerba Reuma	Yes				X																										
248	*Fritillaria affinis*	Checker lily, Mission Bells	Yes					X	X												X	X			X			X		X		X	
249	*Fumaria officinalis*	Fumitory	No								X														X				X				
250	*Fumaria parviflora*	Fumitory	No		X		X				X																						
251	*Fumaria sp.*		No																						X								
252	*Fushia sp.*	Fushia	No																							X		X					
253	*Galium aparine*	Bedstraw, Cleavers, Goosegrass	Yes			X	X	X			X					X					X		X		X	X		X	X	X		X	
254	*Galium nuttallii*	Nuttall's Bedstraw, Climbing Bedstraw	No																										X				
255	*Galium porrigens var. porrigens*	Climbing Bedstraw	Yes				X	X																	X					X		X	
256	*Galium sp.*	Bedstraw	No		X																												
257	*Garrya elliptica*	Silk tassel Bush	Yes		X																				X								
258	*Gaultheria shallon*	Gaultheria	Yes																						X			X		X			
259	*Gazania sp.*	Gazania	No								X																						
260	*Genista monspessulana*	French Broom	No		X		X	X	X		X	X	X				X		X	X					X			X		X	X	X	
261	*Geranium dissectum*	Cut-Leaf Geranium	No					X	X		X	X		X				X							X			X	X	X		X	
262	*Geranium molle*	Crane's Bill Geranium	No					X	X		X														X								
263	*Geranium sp.*	Geranium	No		X				X																								

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				Southwest				Southeast					Central West						Central														North
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			Number of Species	60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																													
264	*Gilia capitata ssp. chamissonis*	Dune Gilia	Yes													X																
265	*Gilia clivorum*	Gilia	Yes					X																								
266	*Glyceria leptostachya*	Manna Grass	Yes																					X								
267	*Glyceria occidentalis*	Manna Grass	Yes								X																					
268	*Gnaphalium californicum*	Cudweed, Green everlasting	Yes				X	X																X					X		X	
269	*Gnaphalium canescens ssp. beneolens*	Everlasting Cudweed	Yes					X																							X	
270	*Gnaphalium luteo-album*	Everlasting Cudweed	No					X																X								
271	*Gnaphalium purpureum*	Purple Cudweed	Yes					X									X															
272	*Gnaphalium ramosissimum*	Pink Everlasting, Cudweed	Yes				X	X																								
273	*Gnaphalium sp.*		No		X		X		X		X																X		X		X	
274	*Gnaphalium stramineum*	Cudweed	Yes					X																								
275	*Grindelia camporum*	Gumplant	Yes																					X								
276	*Grindelia hirsutula*	Hairy Gumplant	Yes																	X											X	
277	*Grindelia hirsutula var. maritima*	San Francisco Gumplant	Yes																												X	
278	*Grindelia maritima*	San Francisco Gumplant	Yes						X																						X	
279	*Grindelia stricta*	Gumplant	Yes				X																									
280	*Grindelia stricta var. angustifolia*		Yes							X																						
281	*Griselinia sp.*	Griselinia	No																													
282	*Hedera helix*	English Ivy	No		X	X			X		X	X	X		X				X						X	X		X	X		X	
283	*Hedypnois cretica*	Hedypnois	No														X								X							
284	*Helenium puberulum*	Sneezeweed	Yes																						X							
285	*Heliotropium curvassavicum*	Heliotrope	Yes				X																									
286	*Heracleum lanatum*	Cow Parsnip	Yes				X																		X			X		X		X	
287	*Heteromeles arbutifolia*	Toyon, Christmas Berry	Yes		X	X	X	X	X		X	X	X					X		X	X	X	X	X	X			X	X	X		X	
288	*Heterotheca sessiliflora ssp. bolanderi*	Goldenaster	Yes					X														X						X				
289	*Heuchera micrantha*	Alumroot	Yes																					X				X				
290	*Hirschfeldia incana*	Summer Mustard	No				X	X	X		X	X							X		X				X			X		X		X	
291	*Holcus lanatus*	Purple Velvet Grass	No			X	X	X			X														X					X			
292	*Holodiscus discolor*	Oceanspray, Creambush	Yes		X		X	X			X									X					X			X		X		X	
293	*Hordeum brachyantherum*	Meadow Barley	Yes				X	X	X		X														X								
294	*Hordeum marinum ssp. gussoneanum*	Mediterranean Barley	No								X																						
295	*Hordeum murinum ssp. Leporinum*	Farmer's Foxtail	No			X		X	X		X	X		X	X	X	X		X	X				X	X		X	X	X		X	X	
296	*Hordeum sp.*		No																											X			
297	*Horkelia californica*	California Horkelia	Yes	X			X	X	X										X	X	X				X			X		X		X	
298	*Hypochaeris glabra*	Smooth Cat's-Ear	No					X	X		X	X		X	X	X	X			X					X			X		X		X	
299	*Hypochaeris radicata*	Hairy or Rough Cat's-Ear	No	X				X	X		X	X		X			X		X	X					X			X		X	X	X	
300	*Ilex aquifolium*	English Holly	No								X														X								
301	*Ilex sp.*	Holly	No																									X					
302	*Iris douglasiana*	Douglas Iris	Yes			X	X	X						X	X					X	X				X			X		X		X	
303	*Iris longipetala*	Coast Iris	Yes					X	X		X								X	X	X				X		X	X		X		X	
304	*Iris pseudacorus*	Yellow Flag	No			X																											
305	*Jaumea carnosa*	Jaumea	Yes				X																										
306	*Juncus balticus*	Rush	Yes			X	X				X			X											X								
307	*Juncus bufonius*	Toad Rush	Yes					X	X		X					X									X				X	X			
308	*Juncus effusus var. brunneus*	Bog Rush	Yes			X	X				X														X			X	X	X			
309	*Juncus lesueurii*	Rush	Yes			X	X				X			X											X								
310	*Juncus occidentalis*	Rush	Yes				X				X									X													
311	*Juncus patens*	Spreading Rush, Common Rush	Yes				X	X																	X			X		X		X	
312	*Juncus phaeocephalus*	Rush	Yes								X			X											X								
313	*Juncus sp.*	Rush	No		X						X																						
314	*Juncus xiphioides*	Iris Leaf Rush	No											X																			
315	*Kniphofia uvaria*	Red-Hot Poker, Poker Plant	No																						X			X					
316	*Koeleria macrantha*	June Grass	Yes				X	X	X		X	X						X		X					X			X		X	X	X	
317	*lactuca serriola*	prickly Lettuce	No					X				X																				X	
318	*Lactuca sp.*	Prickly Lettuce	No																													X	
319	*Lasthenia californica*	Goldfields	Yes					X	X			X								X								X			X	X	
320	*Lasthenia chrysostoma*		No																	X													
321	*lathyrus latifolius*	Giant Pea, Everlasting Pea	No						X										X	X													
322	*Lathyrus sp.*		No						X																								
323	*Lathyrus vestitus var. vestitus*	Pacific, Bolander's, or Hillside Pea	Yes	X			X	X	X		X			X					X	X	X	X	X		X	X	X	X		X	X	X	
324	*Lavatera arborea*	Tree-mallow	No			X	X				X																						
325	*Lavatera cretica*	Tree-mallow	No																						X								
326	*Lavatera sp.*	Tree mallow	No								X																						
327	*Lemna sp.*		No								X																						
328	*Lepidium nitidum*	Peppergrass	Yes						X																X								
329	*Lepidium sp.*	Peppergrass	No		X																												

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	Species Name	Common Name	SF Native																													
330	*Leptospermum laevigatum*	Tea Tree	No									X																X				
331	*Leptospermum sp.*	New Zealand Tea tree	No									X																				
332	*Leymus mollis ssp. mollis*	American Dune-Grass	Yes				X																									
333	*Leymus triticoides*	Valley Wild-rye	Yes					X							X																	
334	*Ligusticum apiifolium*	Pacific Lovage	Yes					X												X				X			X		X		X	
335	*Lilaea scilloides*	Flowering Quillwort	Yes							X																						
336	*Lilium sp.*	Lily	No							X																						
337	*Limonium californicum*	Sea Lavendar, Marsh Rosemary	Yes						X																							
338	*Limonium sp.*	Sea Lavendar	No		X																											
339	*Linaria bipartita*	Toadflax	No																					X								
340	*Linaria canadensis*	Canadian or Blue Toad-Flax	Yes										X																			
341	*Linum bienne*	Flax	No					X																								
342	*Lithophragma affine*	Woodland Star	Yes					X																X								
343	*Lobularia maritima*	Sweet Alyssum	No		X		X				X		X	X	X									X							X	
344	*Lolium multiflorum*	Italian Ryegrass	No	X			X	X	X		X	X					X	X	X	X			X	X		X	X		X	X	X	
345	*Lolium perenne*	Perrenial Ryegrass	No				X	X			X																					
346	*Lomatium caruifolium*	biscuit root	Yes					X	X		X	X						X			X			X		X				X	X	
347	*Lomatium dasycarpum*	Wooly Parsnip	Yes					X	X			X								X				X			X		X			
348	*Lomatium sp.*		No																					X								
349	*Lomatium utriculatum*	Bladder Parsnip	Yes					X	X		X	X							X	X	X			X		X	X		X	X	X	
350	*Lonicera hispidula var. vacillans*	California Honeysuckle	Yes				X				X													X					X		X	
351	*Lonicera involucrata*	Coast Twinberry	Yes				X																									
352	*Lonicera japonica*	Japanese Honeysuckle	No						X															X								
353	*Lotus corniculatus*	Birdfoot Trefoil	No				X	X			X													X								
354	*Lotus purshianus var. purshianus*	Spanish Clover	Yes					X																								
355	*Lotus scoparius*	Deer Weed, California Broom	Yes		X			X	X		X			X	X	X				X				X			X		X		X	
356	*Lotus sp.*	Lotus	No								X						X															X	
357	*Lotus wrangelianus*	Calif. Lotus, Chilean Trefoil	Yes																	X				X								
358	*Ludwigia peploides*	Marsh Purslane	Yes			X																										
359	*Lupinus albifrons var. collinus*	Silver Bush Lupine	Yes				X	X	X		X													X					X		X	
360	*Lupinus arboreus*	Yellow Bush Lupine, Tree Lupine	Yes	X	X	X	X	X	X		X		X	X		X	X	X	X						X				X		X	X	
361	*Lupinus bicolor*	Miniature Lupine, Annual Lupine	Yes					X	X	X	X			X		X	X			X		X			X			X		X	X	X	
362	*Lupinus chamissonis*	Chamisso's Lupine, Beach Blue Lupine	Yes											X		X																
363	*Lupinus formosus var. formosus*	Summer Lupine	Yes					X	X																							
364	*Lupinus nanus*	Sky Lupine	Yes	X				X		X	X	X								X					X							X	
365	*Lupinus sp.*		No																							X						
366	*Lupinus sparsiflorus*	Loosely-flowered Annual Lupine	No																					X								
367	*Lupinus succulentus*	Arroyo Lupine	No																					X								
368	*Lupinus variicolor*	Varicolored Lupine, Varied Lupine	Yes					X	X		X					X				X					X		X	X		X	X	X	
369	*Luzula comosa*	Wood Rush	Yes	X			X	X	X		X	X					X			X		X			X		X	X		X	X	X	
370	*Luzula multiflora*	Hairy Wood Rush	No																	X													
371	*Lyonothamnus floribundus*	Catalina Ironwood	No									X																					
372	*Lythrum hyssopifolium*	Loosestrife	No								X													X					X			
373	*Madia minima*	Tarweed	Yes								X																					
374	*Madia sativa*	Coast Tarweed, Headland Tarweed	Yes					X												X				X					X			
375	*Madia sp.*	Tarweed	No				X																									
376	*Malva nicaeensis*	Bull Mallow	No																					X				X				
377	*Malva parviflora*	Cheeseweed, Little Mallow	No					X			X													X					X			
378	*Malva sp.*	Mallow	No		X				X				X																				
379	*Malva sylvestris*	high Mallow	No			X							X				X		X														
380	*Marah fabaceus*	Man-root, Wild Cucumber	Yes			X	X	X			X		X	X	X	X	X	X	X	X			X		X	X		X	X	X	X	X	
381	*Marah oreganus*	Wild Cucumber, Man-root	Yes								X																						
382	*Matthiola incana*	Stock	No				X																									
383	*Maytenus boaria*	Mayten Tree	No									X																X				
384	*Medicago polymorpha*	California Bur-Clover	No		X	X	X	X	X		X	X					X			X				X		X						
385	*Medicago sp.*	Burclover	No								X																					
386	*Melica californica*	California Melica	Yes					X	X		X	X								X				X		X	X		X		X	
387	*Melica imperfecta*	Small-Flowered Melica	Yes	X			X	X								X																
388	*Melica sp.*	Oniongrass	No				X																	X								
389	*Melica torreyana*	Torrey's Melica	Yes																	X				X								
390	*Melilotus alba*	White Sweetclover, Melilot	No																					X								
391	*Melilotus indica*	Sourclover	No					X	X															X								
392	*Mentha spicata var. spicata*	Spearmint	No																									X				
393	*Microseris bigelovii*	Coast Dandelion, Coast Microseris	Yes					X	X						X					X												
394	*Microseris lindleyi*		No																	X												
395	*Microseris sp.*		No																	X		X										

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	Species Name	Common Name	SF Native																														
396	*Mimulus aurantiacus*	Sticky or Bush Monkey Flower	Yes	X	X		X	X						X		X				X			X		X			X	X	X	X	X	
397	*Mimulus guttatus*	Common Monkey Flower	Yes				X				X														X								
398	*Minuartia douglasii*	Sandwort	No																	X													
399	*Monardella villosa*	Coyote-Mint	Yes				X	X	X											X					X			X				X	
400	*Monardella villosa var. franciscana*	Western Pennyroyal	Yes																						X					X			
401	*Muilla maritima*	Muilla	No																	X							X	X			X	X	
402	*Myoporum laetum*	Lollypop Tree	No		X		X																						X				
403	*Myoporum sp.*		No																									X					
404	*Myosotis latifolia*	Forget-me-not	No																						X								
405	*Myosotis sp.*	Forget-me-not	No																									X					
406	*Myrica californica*	California Wax Myrtle	Yes		X	X	X																		X				X				
407	*Narcissus sp.*	Daffodil	No																						X								
408	*Nassella lepida*	Foothill Needlegrass	Yes				X	X	X		X																						
409	*Nassella pulchra*	Purple Needlegrass	Yes	X			X	X	X		X	X							X	X	X		X	X	X		X	X		X	X	X	
410	*Navarretia squarrosa*	Skunkweed	Yes					X																									
411	*Nemophila maculata*		No						X																								
412	*Nemophila menziesii*	Baby Blue-eyes	Yes						X																X						X		
413	*Nymphaea odorata*	White Water Lily, Water Nymph	No				X																										
414	*Oemleria cerasiformis*	Oso Berry	Yes				X	X			X									X	X				X	X		X		X	X	X	
415	*Oenanthe sarmentosa*	Water Parsley	Yes		X	X	X				X														X				X				
416	*Oenothera elata ssp. hookeri*	Beach Evening Primrose	Yes		X		X																										
417	*Olea sp.*	Olive	No										X																				
418	*Osmorhiza chilensis*	Sweet Cicely	Yes																							X							
419	*Oxalis albicans ssp. pilosa*	Wood-sorrel	Yes	X							X																						
420	*Oxalis incarnata*		No																						X					X			
421	*Oxalis latifolia*		No																X														
422	*Oxalis pes-caprae*	Bermuda Buttercup	No		X			X	X		X			X	X	X	X	X	X	X					X		X	X	X	X	X	X	
423	*Oxalis rubra*		No					X	X																								
424	*Oxalis sp.*		No																									X					
425	*parietaria judaica*		No					X			X																						
426	*Paronychia franciscana*	Nailwort	No	X					X		X						X		X	X	X				X			X		X	X	X	
427	*Pellaea andromedifolia*	Coffee Fern	Yes				X																										
428	*Pellaea sp.*		No																									X					
429	*Pennisetum clandestinum*	Kikuyu Grass	No	X																													
430	*Pentagramma triangularis*	Goldback Fern	Yes				X	X	X			X								X					X					X		X	
431	*Perideridia kelloggii*	Yampah	Yes					X	X																								
432	*Phacelia californica*	California Coast Phacelia	Yes		X		X	X						X	X	X	X			X			X		X							X	
433	*Phacelia distans*	Wild-Heliotrope	Yes				X							X	X	X	X															X	
434	*Phacelia malvifolia*	Stinging Phacelia	Yes				X							X											X				X	X			
435	*Phalaris aquatica*	Harding Grass	No						X																								
436	*Phalaris sp.*		No				X																										
437	*Picris echioides*	Bristly Ox-tongue	No				X	X	X		X								X						X								
438	*Pinus pinea*	Italian Stone Pine	No																								X						
439	*Pinus radiata*	Monterey Pine	No	X	X		X		X		X		X		X	X	X			X					X			X	X			X	
440	*Pinus sp.*	Pine	No								X									X													
441	*Piperia elegans*	Green Rein-orchid, Coast Piperia	Yes					X	X																X			X		X		X	
442	*Piptochaetium setosum*	Ricegrass	No																						X								
443	*Pittosporum crassifolium*	Thick-leaved Pittosporum	No										X																				
444	*Pittosporum sp.*		No			X	X		X																								
445	*Pittosporum undulatum*	Victorian Box, Mock Orange	No										X																				
446	*Plantago coronopus*	Split-Leaf Plantain	No				X	X																									
447	*Plantago erecta*	Dwarf Plantain	Yes	X				X	X		X						X			X		X			X			X		X	X	X	
448	*Plantago lanceolata*	English Plantain	No	X	X		X	X	X		X	X		X		X	X		X	X	X			X		X	X		X	X	X		
449	*Plantago major*	Common Plantain	No		X																				X								
450	*Plantago sp.*	Plantain	No				X																										
451	*Plantago subnuda*	Mexican Plantain	Yes			X	X																		X								
452	*Platanus racemosa*	Western Sycamore	Yes																						X								
453	*Poa annua*	Annual Bluegrass	No		X	X		X	X					X											X		X	X				X	
454	*Poa douglasii*	Douglas or Sand-dune Bluegrass	Yes		X									X		X	X																
455	*Poa secunda ssp. secunda*	One-sided Bluegrass, Pine Bluegrass	Yes																	X		X											
456	*Poa sp.*		No																													X	
457	*Poa unilateralis*	Ocean-bluff bluegrass	Yes	X				X	X			X		X			X		X	X		X			X			X		X	X	X	
458	*Polycarpon tetraphyllum*	Four-leaved allseed	No																						X								
459	*Polygala californica*	Milkwort	Yes														X		X														
460	*Polygonum amphibium var. emersum*	Swamp Knotweed, Kelp	Yes		X	X																											
461	*Polygonum arenastrum*	Common or Dooryard Knotweed	No						X																X		X						

Appendix Table C-3. Plant species found within the San Francisco Significant Natural Areas.

				Natural Area																												
				Southwest				Southeast					Central West						Central													North
				BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BA
			Number of Species	60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																													
462	*Polygonum capitatum*	Ornmental Knotweed	No																						X							
463	*Polygonum paronychia*	Dune Knotweed	Yes	X										X	X	X	X															
464	*Polygonum persicaria*	Lady's Thumb	No								X																					
465	*Polygonum punctatum*	Water Smartweed	Yes				X																		X				X			
466	*Polygonum sp.*	Knotweed	No		X		X				X																					X
467	*Polypodium californicum*	California Polypody	Yes	X		X		X	X		X	X		X	X					X	X		X		X		X	X	X	X	X	
468	*Polypodium scouleri*	Leather-leaf Fern	Yes				X							X	X		X						X		X	X		X		X			
469	*Polypogon interruptus*	Ditch beard Grass	No						X																							
470	*Polypogon monspeliensis*	Anual beard Grass	No				X	X			X																					
471	*Polystichum dudleyi*	Sword Fern	Yes																	X												
472	*Polystichum munitum*	Western Sword Fern	Yes			X	X	X	X			X					X	X		X			X		X	X		X	X	X		X	
473	*Populus fremontii ssp. fremontii*	Fremont's Cottonwood	Yes										X																			
474	*Populus nigra*	Italian Poplar, Lombardi Poplar	No		X																											
475	*Populus sp.*	Poplar	No						X				X																			
476	*Potentilla anserina ssp. pacifica*	Silverfern	Yes				X																		X							
477	*Potentilla glandulosa*	Cinquefoil	Yes				X	X	X												X		X		X			X		X		X	
478	*Potentilla pectinisecta*		No				X																									
479	*Prunella vulgaris*	Self-heal	Yes				X																									
480	*Prunus cerasifera*	Wild Plum, Cherry Plum	No										X												X							
481	*Prunus emarginata*	Bitter Cherry	No					X																	X							
482	*Prunus ilicifolia*	Holly-leaved Cherry, Islais creek cherry	Yes	X			X	X																	X							
483	*Prunus sp.*		No					X			X																					
484	*Prunus virginiana*	Western Choke Cherry	No		X			X																							X	X
485	*Psilocarphus tenellus*	Woolly Marbles	Yes																						X							
486	*Pteridium aquilinum var. pubescens*	Western Bracken, Bracken Fern	Yes	X	X	X	X	X						X		X	X								X	X		X	X	X	X	X	
487	*Pyracantha angustifolia*	Firethorn	No					X																	X					X		
488	*Pyracantha sp.*	Firethorn	No									X																					
489	*Quercus agrifolia*	Coast Live Oak, California Live Oak	Yes		X	X		X	X		X		X					X		X					X				X	X		
490	*Quercus lobata*		No																	X												
491	*Quercus suber*	cork oak	No																												X	
492	*Quercus wislizenii var. frutescens*	Interior Live Oak	Yes																						X					X		
493	*Ranunculus californicus*	California Buttercup	Yes	X				X	X		X	X		X			X		X	X	X	X			X		X	X		X	X	X	
494	*Ranunculus muricatus*	Buttercup	No								X														X							
495	*Raphanus sativus*	Wild Radish, Radish	No		X	X	X	X	X		X	X	X			X	X	X	X	X					X		X	X		X	X	X	
496	*Rhamnus californica*	California Coffeeberry	Yes	X			X	X			X				X	X				X					X			X		X		X	
497	*Rhamnus crocea*	Spiny Redberry	Yes				X																		X					X		
498	*Ribes menziesii*	Canyon Gooseberry	Yes				X	X																		X						X	
499	*Ribes sanguineum var. glutinosum*	Coast Red Flowering Currant	Yes			X							X								X		X		X			X	X				
500	*Rorippa nasturtium-aquaticum*	Water-cress	Yes		X		X				X														X							
501	*Rosa californica*	California Wild Rose	Yes		X			X																								
502	*Rosa gymnocarpa*	Wood Rose	Yes					X																	X			X		X		
503	*Rosa sp.*	garden Rose	No									X																				
504	*Rubus discolor*	Himalayan Blackberry, Himalayaberry	No			X			X		X	X	X		X		X		X		X				X	X		X	X		X	
505	*Rubus parviflorus*	Thimbleberry	Yes		X		X																			X						
506	*Rubus ursinus*	California Blackberry	Yes	X	X	X	X	X			X			X	X	X	X	X	X	X	X		X		X	X		X	X	X	X	X	
507	*Rumex acetosella*	Sheep Sorrel	No		X		X	X	X		X	X		X	X	X	X		X	X					X		X	X		X	X	X	
508	*Rumex crispus*	Curly-leaved Dock	No			X	X	X	X		X								X						X					X		X	
509	*Rumex maritimus*	Golden Dock	Yes																										X				
510	*Rumex pulcher*	Fiddle Dock	No			X					X														X							
511	*Rumex salicifolius var. crassus*	Willow Dock	Yes																						X					X		
512	*Rumex sp.*	Dock	No								X																					
513	*Sagina procumbens*	Procumbent pearlwort	Yes																						X							
514	*Salicornia virginica*	Pickleweed	Yes				X			X																						
515	*Salix babylonica*	Weeping Willow	No			X																										
516	*Salix laevigata*	Red Willow	Yes		X																				X							
517	*Salix lasiolepis*	Arroyo Willow	Yes	X	X	X	X	X	X		X					X	X	X		X					X				X			X	
518	*Salix scouleriana*	Scouler's Willow	Yes								X																					
519	*Salix sitchensis*	Sitka Willow	No				X																									
520	*Salix sp.*	Willow	No		X		X																									
521	*Sambucus mexicana*	Blue Elderberry	Yes			X		X	X				X										X		X							
522	*Sambucus racemosa var. racemosa*	Red Elderberry	Yes		X	X	X																		X	X		X	X	X			
523	*Sanicula arctopoides*	Footsteps-of-spring	Yes	X				X	X		X	X		X			X			X	X		X			X		X	X		X	X	X	
524	*Sanicula bipinnatifida*	Purple Sanicle	Yes					X			X										X	X				X					X		
525	*Sanicula crassicaulis*	Pacific Snakeroot	Yes			X	X	X			X											X		X		X			X		X	X	X	
526	*Satureja douglasii*	Yerba Buena	Yes				X																									X	
527	*Scabiosa atropurpurea*	Pincushion Flower	No						X			X																					

Appendix Table C-3. Plant species found within the San Francisco Significant Natural Areas.

				Natural Area																												
				Southwest				Southeast					Central West						Central													North
				BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BA
		Number of Species		60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																													
528	*Scandix pecten-veneris*	Venus' Needle	No								X														X							
529	*Scirpus acutus*		Yes				X																									
530	*Scirpus americanus*	Three-square	Yes				X																									
531	*Scirpus californicus*	California Bulrush	Yes		X	X	X																									
532	*Scirpus cernuus*	Bulrush	Yes								X																					
533	*Scirpus microcarpus*	Bulrush	Yes				X																		X							
534	*Scirpus pungens*	Common Threesquare	Yes				X				X																					
535	*Scirpus robustus*		Yes				X																									
536	*Scrophularia californica*	California Figwort, Bee Plant	Yes	X	X	X	X	X	X		X	X	X	X		X		X		X			X		X			X	X	X	X	X	
537	*Sedum spathulifolium*	Stone-crop	Yes																						X			X		X	X	X	
538	*Senecio aronicoides*	Groundsel	Yes					X																				X					
539	*Senecio elegans*	Purple Ragwort	No		X																											
540	*Senecio hybridus*	Garden or Florist's Cineraria	No					X			X																					
541	*Senecio mikanioides*	Cape-vine/ivy, German-ivy	No		X																				X							
542	*Senecio vulgaris*	Common Groundsel	No					X						X											X					X		
543	*Sequoia sempervirens*	Coast Redwood	Yes										X												X							
544	*Sequoiadendron giganteum*	Giant Sequoia	No										X																			
545	*Setaria gracilis*		No				X																									
546	*Sherardia arvensis*	Field Madder	No					X																	X							
547	*Sidalcea malvaeflora*	Checkerbloom, Wild Hollyhock	Yes	X				X	X		X	X							X	X	X	X			X		X	X		X	X	X	
548	*Silene gallica*	Windmill Pink	No					X	X		X	X		X		X	X			X					X					X		X	
549	*Silene scouleri ssp. grandis*	Scouler's Large Campion	Yes					X																									
550	*Silene verecunda ssp. verecunda*	Dolores or San Francisco Campion	Yes					X									X											X					
551	*Silybum marianum*	Milk Thistle	No						X		X														X							
552	*Sisymbrium irio*	London Rocket	No		X																											
553	*Sisyrinchium bellum*	Blue-Eyed Grass	Yes				X	X	X		X	X							X	X	X	X			X			X		X		X	
554	*Sisyrinchium californicum*	Golden-eyed Grass	Yes																						X							
555	*Smilacina racemosa*	Fat Solomon's Seal	Yes				X																					X		X		
556	*Smilacina stellata*	False Solomon's Seal	Yes		X																				X				X			
557	*Solanum americanum*	Nightshade	Yes																						X				X			
558	*Solanum aviculare*	Nightshade	No			X																										
559	*Solanum douglasii*	Nightshade	Yes		X	X					X														X					X		
560	*solanum furcatum*		No																						X							
561	*Solanum sp.*	Nightshade	No		X								X															X				X	
562	*Solanum umbelliferum*	Blue Witch	Yes				X																									
563	*Solidago californica*	California Goldenrod	Yes					X																	X							
564	*Solidago canadensis var. elongata*	Meadow Goldenrod	Yes					X													X	X			X			X		X		X	
565	*Solidago sp.*		No		X																											
566	*Solidago spathulata ssp. spathulata*	Dune or Coast Goldenrod	Yes											X	X	X	X								X			X		X		X	
567	*Soliva sessilis*	Common Solvia	No								X									X					X							
568	*Sonchus asper ssp. asper*	Prickly Sow Thistle	No					X			X	X		X					X	X					X		X	X		X		X	
569	*Sonchus oleraceus*	Common Sow Thistle	No			X	X	X	X		X	X		X		X	X		X						X					X	X	X	
570	*Spartina foliosa*		Yes							X																							
571	*Spergula arvensis ssp. arvensis*	Stickwort, Starwort, Spurrey	No						X								X								X			X				X	
572	*Spergula sp.*	Spurry	No																									X					
573	*Spergularia bocconii*	Sand-spurrey	No					X																									
574	*Spergularia marina*	Sand-spurrey	Yes				X										X															
575	*Spergularia rubra*	Sand-spurrey	No																						X							
576	*Spiranthes romanzoffiana*	Ladies tresses	Yes																									X					
577	*Stachys ajugoides var. ajugoides*	Hedge Nettle	Yes			X	X	X	X										X	X		X	X	X	X	X	X	X	X	X			
578	*Stachys ajugoides var. rigida*	Hedge Nettle, Rigid Hedge Nettle	Yes	X							X	X								X	X										X	X	
579	*Stachys bullata*	Hedge Nettle, Wood Mint	Yes			X	X																										
580	*Stachys rigida*	Rigid Hedge Nettle	Yes																						X							
581	*Stellaria media*	Common Chickweed	No				X	X	X		X	X		X				X		X					X		X		X	X			
582	*Symphoricarpos albus var. laevigatus*	Snowberry	Yes			X		X																	X			X	X	X			
583	*Symphoricarpos mollis*	Creeping Snowberry, Trailing Snowberry	Yes				X	X																	X	X				X			
584	*Tamarix sp.*	Tamarisk	No		X																											
585	*Tanacetum camphoratum*	Dune tansy	Yes											X	X	X	X															
586	*Taraxacum officinale*	Dandelion	No								X														X							X	
587	*Taxus brevifolia*	Yew Tree	No										X																			
588	*Tellima grandiflora*	Fringe Cups	Yes			X																			X							
589	*Tetragonia tetragonioides*	New Zealand Spinach	No		X		X																									
590	*Thalictrum fendleri var. fendleri*	Meadow Rue	Yes				X																									
591	*Torilis arvensis*		No								X																					
592	*Torilis nodosa*	Hedge Parsley	No																						X							
593	*Toxicodendron diversilobum*	Poison Oak	Yes	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	

Appendix Table C-3. Plant species found within the San Francisco Significant Natural Areas.

				Natural Area																												
				Southwest				Southeast					Central West						Central													North
				BP	LM	PL	SP	VP	BH	IB	MP	PP	BV	GV	GH	HH	RO	FI	BG	CH	DP	DC	EM	FP	GC	IG	KH	MD	OW	OH	TK	TP	BA
		Number of Species		60	106	74	209	226	167	10	221	76	50	77	51	67	77	31	59	132	53	31	28	11	334	28	59	161	64	160	75	191	
	Species Name	Common Name	SF Native																													
594	*Tragopogan porrifolius*	Salsify, Oyster Plant	No					X			X														X								
595	*Trifolium depauperatum var. amplectans*	Sack Clover, Pale Sack Clover	Yes					X	X			X								X													
596	*Trifolium depauperatum var. truncatum*	Sack Clover	Yes						X																								
597	*Trifolium dubium*	Shamrock, Little Hop Clover	No								X														X							X	
598	*Trifolium gracilentum*	Clover	Yes																						X								
599	*Trifolium hirtum*	Rose Clover	No						X																X								
600	*Trifolium incarnatum*	Crimson Clover	No						X																								
601	*Trifolium microcephalum*	Clover	No																						X								
602	*Trifolium microdon*	Clover	Yes									X																					
603	*Trifolium repens*	White Clover	No			X	X				X														X								
604	*Trifolium sp.*	Clover	No								X																X						
605	*Trifolium subterraneum*	Subterranean Clover	No																						X								
606	*Trifolium tridentatum*	Tomcat Clover	Yes																						X			X					
607	*Trifolium willdenovii*	Tomcat Clover	Yes					X	X		X	X					X			X					X						X	X	
608	*Trifolium wormskioldii*	Cow Clover, Coast Clover	Yes				X																										
609	*Triphysaria eriantha*	Butter-and-eggs, Johnny-tuck	Yes					X			X														X								
610	*Triphysaria pusilla*	Owl's Clover, Dwarf Owl's Clover	Yes					X	X		X														X			X			X	X	
611	*Triteleia laxa*	Ithuriel's Spear, Long-rayed Brodiaea	Yes	X				X	X		X	X								X	X	X			X			X		X	X	X	
612	*Triticum aestivum*	Wheat	No																						X								
613	*Tropaeolum majus*	Garden Nasturtium	No		X	X							X					X			X				X	X		X		X			
614	*Typha angustifolia*	Nail Rod, Narrow-leaved Cattail	Yes				X																										
615	*typha latifolia*	Cat-tail	Yes		X		X				X														X								
616	*Typha sp.*		No																						X								
617	*Umbellularia californica*	California Bay, California Laurel	Yes																						X								
618	*Urtica dioica ssp. gracilis*	California Nettle	Yes			X	X																										
619	*Urtica dioica ssp. holosericea*	Coast Nettle	Yes		X																				X								
620	*Urtica sp.*		No		X																												
621	*Urtica urens*	Dwarf Nettle	No																						X								
622	*Vaccinium ovatum*	California or Evergreen Huckleberry	Yes														X											X		X			
623	*Valeriana sp.*	Valerian, Garden Heliotrope	No						X																								
624	*Veronica americana*	American Brooklime	Yes								X														X								
625	*Veronica persica*	Persian Speedwell	No																						X								
626	*Vicia americana var. americana*	American Vetch	Yes					X			X										X				X							X	
627	*Vicia benghalensis*	Purple Vetch	No								X														X								
628	*Vicia gigantea*	Giant Vetch	Yes			X	X																		X			X					
629	*Vicia hirsuta*		No																						X								
630	*Vicia sativa ssp. nigra*	Narrow-leaved Vetch, Common Vetch	No						X		X	X							X	X					X		X	X		X		X	
631	*Vicia sativa ssp. sativa*	Common Vetch, Spring Vetch	No					X																									
632	*Vicia sp.*	Vetch	No		X				X		X			X								X											
633	*Vicia villosa*	Wooly Vetch	No																						X								
634	*Vinca major*	Greater Periwinkle	No		X	X							X												X				X				
635	*Viola adunca*	Blue or Western Dog Violet	Yes																						X					X			
636	*Viola pedunculata*	Johnny-jump-up, Cal. Golden Violet	Yes					X	X		X										X		X		X			X			X	X	
637	*Vulpia bromoides*	Six-weeks Fescue	No	X			X	X	X			X		X	X	X	X		X	X					X		X	X			X	X	
638	*Vulpia microstachys var. pauciflora*		Yes								X																						
639	*Vulpia myuros var. hirsuta*	Rat-tail Fescue	No					X			X																				X	X	
640	*Vulpia octoflora*	Slender Fescue	Yes								X																						
641	*Vulpia sp.*		No																						X			X		X		X	
642	*Woodwardia fimbriata*	Giant chain Fern	Yes																	X					X								
643	*Wyethia angustifolia*	Narrow-leaf Mule's Ears	Yes				X	X	X		X									X	X				X		X	X		X		X	
644	*Zantedeschia aethiopica*	Calla Lily, Common Calla	No															X							X								
645	*Zigadenus fremontii*	Star Lily	Yes						X		X														X								

Southwest
BP = Brooks Park, LakeView/Ashton Mini Park
LM = Lake Merced
PL = Pine Lake
RN = Rolph Nicol
SP = Sharp Park

Southeast
VP = Bayview Park
BH = Bernal Hill
IB = India Basin Shoreline Park
MP = McLaren Park
PP = Palou/Phelps

Central West
BV = Buena Vista
GV = Grandview Park
GH = Golden Gate Heights
HH = Hawk Hill
RO = Rock Outcrop

Central
FI = 15th Avenue Steps
BG = Billy Goat Hill
CH = Corona Heights
DP = Dorothy Erskine Park
DC = Duncan-Castro
EM = Edgehill Mountain
FP = Fairmount Park
GC = Glen Canyon Park
IG = Interion Green Belt
KH = Kite Hill
MD = Mount Davidson
OW = Golden Gate Park (Oak Woodland and Strawberry Hill)
OH = O'Shaughnessy Hollow
TK = Tank Hill
TP = Twin Peaks

North
ML = Mountain Lake

APPENDIX E

1995 Significant Natural Resource Areas Management Plan



RECREATION AND PARK DEPARTMENT

STAFF REPORT ON THE

SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN

Adopted by the San Francisco
Recreation and Park Commission

January 19, 1995

Resolution No. 9501-008

YA 19210
V90

Introduction

Significant natural areas in San Francisco are generally remnants of an original landscape region that stretched from San Bruno Mountain to the Golden Gate Headlands. This original landscape, sometimes known as the Franciscan biological region, was marked by the greatest inland penetration of ocean sand anywhere on the Pacific Coast and supported a rich sand dune ecosystem.

Rising above this belt of wind-blown sand, a ridge of Franciscan radiolarian chert extended in a southeast-northwest direction. Predominantly treeless except for small groves of coast live oak and toyon in more sheltered areas with sufficient soil, these grassy hilltops flourished with wildflowers in the spring.

Freshwater and saltwater wetlands teeming with wildlife lined the shoreline of the Bay. Small seasonal pools dotted the shifting sand dunes near the ocean and extensive stream systems fed vast marshes. A rising ocean deposited sand that effectively blocked the free-flow of a creek system resulting in the creation of Lake Merced.

The unique characteristics of this biological region made it different from any other ecosystem. Today, only very small examples of this rare environment remain as footnotes to the ecological history of San Francisco.

Many of these natural vestiges face degradation and destabilization from increasing urbanization. In order to effectively preserve and protect these valuable natural resources, the Recreation and Park Department proposes to develop a Significant Natural Resource Areas Management Plan.

Program Background

As public awareness of the value of San Francisco's biological diversity has grown, so has the appreciation of notable natural resources within the City's park system.

To further the protection and enhancement of significant natural resources on property under the jurisdiction of the Recreation and Park Department, a total of $400,000 has been earmarked to fund a Significant Natural Resource Areas Management Plan (SNRAMP) through the San Francisco Park and Open Space Program. The purpose of this management plan is to establish a maintenance and preservation program related to the protection and enhancement of natural resource values.

It is envisioned that a significant portion of the funds would be used to address immediate threats to natural resources on park property, such as invasive weeds and erosion (see Attachment D). The remainder of the funds would be reserved for the development of the specific management programs of the natural resources management plan.

The Recreation and Park Department staff has drafted plan objectives, policies and guidelines for identifying significant natural areas and developing a standardized procedure for inventorying these areas and establishing management programs for their protection. The attached report provides the background and initial process contemplated by staff for the Significant Natural Resource Areas Management Plan.

An environmental consultant would be selected in the second part of the plan's development to further refine the plan, inventory natural resources within selected park properties, and make the site specific management program recommendations.

A stated objective of the proposed program is to "[i]ncrease City-wide level of awareness of the location and value of significant natural resource areas...." and to "[e]ncourage local participation in the protection or improvement of natural resources." Therefore, interested members of the public have been invited to participate in a series of community workshops to review and comment on the draft SNRAMP. Members of the public, community organizations, and agencies with natural resources expertise will be invited to participate with Recreation and Park Department staff on a task force to implement SNRAMP. The task force would also monitor the progress of the consultant and review and comment on further refinements of the plan by the consultant.

Following this process, the general public will be invited to attend a workshop to review and comment on the consultant-prepared plan. Upon completion of the environmental review for compliance with the California Environmental Quality Act (CEQA), the consultant-prepared SNRAMP would be reviewed and considered for approval by the Recreation and Park Commission at a public hearing.

Program Overview

The protection and enhancement of natural areas has become a priority goal for public agencies at both the state and federal levels. The Environmental Protection Agency, and Department of the Interior in particular, have initiated numerous programs to inventory natural resources on public lands, and have developed guidelines and standards for the preservation and enhancement of

resources such as threatened and endangered plants and animals, and habitat areas such as wetlands, vernal pools, desert communities and coastal zones.

Similarly, the State of California has a long history of priority policies and actions directed to the protection of statewide natural resources. In particular, the California Department of Fish and Game, Lands and Natural Areas Project has initiated a computerized inventory of natural areas, and a program designed to raise the awareness among developers, planners, conservationists and the general public about the presence of natural areas in local communities.

Many environmental organizations, such as The Nature Conservancy, also provide assistance in the preservation of unique natural resources. Groups with special expertise, such as the California Native Plant Society, the Sierra Club, the Audubon Society and others have played an active role in forwarding these programs.

Locally, there are a number of individual efforts under the auspices of the Golden Gate National Recreation Area and within the Recreation and Park Department (particularly through the Park and Open Space Program) that focus on the preservation and enhancement of natural areas and resources within the City and County of San Francisco.

The Recreation and Park Department would like to further these efforts by: 1) Developing guidelines and policies to protect or enhance valuable natural resources; 2) Setting standards for identifying these resources on property under the jurisdiction of the Recreation and Park Department; and 3) Following an approach and site-specific methodology for managing these areas. The result will be a Significant Natural Resource Areas Management Plan.

The following report produced by the staff of the Recreation and Park Department provides the background and initial process envisioned by staff for the Significant Natural Resource Areas Management Plan. This report is a summary of a program to identify significant natural resource areas, develop a standardized procedure for inventorying these areas, and establish management policies and actions for their protection.

Relationship to Other Plans

Other City departments and governmental agencies would comment on the consultant-prepared SNRAMP for consistency with other applicable plans and policies, including the following:

- *City Master Plan: Recreation and Open Space Element - Policy 13*: "Natural area management plans should be developed for publicly owned land throughout the City which would identify potentially significant natural areas,

inventory them, and identify the presence of natural resources. The plan should establish a consistent set of management policies and practices to protect and enhance the resources."

- Adopted master plans for individual parks
- Adopted forestry management plans for individual parks
- GGNRA: *General Management Plan* and *Resources Management Plan*
- Local Coastal Plan.

Action Items for Adoption by the Recreation and Park Commission

I. PROGRAM OBJECTIVES

- Increase City-wide level of awareness of the location and value of significant natural resource areas under the jurisdiction of the Recreation and Park Department.
- Encourage community participation in the protection or improvement of natural resources.
- Provide educational and recreational opportunities related to natural resources where appropriate; where feasible, restrict recreational uses and activity in sensitive habitat areas.
- Determine management needs and priorities for natural resources, particularly those identified by other agencies as rare, threatened or endangered species or habitat, or a species or habitat of special concern.
- Consult and coordinate with other city departments, agencies and groups with special expertise for inventory information and implementation.
- Implement measures designed to address immediate problems, such as invasive weed control.

II. IDENTIFICATION OF SIGNIFICANT NATURAL RESOURCE AREAS

In order to identify the significant natural resource areas under the jurisdiction of the Recreation and Park Department, staff established a general set of criteria. These criteria are:

A. Park property contains naturally occurring biotic and/or geomorphic remnants of the indigenous landscape.

B. Conforms to State of California, Department of Fish and Game criteria:

1. Presence of rare type of species or habitat;
2. Presence of ensemble type of species or habitat (3 or more elements occurring together);
3. Presence of the best example of a type of species or habitat; and
4. Presence of high diversity type of species or habitat.

C. Special values: geology, riparian zones, wildlife habitat.

D. Corridor or connector between natural areas.

E. Natural resource area is vulnerable to degradation from an imminent ecological crisis, such as inundation by exotic plant species.

Many properties under the jurisdiction of the Recreation and Park Department are remnants (or include remnants) of the original natural landscape found in San Francisco prior to urbanization and therefore have significant natural values or features. Some examples of significant natural resource areas include:

- Native grasslands that thrive on the shallow soils of the windswept, foggy western slopes of San Francisco hilltops such as Bernal Hill, Twin Peaks, Bayview Park and the eastern side of Mt. Davidson. These grasslands are noteworthy for their ability to provide conditions of shade and water retention between bunches of grass that are ideal for native wildflowers. Many of these native wildflowers support a biologically diverse insect community, including rare species of butterflies.

- The most important avian habitat in San Francisco at Lake Merced. The Lake's proximity to the ocean, coastal cliffs and remnant dunes make it critical to the breeding ecology of as many as 50 bird species. It is a valuable habitat for thousands of migrating birds during spring and fall. Winter birds range from 60 to 100 species and number in the thousands of

individual birds. Lake Merced also provides habitat for remnant mammal, reptile and insect populations.

- Rare and diverse habitat areas in Glen Canyon Park, including a riparian habitat and a hillside native plant community.

- Rare and unusual geological formations found at Twin Peaks, the Rock Outcrop and Corona Heights.

- Important connectors between natural areas such as the many hilltop parks in San Francisco that serve as important links for certain species of birds and butterflies that require a range of suitable habitat.

- Rare, threatened or endangered species of animals and plants, such as the Mission Blue Butterfly found on Twin Peaks.

It is not the function of the SNRAMP to identify, inventory and maintain elements of park property which are not remnants of the original natural landscape, such as playgrounds, golf courses and ballfields. It is recognized, however, that certain parks that are characterized by a nonindigenous landscape are naturalistic, and as such, contribute to the biodiversity of the region by providing wildlife habitat. An example of such a park includes the vegetation of Stern Grove which supports many species of birds. These "naturalistic" parks are generally prioritized in Rank C in recognition of the fact that the park does not meet all of the criteria listed above (particularly criterion A).

Staff developed an evaluation matrix using the above criteria and suggested the following initial priority ranking of properties for "significant natural resource area" designation.

Following supplemental field inventories, this ranking may be revised based on site specific programs. Field work may also show that a particular park should be a higher priority because it is threatened by an immediate ecological crisis, pursuant to criterion E.

All or PART of the following parks would be considered candidates for significant natural areas.

Rank A	Rank B	Rank C
Bayview Park Glen Canyon Park Lake Merced Mt. Davidson Twin Peaks	Bernal Hill Billy Goat Hill Buena Vista Park Corona Heights Golden Gate Heights -- (western edge) Golden Gate Park— Oak Woodland Strawberry Hill Grandview Park Kite Hill McLaren Park— southern grasslands McNab Lake/Marsh Rock Outcrop Sharp Park Tank Hill	Brooks Property Dorothy Erskine Park Edgehill Mtn. Open Space Fairmont Park Golden Gate Park— Selected Lakes Park Presidio Interior Greenbelt Lincoln Park Mountain Lake Park Rolph Nicol (southern edge) Stern Grove/Pine Lake Zoo

COMMENTS:

The program would focus on San Francisco park property and Sharp Park, however, Camp Mather may receive some review. Although the Zoo and Palace of Fine Arts (Lagoon) are included (Rank C), these sites may be questionable as natural areas.

III. GENERAL POLICIES AND MANAGEMENT ACTIONS

A. Vegetation

- Maintain/promote indigenous plant species; propagate native plants using seed collected from the specific site to avoid alteration of unique genetic strains of native plant species. This propagation policy should apply to the policies and management actions listed below to the extent possible.

- Control/remove invasive species.

- Provide fire breaks where appropriate and maximize indigenous vegetation with low flammability or low fuel volume in areas of high fire hazard.

- Utilize indigenous vegetation as ground cover to control erosion on steep slopes.

- Protect species listed as rare, threatened, endangered or of special concern.

- Remove exotic plants which adversely affect indigenous plant growth.

- Enhance riparian areas.

- Reforest and/or replant areas where appropriate to maintain diversity of indigenous plant communities.

- Preserve habitat which supports wildlife.

B. Wildlife

- Monitor wildlife population which is an indicator of a diverse ecosystem.

- Consult with agencies such as the State of California, Department of Fish and Game and The Nature Conservancy on habitat enhancement.

- Cooperate with other agencies (SPCA, Mayor's Office of Animal Care and Control) using established and humane procedures to remove or control free-roaming domestic dogs, feral cats and feral ducks or geese when their presence conflicts with natural wildlife.

- Develop educational programs with other agencies for wildlife protection.

C. Water Resources

- Maintain/improve water quality of streams and ponds.

- Protect riparian zones from erosion and sedimentation.

- Maintain drainage and erosion prevention devices along roads and service trails.

- Control drainage/runoff from roads.
- Establish and maintain tule encroachment zone around lakes.
- Use proper controls when applying aquatic herbicide.

D. Geotechnical/Soils

- Minimize erosion along roads and trails.
- Seed/plant bare soils with indigenous vegetation.
- Stabilize embankments when not in conflict with habitat.
- Minimize public access to and use of landslide areas and unstable slopes.
- Seek agreements with adjacent property owners to avoid development which contributes to erosion/runoff, or is subject to landslides.
- Clear landslide debris on park property.
- Install retaining devices where necessary to stabilize slopes.

E. Education

- Promote professional development of Recreation and Park Department staff in natural resources management.
- Develop nature programs to promote educational and recreational value of resources (for example, through the Randall Museum).
- Develop education programs aimed at private property owners adjacent to significant natural resource areas regarding the degradation of the resource resulting from such practices as dumping garden clippings or planting exotic species on park property.
- Develop education programs through the San Francisco Unified School District regarding significant natural resource areas. For example, work with staff at McAteer High School to develop an ecology program using Glen Canyon Park as an outdoor

classroom. Various aspects of the canyon ecology and history could be incorporated into the school curriculum in the form of class projects.

F. Public Use

- Develop guidelines for pathways and interpretative trails/signs.
- Control dirt bikes and off-road vehicle use.
- Encourage community participation in a public stewardship program.

SIGNIFICANT NATURAL RESOURCES AREA MANAGEMENT PLAN

ATTACHMENT A
SIGNIFICANT NATURAL AREA INVENTORY

(Name of Park) _____

(Area Surveyed) _____

(Date of Survey) _____

Natural Resources Notes	Applicable? Yes	No	
A. VEGETATION Ground cover Shrubs/vines Perennials Annuals Grasses Trees			Describe proportion of natural, exotics; any species on threatened or endangered plant list; sensitive plant endangered list; balance of flowering vs. non-flowering; habitat for animals; proportion of evergreen vs. deciduous self-seeding characteristics; pest and disease resistance; drought tolerant; irrigation; potential fire hazard.[1]
B. WILDLIFE			Describe all types; any species on T & E list; diversity; need for protection/enhancement.[1]
C. WATER			Natural water (ponds, creeks, streams, lakes); drainages; water quality; encroachment (tules, sedimentation).[1]
D. GEOLOGY/SOILS			Any rock outcropping; exposed soils/erosion; landslide areas; wetlands.[1]
E. PUBLIC USE			Active play area; viewing area; developed pathways; seating area; handicapped access; signage; lighting.[1]

[1] Show on map.

SIGNIFICANT NATURAL RESOURCES AREA MANAGEMENT PLAN

ATTACHMENT B
MOBILE CREW WORK PLAN

A component of the proposed Significant Natural Resource Areas Management Plan is to address immediate problems in selected parks that contain significant natural resources. An initial program to hire 3 to 4 gardeners from a temporary Civil Service list and/or retain the services of the San Francisco Conservation Corps on an as-needed basis is being considered.

The types of projects that would be assigned to the mobile crew would include:

- Invasive Weed Control
- Erosion Control/Shoreline Restoration (small scale)
- Ivy Removal/Control
- Revegetation Projects related to Invasive Weed and Erosion Control
- Fire Hazard Control
- Weedy Tree Control

RANK A PARKS	DURATION[1]
Bayview Park	1 month
Glen Canyon Park	2 months
Mt. Davidson (west side)	1 month
Twin Peaks	2 months
Lake Merced	1 month

RANK B PARKS	DURATION[1]
Bernal Hill	2 weeks
Corona Heights	1 month
Golden Gate Park: Oak Woodland	2 weeks
Golden Gate Park: Strawberry Hill	1 week
McLaren Park (South)	2 weeks
Billy Goat Hill	2 weeks
Grandview Park	1 month
Tank Hill	2 weeks
Golden Gate Heights (west side)	1 week
Rock Outcrop	1 week
Buena Vista Park	2 weeks
Sharp Park (Selected Natural Areas)	1 month
Kite Hill	2 weeks

RANK C PARKS	DURATION[1]
Stern Grove/Pine Lake	1 month
Brooks Property	1 week
Golden Gate Park (Selected Lakes)	2 weeks
Mountain Lake Park	2 weeks
Interior Greenbelt	2 weeks

[1]Weed Control: Duration noted is for first pass only. Repeated weed control will be needed.

APPENDIX F

Everson/Digby Natural Area Description

6.27 EVERSON/DIGBY

GENERAL DESCRIPTION AND LOCATION

Everson/Digby (E/D) is a 1.2-acre Natural Area located between Everson Street and Digby Street in the Diamond Heights area of San Francisco, east of Glen Canyon Park. Elevations range from 415 to 515 feet above sea level (Figure 6.27-1). The vegetation of E/D is composed primarily of grasslands with shrubs and trees along its lower boundary (Figure 6.27-1). E/D provides important habitat for native plants; grassland habitat; regionally significant City views; and suitable habitat for a variety of bird species.

GEOLOGY, HYDROLOGY, AND TRAILS

This Natural Area is an undeveloped open space comprised mostly of a steep hill rising up from Everson Street to Digby Street. Soil in this Natural Area is relatively shallow, typically less than one foot deep, and is underlain by Franciscan bedrock. The bedrock outcrops in the middle of the site, in a steep slope area (Figure 6.27-2).

There is no surface water at the site. Drainage of the area is by overland flow. Some rainfall percolates into fissures in the rock, but runoff generally is rapid.

No primary or secondary trials were observed in the E/D Natural Area. A paved sidewalk runs along Digby Street at the upper boundary of the natural area.

VEGETATION

The vegetation of E/D is classified into five series (Table 6.27-1; Figure 6.27-3). These series are within four sub-formations: approximately 79 percent of the area is grassland; 9 percent is forest; 7 percent is scrub; and 4 percent is classified as “other herb” (fennel). None of these series are dominated by native species.

Forest

One forest series was mapped at E/D: acacia forest. Within the Natural Area, only a small amount of land is covered by this species (0.11 acres).

Grassland

Two herbaceous series were mapped at E/D: wild oat grassland (0.95 acres) and fennel (0.05 acres). Wild oat grassland dominates the Natural Area.

Scrub

Two non-native scrub series were mapped at E/D: cottoneaster scrub (0.04 acres) and mixed exotic scrub which contains Scotch broom (*Cytisus scoparius*) (0.05 acres).

Sensitive Plant Species

No sensitive plant species have been observed at E/D. The California Natural Diversity Data Base (CNDDB) does not report the occurrence of any sensitive plant species at E/D (CNDDB 2009). It also does not provide potential habitat for sensitive plant species. Several native species were identified at E/D, including sky lupine (*Lupinus nanus*), yarrow (*Achillea millefolium*), and California melica (Melica californica).

Invasive Plant Species

All of the vegetation series at E/D are dominated by invasive species. As previously mentioned, wild oat grassland dominates the site. Acacia trees are encroaching into the Natural Area from the residential development that abuts E/D on the southern edge. Cotoneaster scrub, mixed exotic scrub and fennel occur in the eastern portion of E/D. Additional invasive species within the grassland include Bermuda buttercup (*Oxalis pes-caprae*), English plantain (*Plantago lanceolata*), and wild radish (*Raphanus sativus*).

WILDLIFE

Birds

The multi-storied complex habitat found within E/D and below the Natural Area may provide some nesting and roosting habitat for a wide variety of species. The grassland habitats of E/D provide foraging habitat for raptors such as red-tailed (*Buteo jamaicensis*) and red-shouldered (*Buteo lineatus*) hawks, while the Acacia forest edge provides potential nesting habitat for these species. Habitat for smaller birds (songbirds) is available in the scrub and forest habitats in and below the Natural Area. No areas of important bird habitat were delineated for this Natural Area.

Mammals, Reptiles, and Amphibians

No animal surveys were conducted at E/D; however, common animals are likely to occur here. Small mammals such as the California meadow vole (*Microtus californicus*), house mouse (*Mus musculus*), and pocket gopher (*Thomomys bottae*) are likely to be found in this habitat. Large mammals such as raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*) and Virginia opossum (*Didelphis virginiana*) are typical of urbanized parks in general and are expected to occur within E/D. Reptiles typical of grassland habitats, such as garter snakes, are suspected to occur here, but have not been reported. The CNDDB does not report any sensitive species as

occurring within the area (CNDDB 2009), and the area does not provide potential suitable habitat for sensitive species.

Invertebrates

Sensitive Invertebrate Species

At least three special-status species of butterflies potentially occur within the City of San Francisco: mission blue butterfly (*Icaricia icarioides missionensis*), San Bruno elfin butterfly (*Incisalia mossii bayensis*), and bay checkerspot butterfly (*Euphydryas editha bayensis*). The CNDDB does not report the occurrence of any special-status species of invertebrates at E/D (CNDDB 2009), and the site does not provide potential habitat for these species.

MANAGEMENT AREAS

The Management Areas (MAs) at E/D have been delineated based on the presence of diverse native grasslands. The MA-1a area supports a rich array of species including California poppy (*Eschscholzia californica*), purple needle grass (*Nassella pulchra*), and California melica (*Melica californica*), and is more intact habitat than the MA-2a area which borders Digby Street. The MA-3a areas include tree and shrub communities (Figure 6.27-4).

ISSUES AND RECOMMENDATIONS

Several conservation and recreation-related issues have been identified for E/D. Recommendations developed for each of these issues will guide restoration, enhancement, and maintenance work. In the following discussion, system-wide issues and recommendations (GR-1 for example; see Chapter 5) that apply to the entire Natural Area at E/D are presented first within each topical area, followed by site-specific issues and recommendations. Site-specific recommendations are keyed to the Management Area in which they should occur.

Site Improvements – Implementation of management recommendations at E/D would not change significantly the overall look of the park and would result in:

- improved wildlife habitat;
- enhancement of native grasslands.

Careful management and restoration of the grasslands at E/D will create a native grassland that is rich in plant species and offers habitat for sensitive species of butterflies. This grassland may be comparable to that found on the northern slope of Bayview Park (Section 6.17) or on San Bruno Mountain.

Vegetation

Issues relating to vegetation management at E/D involve the protection of habitats, typically though the control of invasive plants (GR-1). Specific actions to take in managing grasslands such as those present at E/D should be implemented (GR-3). No trees will be removed at E/D. Issues relating to the general safety of visitors and surrounding homes, fire hazards posed by vegetation and trees, and illicit activities must be considered during management of the Natural Areas (GR-13). In addition to these general recommendations, the following site-specific issues should be addressed.

Issue ED-1: Invasive species occur throughout E/D and pose a threat to the grasslands

> ***Recommendation ED-1a:*** Reduce and contain herbaceous and woody invasive species, including radish, fennel, and annual grasses in all Management Areas. Prevent the establishment of invasive trees in grasslands.
>
> ***Recommendation ED-1b:*** Areas where invasive species have been removed shall be revegetated using appropriate native plants. Existing grasslands will be enhanced and diversified as appropriate (MA-1a and MA-2a). Specifically, within MA-1a, efforts shall be taken to augment the existing uncommon grassland plant species such as silver lupine (*Lupinus albifrons* var. *collinus*). Within MA-2a, the existing non-native grassland should be slowly replaced with a native grassland including California poppy (*Eschscholzia californica*), purple needle grass (*Nassella pulchra*), and California melica (*Melica californica*). Using diversity, cover, and density targets generated from reference sites within and around San Francisco, plant native grassland species in the appropriate areas (see Appendix B).
>
> ***Recommendation ED-1c:*** Contain and/or reduce acacia, broom, cotoneaster, and fennel in MA-3a and diversify the grassland interface with wildlife-enhancing species and design.

Wildlife

Implementation of system-wide recommendations that relate to vegetation management and nesting birds (GR-4), predation (GR-7), increasing cover for small mammals and birds (GR-9) and installation of host plants for native insects (GR-10) would all serve to enhance the wildlife habitat at E/D.

Soils, Erosion, and Public Use

No primary or secondary trials were observed in the E/D Natural Area. The issue of erosion and habitat impacts related to social trails that may develop is addressed through implementation of GR-11 and GR-12.

Table xx. Vegetation series mapped at Everson/Digby.

	Vegetation Series	Total Acreage
Forest	acacia forest	0.11
	Subtotal	**0.11**
Scrub	cottoneaster scrub	0.04
	Scotch broom	0.05
	Subtotal	**0.09**
Grassland	wild oat grassland	0.95
	fennel	0.05
	Subtotal	**1.00**
Grand Total		**1.20**



Source: Orthophoto - SFDT, 2007; Street Data - SFDPW, 2009; Contour Data - HJW, 2001; Property Data REIS, 2005; Significant Natural Area Data created by RPD Planning from information provided by RPD Natural Area Program, 2010; All Data are NAD 1983 StatePlane California III FIPS 0403 Feet

Created by Sean Stasio, SFRPD Planning Division for SFRPD Significant Natural Areas Program, November 2010

N

0 25 50 75 100
Feet

FIGURE 6.27-1

AERIAL PHOTOGRAPH, PROPERTY BOUNDARIES, AND NATURAL AREAS

Everson/Digby

Significant Natural Resource Areas Management Plan

San Francisco, California



Source: Orthophoto - SFDT, 2007; Street Data - SFDPW, 2009; All Data are NAD 1983 StatePlane California III FIPS 0403 Feet

Created by Yashekia Evans, Tetra Tech, for SFRPD Significant Natural Areas Program, April 2011.

N

0 50 100
Feet

FIGURE 6.27-2

SOILS AND LAND FEATURES

Everson/Digby

Significant Natural Resource Areas Management Plan

San Francisco, California



SAN FRANCISCO RECREATION & PARKS

Source: Orthophoto - SFDT, 2007; Street Data - SFDPW, 2009;
Significant Natural Area Data created by RPD Planning from information provided by RPD Natural Area Program, 2010;
All Data are NAD 1983 StatePlane California III FIPS 0403 Feet

Created by Sean Stasio, SFRPD Planning Division
for SFRPD Significant Natural Areas Program, November 2010

N

0 25 50 75 100
Feet

FIGURE 6.27-3

VEGETATION

Everson/Digby

Significant Natural Resource Areas Management Plan

San Francisco, California



Mgmt Area	Action
MA-1a	Maintain diverse native grassland
	Reintroduce sensitive plants
MA-2a	Maintain and enhance grassland
MA-3a	Maintain and enhance multi-storied forest-scrub ecotone with oaks, and buckeye
Natural Area Wide Management Actions	
	Reduce and contain herbaceous and woody weeds No invasive tree removal unless specified above Prevent recruitment of invasive trees unless specified above Provide access on designated trails only Social trails subject to closure Total invasive tree removal: 0; Total invasive trees to remain: 0. Implement erosion control as required (GR-12) Implement wildlife enhancements as appropriate

SAN FRANCISCO RECREATION & PARKS

Source: Orthophoto - SFDT, 2007; Street Data - SFDPW, 2009;
Significant Natural Area Data created by RPD Planning from information provided by RPD Natural Area Program, 2010;
All Data are NAD 1983 StatePlane California III FIPS 0403 Feet

Created by Sean Stasio, SFRPD Planning Division
for SFRPD Significant Natural Areas Program, NOvember 2010

N

0 25 50 75 100
Feet

FIGURE 6.27-4

MANAGEMENT AREAS

Everson/Digby

Significant Natural Resource Areas
Management Plan

San Francisco, California

APPENDIX G

Cumulative Projects

San Francisco Related Cumulative Projects List

Area Plans

PLAN AREA	NATURAL AREAS
Bayview Hunters Point	Bayview Park, Bernal Hill, India Basin Shoreline Park, Palou/Phelps
Hunters Point Shipyard	India Basin Shoreline Park
Market and Octavia	Buena Vista Park, Corona Heights
Mission	Bernal Hill

Planning Cases

NATURAL AREAS	CASE NO	PROJECT NAME	NOTICE
15th Avenue Steps	2008.0612	1427 11TH AV	Two-story vertical addition to the existing one-story, 1,368 sqft single-family dwelling, and a three-story horizontal side addition to the south side of existing dwelling. The resulting structure will be three stories in height and 2-dwelling units.
15th Avenue Steps	2010.0264	RPD-Grandview Park Restoration Work	Repair existing retaining walls, restore trail, provide new protective fencing, provide soil erosion control measures, and native plant restoration.
Balboa Natural Area	2010.0350	640 46TH AV	3rd-story vertical addition and remodel at 2nd-story of a single-family residence.
Bayview Park	2006.0422	Executive Park	General Plan Amendment and Zoning Map change to amend the Executive Park Subarea Plan of the South Bayshore Area Plan.
Bayview Park	2009.0311	SUNNYDALE SEWER IMPROVEMENT	SFPUC auxiliary sewer project to alleviate flooding in the Visitation Valley/Sunnydale neighborhood, with new main alignment N along county line to SF Bay; previous main tunnel alignment (1998.123E) Negative Declaration.
Bayview Park	2008.1110	6600 Third Street	100% Affordable DUs (42,238 square feet) and 21 off-street parking spaces. New building would be 40 feet tall. Demolition of 43 residential hotel rooms and construction of 25 new dwelling units and 55 group housing units.
Bayview Park	2009.0815	RPD-Candelstick Park	Add temporary pedestrain bridge over Hunters Point Expressway.
Bayview Park	2009.0839	BOS 091036-Third St/LeConte Affordable Housing SUD	Planning Code amendment establishing the Third Street and Le COnte Ave Affordable Housing Special Use District.
Bayview Park	2010.0863	Visitacion Valley Impact Fee	Amendments to the Planning Code Section 420.1-420.5: The Visitacion Valley Community Facilities and Infrastructure Fee and Fund [Board File No. 10-----]. Ordinance introduced by Supervisor Maxwell amending Planning Code Sections 420.1 (Findings), 420.2
Bayview Park	2010.0708	RPD- Candlestick Park 2010	Add temporary pedestrain bridge over Hunters Point Expressway.
Bernal Hill	2008.0283	41 MIRABEL AV	Existing 2-unit, 3-story, 3298 sqft residential building. Proposed unit merge of the top two floors, remodel garage into a unit, and addition of a 1-car garage.
Bernal Hill	2008.0409	384 HOLLADAY AV	Develop single-family dwellings on each lot with two off-street parking spaces each. Downslope Lots.
Bernal Hill	2009.0195	280 BAYSHORE BL	Micro Bio Diesel Refinery; blending, fueling hybrid
Bernal Hill	2009.0338	97 ANDOVER ST	Parking variance. Addition/Alteration of single-family residence.
Bernal Hill	2009.0725	128 ELSIE ST	New single-family residence on a vacant downsloping lot.
Bernal Hill	2009.1018	183 BREWSTER ST	New 2,811 sqft single-family residence on vacant lot.
Bernal Hill	2009.0276	CESAR CHAVEZ AUXILIARY SEWER	New 1.2mi auxiliary sewer to address localized flooding, Cesar Chavez Street Area. Alignment from east: off Napoleon, Jerrold, Precita, Cesar Chavez west to Valencia, Duncan, Guerrero, Fair, Coleridge, Coso. Replaces existing brick sewer in Cesar Chavez
Bernal Hill	2009.0753	3155 Cesar Chavez Street	Vertical and horizontal addition of a church in an R-district. Requires CU per 209.3(j)
Bernal Hill	2009.1173	1467 SHOTWELL ST	2-story side addition and alterations to the existing entry way of a single-family residenence.
Bernal Hill	2010.0306	10 Bernal Heights	Modify CU to install 5 dish antennas.
Billy Goat Hill	2006.0974	1700 DIAMOND ST	Demolish existing single-family home, subdivide existing parcel resulting in four new lots, and construct four new single-family homes.
Billy Goat Hill	2007.0679	290 BEACON ST	Renovation of front facade, construction of horizontal addition to either side of the existing second and third floors, construction of horizontal addition to the rear of the existing basement, second, and third floors, and construction of a new basement
Billy Goat Hill	2008.0041	527 29TH ST	Raise existing single-family residence from 24'-7" to 34'-4" in height. Create new 2-car tandem garage at lower level. Proposed addition of 1,422 sqft for a totla of 3,811 sqft.
Billy Goat Hill	2008.1218	70 GOLD MINE DR	Demolition of existing single-family residnece and detached garage. Proposed subdivision and construction of 4 residnetial units.
Billy Goat Hill	2009.1025	140 - 142 Laidley Street	Dwelling unit merger from 3 dwellings to 2 dwellings. Project inlcudes adding a garage and constructing additions to the cottage portion of the building.
Billy Goat Hill	2010.0876	631 29TH ST	Alteration of the roofline to crate more habitable space at the 2nd floor of the existing single-family building.
Billy Goat Hill	2010.1032	2329 CASTRO ST	Raise subject building by approx. 5ft to create gound level living space and storage space.
Billy Goat Hill	2010.0446	RPD-Billy Goat Hill	repair and replace landscaping at park.
Brooks Park	2008.0580	439 VERNON ST	Demo existing dwelling and construct a 2-story single-family dwelling with one off-street parking space.
Brooks Park	2008.0212	1101 JUNIPERO SERRA BL	Demolish existing gas station and construct 3 story mixed use project with 8 dwelling units.
Brooks Park	2009.0240	BOS 090319	Amend Planning Code Section 263.20 to allow special height exception for ground floor uses.
Brooks Park	2010.0621	314 RANDOLPH ST	New construction on vacant lot for new 8-unit residential building with a health center on the ground and first floors.
Buena Vista Park	2001.1056	280 DIVISADERO ST	3/20/04 - Determination that project may have significant effect on environment 6/26/03 - Environmental Evaluation filed Request for a Certificate of Appropriateness for effective demolition replacement carriage house, converted to residential unit.
Buena Vista Park	2005.0927	755 ASHBURY ST	Amend existing PUD; move house. Previous CATEX. AKA 36-38 DOWNEY
Buena Vista Park	2005.0555	CA Pacific Medical Center (CPMC)	California Pacific Medical Center - Four Campus Master Plan - (1) Cathedral Hill, (2) Pacific, (3) California, and (4) Davies Campuses. Revised Application (2/22/2008): CPMC Long Range Development Plan: (1) Cathedral Hill (reduced), (2) Pacific, (3)

Buena Vista Park	2008.0775	1000 GREAT HY- 811 Stanyan St	Seismic upgrade of building and infrastructure and code improvments. No changes to building envelope.
Buena Vista Park	2008.1232	Int Moratorium Haight Paraphernalia	BOS 081380: Urgency Ordinance impsoing interim zoning moratorium prohibiting new tobacco paraphernalia shops in the Haight NCD, or Haight Street NC-1 or NC-2 for period of 45 days.
Buena Vista Park	2008.0845	SF BOTANICAL GARDEN	SF Botanical Garden, in Golden Gate Park, to replace two greeenhouses, total of 6,960-sf, with 13,000-sf Center for Sustainable Gardening, 1-story, replace 10 parking spaces, remove a number trees for enlarged building footprint, terraced growing areas a
Buena Vista Park	2009.0811	1580 MASONIC AV	4th floor addition. 1st, 2nd, 3rd floor horizontal addition. Interior changes.
Buena Vista Park	2009.1003	1138 PAGE ST	Addition and alteration of existing 2-unit residence to proposed 4 unit, 4parking space residential building.
Buena Vista Park	2009.0269	RPD-Buena Vista Park Improvement	Trail extension, clearing and grubing, erosion control measures, small retaining walls and native plantings.
Buena Vista Park	2009.0419	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel,lighting modifications tea sipping and preparation, retail concession
Buena Vista Park	2009.1170	37 - 39 LLOYD STREET (aka 35 LLOYD STREET)	Vacant lot and new construction of a 4- story, 2-unit residential building with 2 parking spaces.
Buena Vista Park	2010.0016	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artifical turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.
Buena Vista Park	2010.0445	RPD-Corona Heights	Repair and replace existing landscaping.
Corona Heights	2005.0555	CA Pacific Medical Center (CPMC)	California Pacific Medical Center - Four Campus Master Plan - (1) Cathedral Hill, (2) Pacific, (3) California, and (4) Davies Campuses. Revised Application (2/22/2008): CPMC Long Range Development Plan: (1) Cathedral Hill (reduced), (2) Pacific, (3)
Corona Heights	2008.0430	2299 MARKET ST	Develop vacant lot with 34,477 sqft, 5-story, 50-foot high mixed-use building with ground floor retail, 18 residential units and a basement garage. Project includes a rear yard modification request.
Corona Heights	2008.1188	136 ORD ST	Historic resource determination
Corona Heights	2009.0269	RPD-Buena Vista Park Improvement	Trail extension, clearing and grubing, erosion control measures, small retaining walls and native plantings.
Corona Heights	2009.0811	1580 MASONIC AV	4th floor addition. 1st, 2nd, 3rd floor horizontal addition. Interior changes.
Corona Heights	2009.1097	2362 15TH ST	Addition/alteration to existing 4-unit building.
Corona Heights	2010.0445	RPD-Corona Heights	Repair and replace existing landscaping.
Corona Heights	2010.0634	75 CLIFFORD TR	Addition/alteration at front of single-family dwelling to add a new garage and reconfigure the existing bay window.
Dorothy Erskine Park	2008.0374	279 MONTEREY BL	Demoiltion of existing single-family residence.
Dorothy Erskine Park	2009.0652	125 CHILTON AV	Addition alteration to single-family dwelling.
Dorothy Erskine Park	2009.1098	75 VAN BUREN ST	863 sqft addition that includes a new bedroom, bathroom and a living room. Will remain a single-family dwelling.
Dorothy Erskine Park	2010.0391	1259 BOSWORTH ST(aka 701 CONGO ST)	Two-lot subdivision
Dorothy Erskine Park	2010.0587	185 CHILTON AV	Rear Yard and Exposure Variances to construct new one-story extension connecting front garage structure to rear dwelling unit.
Duncan-Castro	2006.0974	1700 DIAMOND ST	Demolish existing single-family home, subdivide existing parcel resulting in four new lots, and construct four new single-family homes.
Duncan-Castro	2006.1102	1409 SANCHEZ ST	Demolish existing single-family building and replace it with a new two units residential building. DR pursuant to Section 317 of the Code.
Duncan-Castro	2008.0041	527 29TH ST	Raise existing single-family residence from 24'-7" to 34'-4" in height. Create new 2-car tandem garage at lower level. Proposed addition of 1,422 sqft for a totla of 3,811 sqft.
Duncan-Castro	2008.1218	70 GOLD MINE DR	Demolition of existing single-family resident and detached garage. Proposed subdivision and construction of 4 residnetial units.
Duncan-Castro	2009.1019	1412 DIAMOND ST	1,131 sqft 3rd floor and rear addition to existing single-family residence.
Duncan-Castro	2010.0876	631 29TH ST	Alteration of the roofline to crate more habitable space at the 2nd floor of the existing single-family building.
Duncan-Castro	2010.1032	2329 CASTRO ST	Raise subject building by approx. 5ft to create gound level living space and storage space.
Edgehill Mountain	2009.0411	40 EDGEHILL WY	Demolition and construction of a new single-family residence.
Edgehill Mountain	2010.0156	1043 PORTOLA DRIVE	Vertical addition to existing 2-story building that includes strucutral upgrade and replacement and repair of existing windows and doors.
Everson Digby	2006.0076	538 LAIDLEY ST	To construct a two-story over garage single-family dwelling on a vacant lot. The previous dwelling on the lot was destroyed by fire, as a result, an emergency demolition was issued by the DBI, to demolish the bldg. in an RH-1 district.
Everson Digby	2006.0974	1700 DIAMOND ST	Demolish existing single-family home, subdivide existing parcel resulting in four new lots, and construct four new single-family homes.
Everson Digby	2006.0076	538 LAIDLEY ST	To construct a two-story over garage single-family dwelling on a vacant lot. The previous dwelling on the lot was destroyed by fire, as a result, an emergency demolition was issued by the DBI, to demolish the bldg. in an RH-1 district.
Everson Digby	2007.0679	290 BEACON ST	Renovation of front facade, construction of horizontal addition to either side of the existing second and third floors, construction of horizontal addition to the rear of the existing basement, second, and third floors, and construction of a new basement
Everson Digby	2008.0041	527 29TH ST	Raise existing single-family residence from 24'-7" to 34'-4" in height. Create new 2-car tandem garage at lower level. Proposed addition of 1,422 sqft for a totla of 3,811 sqft.
Everson Digby	2008.1218	70 GOLD MINE DR	Demolition of existing single-family resident and detached garage. Proposed subdivision and construction of 4 residnetial units.
Everson Digby	2009.0069	564 CHENERY ST	3-story fron addition to existing 2-story residnetial house.
Everson Digby	2009.1019	1412 DIAMOND ST	1,131 sqft 3rd floor and rear addition to existing single-family residence.
Everson Digby	2009.1098	75 VAN BUREN ST	863 sqft addition that includes a new bedroom, bathroom and a living room. Will remain a single-family dwelling.
Everson Digby	2009.1025	140 - 142 Laidley Street	Dwelling unit merger from 3 dwellings to 2 dwellings. Project inlcudes adding a garage and constructing additions to the cottage portion of the building.
Everson Digby	2010.0876	631 29TH ST	Alteration of the roofline to crate more habitable space at the 2nd floor of the existing single-family building.
Everson Digby	2010.1032	2329 CASTRO ST	Raise subject building by approx. 5ft to create gound level living space and storage space.
Everson Digby	2010.0446	RPD-Billy Goat Hill	repair and replace landscaping at park.
Fairmount Park	2006.0076	538 LAIDLEY ST	To construct a two-story over garage single-family dwelling on a vacant lot. The previous dwelling on the lot was destroyed by fire, as a result, an emergency demolition was issued by the DBI, to demolish the bldg. in an RH-1 district.

Fairmount Park	2007.0679	290 BEACON ST	Renovation of front facade, construction of horizontal addition to either side of the existing second and third floors, construction of horizontal addition to the rear of the existing basement, second, and third floors, and construction of a new basement
Fairmount Park	2009.0069	564 CHENERY ST	3-story fron addition to existing 2-story resident house.
Fairmount Park	2009.1025	140 - 142 Laidley Street	Dwelling unit merger from 3 dwellings to 2 dwellings. Project inlcudes adding a garage and constructing additions to the cottage portion of the building.
Fairmount Park	2010.0446	RPD-Billy Goat Hill	repair and replace landscaping at park.
Glen Canyon Park	2008.1218	70 GOLD MINE DR	Demolition of existing single-family resident and detached garage. Proposed subdivision and construction of 4 residnetial units.
Glen Canyon Park	2009.1098	75 VAN BUREN ST	863 sqft addition that includes a new bedroom, bathroom and a living room. Will remain a single-family dwelling.
Glen Canyon Park	2010.0391	1259 BOSWORTH ST(aka 701 CONGO ST)	Two-lot subdivision
Glen Canyon Park	2010.0167	201 TERESITA BL	Vertical addition to existing single-family residence.
Golden Gate Heights	2009.0521	916 ORTEGA ST	2-story rear addition and a new 3rd floor. Remove non-confomring rear addition.
Golden Gate Heights	2009.0755	2021 16TH AV	Interior remodel, re-roof (flat to pitch), and change in entrance elevation.
Golden Gate Heights	2010.0930	PUC-Forest Hill Pump Station Upgrades Project	Demolition of the existing pump station and replacement with a new potable water pump station to meet current Building Code standards as an essential utility facility.
Golden Gate Heights	2010.0396	645 QUINTARA ST	Vertical addition to single-family residence to provide an additional two bedrooms. Would remain a single-faily residence.
Golden Gate Heights	2010.0384	2192 FUNSTON AVENUE	Vacant lot. New construction of a single-family 3,401 sqft, 40-foot high residential building.
Golden Gate Heights	2010.0181	2 QUINTARA ST	Lot Line Adjustment
Grandview Park	2009.0521	916 ORTEGA ST	2-story rear addition and a new 3rd floor. Remove non-confomring rear addition.
Grandview Park	2010.0264	RPD-Grandview Park Restoration Work	Repair existing retaining walls, restore trail, provide new protective fencing, provide soil erosion control measures, and native plant restoration.
Grandview Park	2010.0297	1770 16TH AV	3rd floor vertical addition to existing SFD setback 15-feet from front facade.
Hawk Hill	2009.0085	202 SAN MARCOS AV	To construct a three-story over garage single-family dwelling on a vacant lot.
Hawk Hill	2009.0085	160 SAN MARCOS AVENUE	To construct a three-story over garage single-family dwelling on a vacant lot.
Hawk Hill	2010.0930	PUC-Forest Hill Pump Station Upgrades Project	Demolition of the existing pump station and replacement with a new potable water pump station to meet current Building Code standards as an essential utility facility.
Hawk Hill	2010.0396	645 QUINTARA ST	Vertical addition to single-family residence to provide an additional two bedrooms. Would remain a single-faily residence.
Hawk Hill	2010.0384	2192 FUNSTON AVENUE	Vacant lot. New construction of a single-family 3,401 sqft, 40-foot high residential building.
Hawk Hill	2010.0181	2 QUINTARA ST	Lot Line Adjustment
India Basin Shoreline Park	2009.0919	1000 EVANS AV	Remediation work involving digging of three recovery trenches with lengths varying from 120 ft to 175 ft.
Interior Green Belt	2008.1087	1427 SHRADER ST	Horizontal and vertical addition; modification to the facade. Addiing one more unit.
Interior Green Belt	2009.0299	4963 17TH ST	Horizontal and vertical addition to existing 2-story single-family residence.
Interior Green Belt	2009.0487	200 BELGRAVE AV	Addition/Alteration to single-family residence.
Interior Green Belt	2009.0156	89 BELGRAVE AV	Lot line adjustment to divide one 7,500 sq.ft. lot into a 4,000 sq.ft. and 3,000 sq.ft. lot. Vertical and Horizontal Addition to existing single family residence of 1,300sf, resulting in a 4,200 sf single-family residence. New construction of a 4,000 sf
Interior Green Belt	2009.0568	AWSS SEISMIC & SYSTEM UPGRADES	Five pump station and tank retrofit/rebuild projects, part of AWSS program improvements.
Interior Green Belt	2009.0814	36 WOODLAND AV	Expand roof to livable space by adding 900 sf to an existing 2,800 sf single family home.
Interior Green Belt	2009.1152	Earthquake Safety & Emergency Response Bond	-Auxilliary Water Supply System -Critical Facilities and Infrastructure -Public Safety Building -Forensic Science Center Project Preliminary work for this DPW bond measure. Earthquake Safety and Emergency Response Bond. The Earthquake Safety and
Interior Green Belt	2009.0980	1560 SHRADER ST	Additon/alteration to single-family residence.
Interior Green Belt	2010.0351	5370 BELVEDERE ST	Rear addition and new doormers, raise the building 12", add new garage and driveway, and renovate kitchen, family room, master bedroom, bathrooms, and stairs.
Interior Green Belt	2010.0001	45 GRATTAN ST	NEW CONSTRUCTION. FRONT SETBACK VARIANCE
Kite Hill	2008.1178	1344 CLAYTON ST	Rear yard variance
Kite Hill	2008.1188	136 ORD ST	Historic resource determination
Kite Hill	2008.1191	358 DIAMOND ST	Raise existing 2,285 sqft 2-story house 5-feet in order to add 3-car garage at ground level. Add new driveway and curb cut, which will require removal of one street tree. Replace existing front stairs to accomdate increased height. Add 26 sqft addition a
Kite Hill	2008.0040	86 STANTON ST	Construction of 3,081 sqft, 25'-11" in height single-family residence with existing secondary structure. Parking provided on adjacent lot per ZA's letter of determination.
Kite Hill	2009.0196	117 DIAMOND ST	Adding expanded child care to existing school use for 13+ children
Kite Hill	2009.0568	AWSS SEISMIC & SYSTEM UPGRADES	Five pump station and tank retrofit/rebuild projects, part of AWSS program improvements.
Kite Hill	2009.0788	324 CASELLI AV	Interior improvements and vertical 3rd story addition.
Kite Hill	2009.0826	225 DOUGLASS ST	Interior renovations, front facade renovation, vertical 3rd story addition, horizontal rear addition and seismic upgrade.
Kite Hill	2009.1152	Earthquake Safety & Emergency Response Bond	-Auxilliary Water Supply System -Critical Facilities and Infrastructure -Public Safety Building -Forensic Science Center Project Preliminary work for this DPW bond measure. Earthquake Safety and Emergency Response Bond. The Earthquake Safety and
Kite Hill	2010.0005	4260 22ND ST	Remove asbestos shingles and replace with stucco and replace existing aluminum windows and front door.
Kite Hill	2010.0354	267 EUREKA ST	Enclose a protion of the front porch of an existing single-family residence.
Kite Hill	2010.1033	4226 22ND ST	Proposed addition to 2-unit dwelling.
Kite Hill	2010.0208	445 DOUGLASS ST	Addition/alteration to front primary facade of single-family residence. Would remain a single-family residence.
Kite Hill	2010.0372	479 DOUGLASS ST	Horizontal 3-story addition behind existing 3-story residence.

Kite Hill	2010.0598	75 MARS STREET	Addition/alteration to existing single-family dwelling to add a new residential unit, a new garage and exapnd all levels of existing building and a new vertical floor addition, rear yard variance required for rear addition that would extend to the rear p
Lake Merced	2008.0021	3711 19th Avenue (Parkmerced)	Master redevelopment program for 116-ac Parkmerced site, proposed to retain existing midrise bldgs and demo/replace all others w/ 4-14-story residential bldgs, on-site relocation of existing residents @ current rent-controlled rates, concurrent infrastru
Lake Merced	2008.1122	WSIP Groundwater Project B	SFPUC WSIP Groundwater Project B-- North Westside Basin local supply project. Would provide additional potable water supply using locally developed groundwater; construct six well stations, including three in GGP, and five miles of new distribution pipel
Lake Merced	2010.0099	PUC-Sunset Supply Pipeline Vegetation Clearing	Remove trees and vegetation around the Sunset Supply Pipeline.
Lakeview/Ashton	2009.0240	BOS 090319	Amend Planning Code Section 263.20 to allow special height exception for ground floor uses.
Lakeview/Ashton	2009.0297	239 MINERVA ST	Demolish existing 1-story substandard, non-comforming single-family resindece at rear of lot, lot line adjustment with lot 069, divide into 2 parcels and construct a single-family home on each site.
Lily Pond	2008.0775	1000 GREAT HY- 811 Stanyan St	Seismic upgrade of building and infrastructure and code improvments. No changes to building envelope.
Lily Pond	2008.0845	SF BOTANICAL GARDEN	SF Botanical Garden, in Golden Gate Park, to replace two greeenhouses, total of 6,960-sf, with 13,000-sf Center for Sustainable Gardening, 1-story, replace 10 parking spaces, remove a number trees for enlarged building footprint, terraced growing areas a
Lily Pond	2009.0419	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel,lighting modifications tea sipping and preparation, retail concession
Lily Pond	2010.0016	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artifical turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.
McLaren Park	2007.0389	228 RAYMOND AV	Two story horizontal addition in front requiring a front yard setback variance.
McLaren Park	2008.1050	191 TIOGA AV	Demolition of single family house (located on two lots) and garage (on a third lot). Construction of 3 single family homes on the three lots.
McLaren Park	2009.0307	555 MOSCOW ST	Horizontal addition for addtional guest room and study.
McLaren Park	2009.0756	469 RAYMOND AV	Demolish 1-story single-family residential building straddled in the middle of two lots and construct two single-family residential buildings on each lot.
McLaren Park	2009.1073	1200 BOWDOIN ST	Retaining wall between 1200 and 1208 Boudin Street.
McLaren Park	2010.0305	Sunnydale HOPE SF Master Plan	The project project is the Sunnydale HOPE SF Master Plan. The proposed project would demolish the existing Sunnydale public housing complexes and construct replacement housing, new market rate housing, infrastructure, open space, and community ammentitie
McLaren Park	2010.0863	Visitacion Valley Impact Fee	Amendments to the Planning Code Section 420.1-420.5: The Visitacion Valley Community Facilities and Infrastructure Fee and Fund [Board File No. 10-----]. Ordinance introduced by Supervisor Maxwell amending Planning Code Sections 420.1 (Findings), 420.2
McLaren Park	2010.0616	137 ARLETA AV	Horizontal/vertical addition to existing single-family residence to add a new garage. Would remain a single-family residence.
Mt. Davidson	2008.0558	795 FOERSTER ST	2 lot merger and 4 Lot subdivision, construction of 3 SFDs on three new lots
Mt. Davidson	2010.0167	201 TERESITA BL	Vertical addition to existing single-family residence.
Mt. Davidson	2010.0156	1043 PORTOLA DRIVE	Vertical addition to existing 2-story building that includes strucutral upgrade and replacement and repair of existing windows and doors.
Oak Woodlands	2006.0460	690 STANYAN ST	Demolish existing one-story retail and mezzanine containing approximately 23,600 sq. ft. and construct a new 62 unit residential structure with 34,400 sq. ft. of groundfloor retail. Two stories of underground parking would also be proposed for 176 total
Oak Woodlands	2008.0775	1000 GREAT HY- 811 Stanyan St	Seismic upgrade of building and infrastructure and code improvments. No changes to building envelope.
Oak Woodlands	2008.1273	25 BALBOA ST	One story vertical addition over the existing two-story over garage and convert existing single-family dwelling to two family dwellings.
Oak Woodlands	2008.0395	2130 FULTON ST	Construction of a 4 story 59,900-sf University of San Francisco Teaching Building and Demolition of 17,000-sf of a Concrete Plaza,
Oak Woodlands	2008.0845	SF BOTANICAL GARDEN	SF Botanical Garden, in Golden Gate Park, to replace two greeenhouses, total of 6,960-sf, with 13,000-sf Center for Sustainable Gardening, 1-story, replace 10 parking spaces, remove a number trees for enlarged building footprint, terraced growing areas a
Oak Woodlands	2009.1072	32 COLE ST	Remove and reaplce existing failing concrete retaining wall.
Oak Woodlands	2009.0419	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel,lighting modifications tea sipping and preparation, retail concession
Oak Woodlands	2010.0016	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artifical turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.
Oak Woodlands	2010.0014	226 CABRILLO ST	Demo existing single-family dwelling
Palou/Phelps	2003.1048	4800 Third St.	Proposal to build a mixed use project with 15 BMR DUs over commercial. Zoning Map changes for height and SUD for affordable housing. Requires PUD for exceptions to parking variance and rezoning.
Palou/Phelps	2007.1141	4701 03RD ST	Seismic retrofit and ADA access upgrades, balcony rehabilitiation, interior and exterior prep and paint, prescenium evaluation.
Palou/Phelps	2009.0304	SFPL-Bayview Branch Library	Demo and construction of a new Bayview Branch Library, R-Case: The project proposes to remove existing Bayview Anna E Waden Branch Library and the neighborhing storefront. The new library will be an approximately 9,000 square feet one-story building wit
Palou/Phelps	2009.0313	1911-1915 Quesada	Construction of two new single-family residences on two vacant lots.
Palou/Phelps	2010.1020	PUC-City Distribution Division Corp. Yard Fueling	PUC-City Distribution Division Corp. Yard Fueling Station.
Palou/Phelps	2010.0489	MTA-4701 03RD ST (Bayview Opera House Plaza)	Street and plaza improvements around the Bayview Opera House. No changes to the Opera building.
Palou/Phelps	2010.0199	PUC Southeast Water Pollution Control Plant	Proposed SEWPCP Medium Voltage Reliabilitity System Upgrad Project would remove and replace the existing 15kV electrical cables and would install new equipment.

Rock Outcrop	2009.0521	916 ORTEGA ST	2-story rear addition and a new 3rd floor. Remove non-confomring rear addition.
Rock Outcrop	2009.0755	2021 16TH AV	Interior remodel, re-roof (flat to pitch), and change in entrance elevation.
Rock Outcrop	2010.0264	RPD-Grandview Park Restoration Work	Repair existing retaining walls, restore trail, provide new protective fencing, provide soil erosion control measures, and native plant restoration.
Rock Outcrop	2010.0297	1770 16TH AV	3rd floor vertical addition to existing SFD setback 15-feet from front facade.
Strawberry Hill	2008.0775	1000 GREAT HY- 811 Stanyan St	Seismic upgrade of building and infrastructure and code improvments. No changes to building envelope.
Strawberry Hill	2008.0845	SF BOTANICAL GARDEN	SF Botanical Garden, in Golden Gate Park, to replace two greeenhouses, total of 6,960-sf, with 13,000-sf Center for Sustainable Gardening, 1-story, replace 10 parking spaces, remove a number trees for enlarged building footprint, terraced growing areas a
Strawberry Hill	2009.0419	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel,lighting modifications tea sipping and preparation, retail concession
Strawberry Hill	2010.0016	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artifical turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.
Tank Hill	2008.1087	1427 SHRADER ST	Horizontal and vertical addition; modification to the facade. Addiing one more unit.
Tank Hill	2008.1178	1344 CLAYTON ST	Rear yard variance
Tank Hill	2009.0299	4963 17TH ST	Horizontal and vertical addition to existing 2-story single-family residence.
Tank Hill	2009.0487	200 BELGRAVE AV	Addition/Alteration to single-family residence.
Tank Hill	2009.0156	89 BELGRAVE AV	Lot line adjustment to divide one 7,500 sq.ft. lot into a 4,000 sq.ft. and 3,000 sq.ft. lot. Vertical and Horizontal Addition to existing single family residence of 1,300sf, resulting in a 4,200 sf single-family residence. New construction of a 4,000 sf
Tank Hill	2009.0568	AWSS SEISMIC & SYSTEM UPGRADES	Five pump station and tank retrofit/rebuild projects, part of AWSS program improvements.
Tank Hill	2009.0788	324 CASELLI AV	Interior improvements and vertical 3rd story addition.
Tank Hill	2009.1152	Earthquake Safety & Emergency Response Bond	-Auxilliary Water Supply System -Critical Facilities and Infrastructure -Public Safety Building -Forensic Science Center Project Preliminary work for this DPW bond measure. Earthquake Safety and Emergency Response Bond. The Earthquake Safety and
Tank Hill	2009.0980	1560 SHRADER ST	Additon/alteration to single-family residence.
Tank Hill	2009.0870	125 CROWN TR	NEW CONSTRUCTION OF SINGLE-FAMILY DWELLNG. SEE 2008.1160D FOR DEMO.
Tank Hill	2010.0598	75 MARS STREET	Addition/alteration to existing single-family dwelling to add a new residential unit, a new garage and exapnd all levels of existing building and a new vertical floor addition, rear yard variance required for rear addition that would extend to the rear p
Tank Hill	2010.0351	5370 BELVEDERE ST	Rear addition and new doormers, raise the building 12", add new garage and driveway, and renovate kitchen, family room, master bedroom, bathrooms, and stairs.
Tank Hill	2010.0001	45 GRATTAN ST	NEW CONSTRUCTION. FRONT SETBACK VARIANCE
Twin Peaks	2008.0315	829 CORBETT AVENUE	Demolish existing single-family dwelling unit. No proposd plans.
Twin Peaks	2009.0324	21 FOUNTAIN ST	Addition/Alteration of existing single-family.
Twin Peaks	2009.0446	60 FOUNTAIN ST	Rear yard variance for the construction of a new single-family building at rear of site.
Twin Peaks	2009.0568	AWSS SEISMIC & SYSTEM UPGRADES	Five pump station and tank retrofit/rebuild projects, part of AWSS program improvements.
Twin Peaks	2009.0870	125 CROWN TR	NEW CONSTRUCTION OF SINGLE-FAMILY DWELLNG. SEE 2008.1160D FOR DEMO.
Twin Peaks	2009.1152	Earthquake Safety & Emergency Response Bond	-Auxilliary Water Supply System -Critical Facilities and Infrastructure -Public Safety Building -Forensic Science Center Project Preliminary work for this DPW bond measure. Earthquake Safety and Emergency Response Bond. The Earthquake Safety and
Twin Peaks	2010.0375	20 HOFFMAN AV	The proposed project is a vertical addition to alter the existing pitched roof.
Twin Peaks	2010.0725	70 CRESTLINE DR	Vacant lot/Split lot from larger lot and construct 4-unit residential building.
Whiskey Hill	2008.0775	1000 GREAT HY- 811 Stanyan St	Seismic upgrade of building and infrastructure and code improvments. No changes to building envelope.
Whiskey Hill	2008.0845	SF BOTANICAL GARDEN	SF Botanical Garden, in Golden Gate Park, to replace two greeenhouses, total of 6,960-sf, with 13,000-sf Center for Sustainable Gardening, 1-story, replace 10 parking spaces, remove a number trees for enlarged building footprint, terraced growing areas a
Whiskey Hill	2009.0419	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel,lighting modifications tea sipping and preparation, retail concession
Whiskey Hill	2010.0016	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artifical turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.

Other SF Projects

Name	Description
Sharp Park Recycled Water Project	Construction and operation of recycled water pump station, storage tanks, and pipelines near Sharp Park; pipelines would be installed through Sharp Park; construction scheduled for 2009 (project on hold)
Westside Recycled Water Project	Construction and operation of recycled water facility and pipelines; construction scheduled for 2011-2014
Harding Park Recycled Water Project	Construction and operation of a recycled water storage tank and distribution pipeline near Lake Merced; construction scheduled for 2009-2010
San Andreas Pipeline No. 3	Installation and operation of approximately 23,400 feet (4.4 miles) of new pipeline to extend the existing pipeline from the San Pedro Valve Lot in Daly City to Merced Manor Reservoir in San Francisco; installation scheduled for 2009-2011

UC San Francisco Mount Sutro Open Space Reserve	UCSF would conduct fire mitigation (forest thinning) projects on two parcels of 6 and 8 acres within the 61-acre reserve
San Francisco State University Master Plan	Development of the campus from 2009 through 2020 to accommodate an increased enrollment ceiling of 25,000 full-time students. Current full time student enrollment is 20,000. The campus master plan would result in a net increase in academic and academic support building space of 900,000 gross square feet.
SFRPD Trails Program	Trail improvements under the Clean and Safe Neighborhood Parks Bond
SFRPD Forestry Program	Tree planting and restoration under the Clean and Safe Neighborhood Parks Bond
SFRPD Horseshoe Courts	Create horseshoe courts at Oak Woodlands
SFRPD Bike Skills Area	Create bike skills area at McLaren Park
SFRPD disc golf course	Create disc golf course at McLaren Park
GGNRA Dog Management Plan	Changes in dog management measures at 21 properties within the Golden Gate National Recreation Area (including Fort Mason, Crissy Field, Fort Point, Baker Beach, Fort Miley, Lands End, Sutro Heights Park, Ocean Beach, and Fort Funston in San Francisco) (including Mori Point, Milagra Ridge, Sweeney Ridge, and Pedro Point Headlands in San Mateo County)
Candlestick Point-Hunters Point Shipyard Phase II Development	Development of 10,500 residential for 24,465 residents; 885,000 gross square feet (gsf) of retail; 150,000 gsf of office; 2.5 million gsf of Research & Development (R&D) uses; a 220-room, 150,000 gsf hotel; 255,000 gsf of artist live/work space; 100,000 gsf of community services; 300-slip maringa; 251.3 acres of new parks, sports fields, and waterfront recreation areas, as well as 84 acres of new and improved State parkland; a 69,000-seat 49ers stadium; and a 75,000 gsf performance arena. The permanent employee population associated with the project would be 10,730. Project area extends from India Basin to Candlestick Cove.

Pacifica Related Cumulative Projects List

Residential Development	Projects totaling 261 units on an estimated 150 acres
Commercial Development	Projects totaling about 85,000 square feet of building space

APPENDIX H

Air Quality



TETRA TECH

CEQA AIR QUALITY TECHNICAL REPORT

FOR THE

SAN FRANCISCO NATURAL AREAS MANAGEMENT PLAN

Prepared by

Tetra Tech, Inc.

August 2011

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ACRONYMS AND ABBREVIATIONS

ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards (CAAQS)
CO	Carbon monoxide
CO_2	Carbon dioxide
EPA	Environmental Protection Agency
GHG	Greenhouse gas
HARP	Hot Spots Analysis Reporting Program
HI	Hazardous Index
H_2S	Hydrogen sulfide
HRA	Health Risk Assessment
ISCST	Industrial Source Code Short Term
Lbs	Pounds
Mph	miles per hour
MT	Metric tons
NAAQS	National Ambient Air Quality Standards
NO	Nitric oxide
NO_2	Nitrogen dioxide
NOx	Nitrogen oxides
OEHHA	Office of Environmental Health and Hazard Assessment
O&M	Operating and maintenance
O_3	Ozone
Pb	Lead
PM_{10}	fine particulate matter equal to or less than 10 microns
$PM_{2.5}$	fine particulate matter equal to or less than 2.5 microns
ROG	Reactive organic gas
SFRPD	San Francisco Recreation and Park Department
SCAQMD	South Coast Air Quality Management District
SO_2	Sulfur dioxide
TACs	Toxic air contaminants
TSP	Total suspended particulate
URBEMIS	Urban Emissions Program

SECTION 1

PROJECT DESCRIPTION

The San Francisco Recreation and Park Department (SFRPD) proposes to implement the Significant Natural Resource Areas Management Plan at 32 Natural Areas in San Francisco and Pacifica. The largest individual project proposed under that plan is restoration of the wetland at Sharp Park located in Pacifica. The air quality analysis presented in this report analyzes the potential air quality impacts associated with the proposed restoration project. The estimated emissions from that project represent the highest level of emissions anticipated under the plan; this analysis serves as a guide for the anticipated emissions associated with other plan activities.

1.1 Project Location

The proposed project is to restore the wetland at Sharp Park located in the city of Pacifica, County of San Mateo, California. Sharp Park is one of the largest SFRPD parks and is surrounded by significant open spaces. The park borders the Pacific Ocean and is bisected by Highway 1. The Sharp Park Golf Course and Laguna Salada are on the western side of Highway 1. Mori Point borders the southwestern edge, and Sweeney Ridge borders the park on the southeastern and eastern edges. The northern side of Sharp Park is bordered by undeveloped areas within the cities of Pacifica and San Bruno. The Natural Area accounts for 237.2 acres within Sharp Park and encompasses the upper canyon areas, portions of Sanchez Creek, and the Laguna Salada wetlands and associated vegetation.

The proposed project is in the area under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD is the public agency entrusted with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties.

1.2 Proposed Project Description

Following are the proposed main activities to restore the wetland at Sharp Park:

- Dredging to remove sediment and decaying vegetation in Laguna Salada, Horse Stable Pond, and the channel that connects the two water bodies;
- Re-contouring the shoreline to create shallow water habitat;
- Creating a habitat corridor between Horse Stable Pond and Laguna Salada;

- Creating an upland peninsula in the middle of the lagoon to provide snakes and frogs with refugia from feral cats and other predators; and

- Constructing upland mounds on the east side of the lagoon and between Laguna Salada and Horse Stable Pond.

1.3 Types and Sources of Air Pollutants

There are three major sources of emissions for this project:

- Fugitive dust emissions – Dust is generally associated with excavation, windblown unpaved areas, vehicle and equipment travel on unpaved roads, and dirt/debris pushing. Dust generated during construction activities would vary substantially depending on the level of activity, the specific operations, and weather conditions;

- Construction Equipment – Construction requires use of heavy-duty equipment, such as bulldozers, excavators, loaders, etc. Exhaust emissions from this equipment during construction activities would vary daily as activity levels change; and

- Vehicles – Transport vehicles travelling to and from the site, including delivery trucks hauling materials and automobiles carrying workers, generate exhaust emission.

SECTION 2

PROJECT SETTING

2.1 Sources and Receptors

The emission sources for this project include: fugitive dust from site excavation, exhaust form construction equipment and exhaust from vehicles. The BAAQMD California Environmental Quality Act (CEQA) Air Quality guidelines require that air quality impact shall be assessed for receptors located within 1,000 feet of a project. These nearby receptors include residents, businesses, schools, churches, and hospitals. Figure 1 shows the emissions sources and the receptors within 1,000 feet of the proposed project. The area within 1,000 feet of the emissions source is often referred to as the zone of impact. The zone of impact is depicted as a circle on Figure 1. The nearest receptor is the golf course located east of the site where major construction activities will occur.

2.2 Existing Air Quality Standards

In California, local responsibility for air quality is assigned to air quality management districts and air pollution control districts. The project site is located in San Mateo County, which is under the jurisdiction of the BAAQMD. The impact analysis contained in this section was prepared according to the methodologies provided by the BAAQMD [Ref. 1].

The Federal Clean Air Act (42 USC Section 7401-7671q; CAA) requires the adoption of the National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare from the effects of air pollution. Current standards are set for sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), fine particulate matter equal to or less than 10 microns (PM_{10}), fine particulate matter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants are called criteria air pollutants. The State of California Air Resources Board (ARB) has established additional standards for criteria air pollutants that are generally more restrictive than the NAAQS. National and state standards are shown in Table 1 [Ref. 2].

The project site is located within the jurisdiction of the BAAQMD. The mission of the BAAQMD is to attain and maintain NAAQS and California Ambient Air Quality Standards (CAAQS) and to ensure air pollutants do not pose a nuisance or significant public health threat.

2.3 Climate

Air quality in the project area is not only affected by various emission sources (mobile, industry, etc.) but also by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall, etc.

The climate near the proposed project features mild and wet winters and cool summers with frequent fog or wind. The lowest winter temperatures ranged from 36°F to 23°F (2°C to –5°C). The lowest temperature on record ranges from 30°F to 20°F (–1°C to –7°C). The average highest temperature ranges from 104°F to 116°F (40°C to 47°C).

The BAAQMD maintains a meteorological station near the proposed project (Fort Funston Meteorological Station). The station is located approximately 10 miles north of Sharp Park. Review of the wind data collected at this station shows that the prevailing wind is from the southwest with an average wind speed of 8 knots. Figure 2 shows the windrose plot.

2.4 Air Pollutant Constituents and Attainment Status

The following describes the criteria air pollutants and their attainment status in the Bay Area Air Basin. A state or region is given the status of "attainment" or "unclassified" if ambient air quality standards have not been exceeded. A status of "nonattainment" for particular criteria air pollutants is assigned if the ambient air quality standard for that pollutant has been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a maintenance area, indicating the requirement to establish and enforce a plan to maintain attainment with the standard.

Table 2 presents the air quality attainment status of the Bay Area Air Basin. The Bay Area is classified "attainment" for all of the national standards with the exception of ozone. It is classified "non-attainment" for state standards for ozone and particulate matters (PM_{10} and $PM_{2.5}$). Following is a brief description of the criteria air pollutants.

Ozone

Ozone results from chemical reaction of nitrogen oxides and reactive organic gases under sunlight influence. Ozone is a problematic air contaminant in the Bay Area Air Basin. Maximum ozone concentrations usually are recorded during summer months. The BAAQMD measured ambient air data show that state and national ozone air quality standards were exceeded approximately 32 days in 2009 [Ref. 3]. Under both national and state standards, the area is classified as nonattainment area for ozone.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a product of fuel combustion, during which the nitrogen in the air is converted to nitrogen dioxide (NO_2) and nitric oxide (NO). The combination of NO_2 and NO is collectively known as nitrogen oxides (NOx). The BAAQMD measured ambient air data show that state and national NO_2 air quality standards were not exceeded in 2009 [Ref. 3]. Under both national and state standards, the area is classified as attainment area for NO_2.

Carbon Monoxide

Carbon monoxide (CO) is a product of inefficient combustion, principally from automobiles and other mobile sources of pollution. CO reduces the oxygen-carrying capacity of the blood and in high concentrations can cause death. At lower concentrations, people exposed experience dizziness and headaches. The BAAQMD measured ambient air data show that state and national CO air quality standards were not exceeded in 2009 [Ref. 3]. Under both national and state standards, the area is classified as attainment area for CO.

Sulfur Dioxide

Sulfur dioxide (SO_2) is produced when any sulfur-containing fuel is burned. Chemical plants that treat or refine sulfur or sulfur-containing chemicals also emit SO_2. Because of the complexity of the chemical reactions that convert SO_2 to other compounds (such as sulfates), peak concentrations of SO_2 occur at different times of the year in different parts of the state, depending on local fuel characteristics, weather, and topography. SO_2 can cause bronchia constriction and may aggravate respiratory diseases. In moist environments, SO_2 may combine with water to form sulfuric acid, a component of acid deposition. The BAAQMD measured ambient air data show that state and national SO_2 air quality standards were not exceeded in 2009 [Ref. 3]. Under both national and state standards, the area is classified as attainment area for SO_2.

Fine Particulates (PM_{10}, $PM_{2.5}$)

Particulate matter in the air is composed of windblown fugitive dust; particles emitted from combustion sources (usually carbon particles); and organic, sulfate, and nitrate aerosols formed in the air from emitted hydrocarbons, sulfur oxides, and oxides of nitrogen. In 1984, the ARB adopted standards for fine particulate (PM_{10} - particulate matter of less than 10 microns), and phased out the total suspended particulate (TSP) standards used up to that time. PM_{10} standards were substituted for TSP standards because PM_{10} corresponds to the size range of inhalable particulate related to human health. In 1987, Environmental Protection Agency (EPA) also replaced national TSP standards with PM_{10} standards. In July 1997, the EPA adopted new standards for fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

Particulates are a public health and welfare concern for several reasons. Particulates may be intrinsically toxic because of their inherent chemical and/or physical characteristics. Particulate matter may interfere with one or more of the mechanisms that normally clear the respiratory tract. Finally, fine particulates, which are easily carried deep into the lungs, may act as carriers of absorbed toxic substances. Thus elevated particulate concentrations may exacerbate pre-existing respiratory diseases such as bronchitis. Particulate matter, especially fine particulates, also interferes with visibility. The BAAQMD measured ambient air data show that state PM_{10} air quality standards were exceeded on 1 day in 2009 [Ref. 3]. The national $PM_{2.5}$ air quality standards were exceeded on 11 days in 2009 [Ref. 3].

Lead

Lead is found in old paints and coatings, plumbing, and various other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.

Figure 1. Emissions Sources and Receptors Within 1,000 Feet

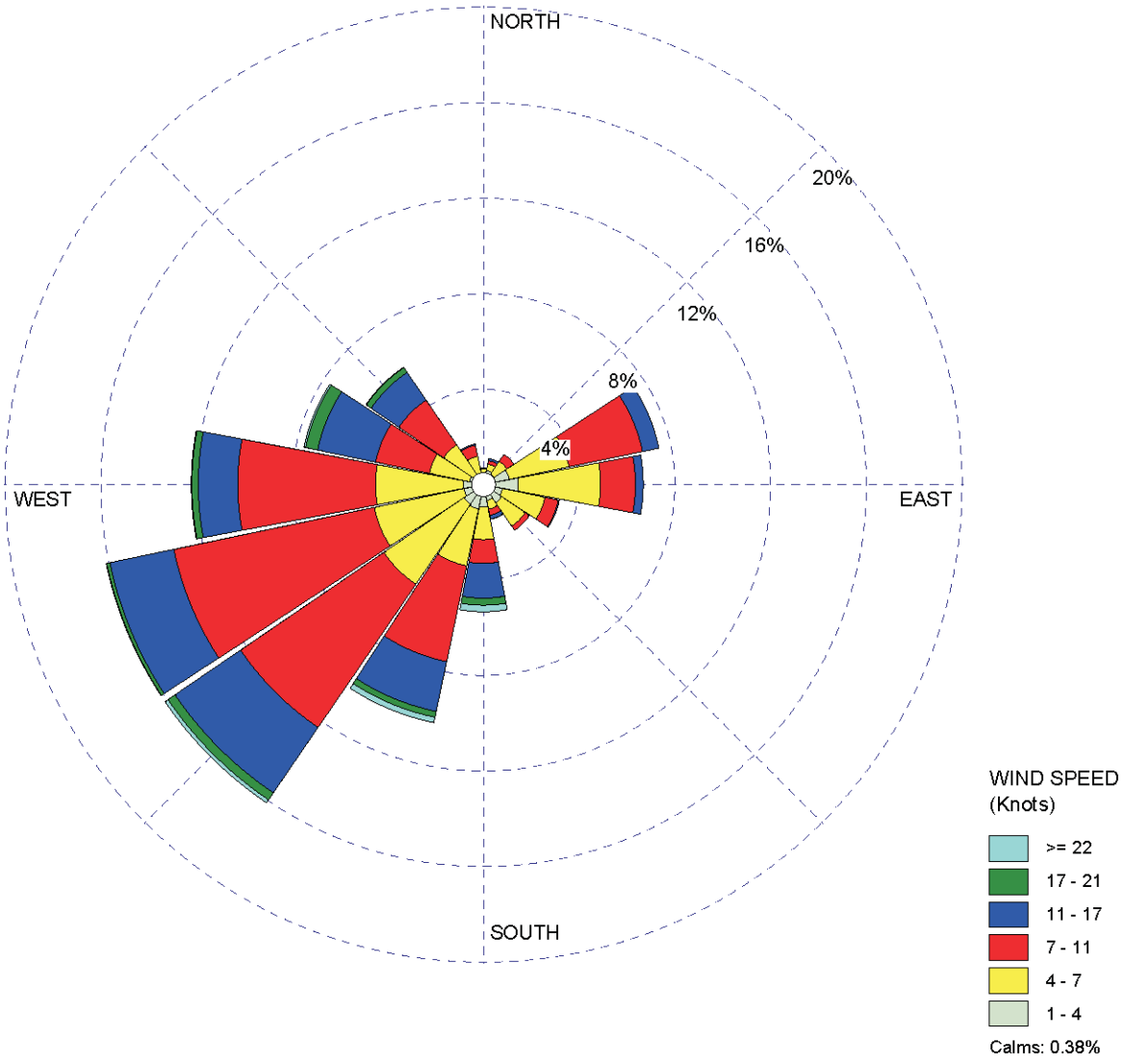


WIND ROSE PLOT:

Figure 2. Windrose Plot

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **2005** **Jan 1 - Dec 31** **00:00 - 23:00**	COMPANY NAME: **Tetra Tech, Inc.**	
	CALM WINDS: **0.38%**	TOTAL COUNT: **8760 hrs.**	
	AVG. WIND SPEED: **8.16 Knots**		PROJECT NO.:

Table 1. State and National Air Quality Standards

Pollutant	Averaging Time	California Standards [1] (Concentration) [3]	National Standards [2]	
			Primary [3,4]	Secondary [3,5]
Ozone (O_3)	1 Hour	0.09 ppm	-	
	8 Hour	0.07 ppm	0.08 ppm [6]	0.08 ppm
Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3
Particulate Matter ($PM_{2.5}$)	24 Hour		35 µg/m^3	
	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9 ppm	9 ppm	
	1 Hour	20 ppm	35 ppm	
	8 Hour (Lake Tahoe)	6 ppm		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm	0.053 ppm	
	1 Hour	0.18 ppm	0.1 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean		0.03 ppm	
	24 Hour	0.04 ppm	0.14 ppm	
	3 Hour			
	1 Hour	0.25 ppm		
Lead [7]	30 Day Average	1.5 µg/m^3		
	Calendar Quarter		1.5 µg/m^3	1.5 µg/m^3
Visibility Reducing Particles [8]	8 Hour	See footnote 8		
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm		
Vinyl Chloride [7]	24 Hour	0.01 ppm		

µg/m^3 – micrograms per cubic meter
ppm – parts per million

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$) and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

3. Concentration expressed first in units in which it was promulgated; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect public health.

5. National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

6. New National 8-hour ozone and fine particulate matter standards were promulgated by EPA on July 18, 1997.

7. The ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for implementing control measures at levels below the ambient concentrations specified for these pollutants.

8. Extinction coefficient of 0.23 per kilometer, visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particulates when relative humidity is less than 70 percent.

Table 2. Criteria Air Pollutant Attainment Status in the Bay Area

Air Pollutants	State	National
Ozone (1-Hour)	Non-attainment	N/A
Ozone (8-Hour)	Non-attainment	Non-attainment
$PM_{2.5}$	Non-attainment	Non-attainment
PM_{10}	Non-attainment	Unclassified
NO_2	Attainment	Unclassified/Attainment
CO	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	N/A
Hydrogen Sulfide	Unclassified	N/A
Visibility Reducing Particles	Unclassified	N/A

Source: BAAQMD 2010 [Ref. 2].

N/A – not applicable

SECTION 3

THRESHOLDS OF SIGNIFICANCE

This section describes the air quality significant thresholds established by the BAAQMD. Section 4 presents the methodologies used to determine the air quality impacts associated with the proposed project and the actual air quality impacts using these methods.

For purposes of meeting national requirements, impact significance is related to conformance with the EPA-approved State Implementation Plan (SIP) and with the NAAQS. Air quality impacts would be significant if they exceed these standards or contribute to non-conformance. BAAQMD has published thresholds of significance for air quality, as shown in Table 3.

A project has a significant air quality impact if it does one of the following:

1. Generates total emissions that exceed the thresholds shown in Table 3; and/or

2. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1, or annual average $PM_{2.5}$ emissions above 0.3 $\mu g/m^3$.

A project with significant impacts must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation.

Table 3. Thresholds of Significance

Criteria Air Pollutants	Construction-Related	Operational-Related	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/yr)
ROG	54	54	10
NOx	54	54	10
PM_{10}	82 (exhaust only)	82	15
$PM_{2.5}$	54 (exhaust only)	54	10
CO	None	9 ppm (8-hr average), 20 ppm (1-hr average)	
SOx	None	None	None
GHGs (stationary sources)	None	10,000 MT/yr	
GHGs (non-stationary sources)	None	Compliance with Qualified GHG Reduction Strategy Or 1,100 MT of CO_2e/yr Or 4.6 MT CO_2e /yr (residents and employees)	
Health Risk (Individual Project)	Same as Operational-related Thresholds	Cancer Risk < 10 in a million, Chronic Index <1, Acute Index <1, Ambient $PM_{2.5}$ < 0.3 ug/m^3 annual average, Zone of Impact = 1,000 feet from fence line	
Health Risk (cumulative)	Same as Operational-related Thresholds	Cancer Risk < 100 in a million, Chronic Index <10, Acute Index <10, Ambient $PM_{2.5}$ < 0.8 ug/ m^3 annual average (from all local sources), Zone of Impact = 1,000 feet from fence line	

CO_2e – carbon dioxide equivalent
GHG – greenhouse gas
lbs – pounds
MT – metric ton
ROG – reactive organic gas
yr – year

SECTION 4

CRITERIA AIR POLLUTANT EMISSIONS

This section presents the methodologies used to determine the types and quantities of the criteria air pollutant emissions and their impacts associated with the proposed Sharp Park restoration project.

4.1 Methodology

4.1.1 Construction Emissions

Air quality impacts associated with the proposed project are related to emissions that would occur during construction and subsequent operation of the proposed project. The principal sources of pollutants during construction would be the earth-moving activities, construction equipment, trucks bringing materials to site, and construction crew commuting vehicles. The sources of pollutants during project operations would be limited to the vehicles and equipment used by the operations and maintenance staff.

There are many air quality modeling tools available to assess air quality impacts of the project. Construction emissions were estimated based on the air emission modeling software package, ARB's URBEMIS 2007 [Ref. 4]. The model selection is consistent with the BAAQMD CEQA guidelines. The model contains data specific for each California air basin.

Construction is typically conducted in phases. The URBEMIS 2007 model divides construction into demolition, mass site grading, fine site grading, trenching, building construction, architectural coating, and paving phases. These model settings can be modified to fit applicable features of a specific project. For this project, the following construction phases are assumed:

- Barrier Installation and Ponds Dewatering
- Excavation and Grading
- Culvert Placement and Excavation
- Revegetation
- Rifle Range Excavation

Each construction phase can generate the following: (1) fugitive dust emissions resulting from soil disturbance activity; (2) emissions of air pollutants from fuel combustion in construction equipment; and (3) emissions of air pollutants from fuel combustion in vehicles used for worker commuting and material hauling and construction debris disposal.

Construction activities consist of wetland restoration activities in the Sharp Park area, west of Highway 1. The project is located in a coastal wetland which is currently home to several endangered species. The endangered species located on-site are migratory in nature and generally not present at Sharp Park from September to October each year..

The air quality impact analyses are conducted based on the assumption that construction activities would be conducted in a single year between May 1 and October 15. A summary of the quantitative construction activity information and assumptions used for the modeling analysis is provided in Appendix A

4.1.2 Operational-Related Emissions

Planned maintenance activities during the operation phase could result in emissions. However, because proposed operations are expected to be substantially similar to current operations, negligible changes are anticipated in the operation emissions. As a result, these operation emissions are not expected to exceed the BAAQMD significance thresholds and are not quantified.

4.2 Results of Analysis

4.2.1 Project Level

Table 4 shows the URBEMIS model output summary. Criteria air pollutant emissions from construction activities were compared to the June 2010 BAAQMD CEQA significance thresholds. As shown in Table 4, construction criteria air pollutant emissions would exceed the BAAQMD threshold for NOx, and mitigation measures would be required. Appendix A provides the complete URBEMIS files, including construction assumptions, schedules, types and quantities of equipment, model input and output files.

4.2.2 Cumulative

The BAAQMD considers projects that result in a significant criteria air pollutant or ozone precursor impact to also result in a cumulatively considerable contribution to criteria air pollutants or ozone precursors.

4.3 Mitigation Measures

The project will be required to implement all feasible mitigation measures to reduce NOx emissions.

Following are the mitigation measures considered for NOx emissions reduction:

1. For any Sharp Park restoration activities between 2011 and 2015, use Tier 3 equipment with best available control technology where feasible. For programmatic projects conducted after 2015, use Tier 4 equipment or interim Tier 4 equipment equipped with best available control technology where such equipment exists.

2. Use temporary power provided by the Pacific Gas & Electric Company instead of diesel generators; where it is not possible to plug into the electric grid, use Tier 3 diesel generators and air compressors.

3. Use concrete batched from local plants to limit concrete trucks' travel time and the amount of diesel exhaust emitted.

4. Minimize idling times by either shutting equipment and vehicles off when not in use or limiting the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage for construction workers regarding idling rules at all access points.

5. Use on-road haul trucks model year 2007 or later.

6. Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Have all equipment checked by a certified mechanic to determine that equipment is running in proper condition prior to operation.

There are commercially available post-combustion NOx emission control technologies, including selective catalytic reduction (SCR) system, selective non-catalytic reduction (SNCR) system, and NOxTECH. These technologies can reduce NOx emissions by up to 90 percent. However, they are more suitable for stationary equipment and have not been demonstrated and proven to operate effectively in mobile construction equipment. In summary, the proposed mitigation measures would reduce NOx emissions but not substantially. Using Tier 3 or similar engines would be the most effective way to reduce NOx emissions; however, it is not likely to reduce emissions below the significance threshold.

For dust control mitigation, the San Francisco Construction Dust Ordinance requires that all site preparation work, demolition, or other construction activities that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with specified dust control measures. For project sites greater than half an acre in size, the Ordinance requires that a Dust Control Plan be prepared and approved by the San Francisco Health Department. The SFRPD would be required to comply with the Ordinance and submit a Dust Control Plan for the Sharp Park restoration project and many of the programmatic projects.

In addition, BAAQMD fugitive emissions rule requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. The BAAQMD fugitive emissions rule requires implementing dust suppression techniques to prevent fugitive dust from creating an off-site nuisance. Implementing these dust suppression techniques will reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Applicable dust suppression techniques include the following:

1. Water active sites. Locations where grading is to occur will be watered before earth moving activities;

2. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114 (freeboard means vertical space between the top of the load and top of the trailer);

3. Traffic speeds on all unpaved roads shall be reduced to 15 miles per hour or less.

The San Francisco Dust Control Ordinance includes these dust suppression requirements.

4.4 Summary of Project's Criteria Air Pollutant Impacts

In summary, the air quality analysis concludes that the project would result in NOx emissions that exceed the significant thresholds established by the BAAQMD. During the long-term operation of the project, all criteria air pollutant emissions are expected to be similar to current emissions levels.

Because construction-related NOx emissions exceed the BAAQMD significance threshold, the project would also be considered to result in a considerable contribution to cumulative ozone precursor emissions.

Table 4. CEQA Thresholds of Significance for Construction Emissions Versus Estimated Sharp Park Construction Emissions

	Average Daily ROG, lbs/day	**Average Daily NOx, lbs/day**	**Average Daily PM_{10}, lbs/day**	**Average Daily $PM_{2.5}$, lbs/day**	**GHGs, CO_2e (MT/year)**
BAAQMD Threshold for Construction Emissions	54	54	82 (exhaust only)	54 (exhaust only)	None for construction
Sharp Park Construction Emissions	13	153	3.4 (exhaust only)	3.1(exhaust only)	1,630
Exceed Threshold?	No	YES	No	No	NA

NA = Not Applicable

SECTION 5

GREENHOUSE GAS EMISSIONS

This section presents the methodologies used to determine the types and quantities of the greenhouse gas (GHG) emissions and their impacts associated with the proposed Sharp Park restoration project.

5.1 Methodology

5.1.1 Construction Emissions

The BAAQMD does not have an adopted quantitative threshold of significance for construction-related GHG emissions. However, BAAQMD recommends that construction-related GHG emissions be quantified and that the project opponent make a determination on the significance of these construction-generated GHG emission impacts.

For this project, the sources of GHG are the fuel combustion in construction equipment, in vehicles used to haul materials and vehicles used by worker commuting to/from the site.

There are three types of GHG from fuel combustion, including carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). GHG emissions are presented as carbon dioxide equivalents (CO_2e). CO_2e is computed based on global warming equivalence. The CH_4 global warming equivalence is 21 times that of CO_2, and the N_2O global warming equivalence is 310 times that of CO_2.

Mathematically, the CO_{2e} can be represented by the following equation:

CO_{2e} Emissions = CO_2 Emissions + 21 x CH_4 Emissions + 310 x N_2O Emissions

The BAAQMD has developed a GHG emission calculation tool (BGM Model). However, this model can only be used to estimate operation-related GHG emissions. Therefore, the URBEMIS model was used to estimate the GHG emissions during the construction phase of the proposed project.

5.1.2 Operation Emissions

Planned maintenance activities during the operation phase could result in GHG emissions. However, because proposed operations are expected to be substantially similar to current operations, negligible changes are anticipated in the operation emissions. As a result, these operation GHG emissions are not expected to exceed the BAAQMD significance thresholds and are not quantified.

5.2 Results of Analysis

5.2.1 Project Level

Tetra Tech used the URBEMIS model to estimate the GHG emissions during the construction phase of the project. Based on the construction schedule, types and quantities of construction equipment, and numbers of haul trucks, etc., Tetra Tech estimated that the maximum CO_2 emissions would be 21,777 pounds per day. Table 4 shows the calculation result.

The URBEMIS model provides a CO_2 profile only and does not quantify CO_2e, CH_4 and N_2O emissions. Tetra Tech assumes that the CO_2 emissions of 21,777 pounds per day are CO_2e. Justification of the assumption is as follows: For typical diesel-fueled combustion equipment used in construction activities, the emissions factors adjusted with global warming equivalence are:

(1) CO_2 emission factors are 22.4 pounds of CO_2e per gallon consumed,
(2) CH_4 emission factors are 0.065 pounds of CO_2e per gallon consumed, and
(3) N_2O emission factors are 0.068 pounds of CO_2e per gallon consumed.

As shown in these emission factors, the CO_2 profile is 99 percent of the total GHG generated in combustion equipment. Therefore, Tetra Tech assumes that the CO_2 emissions of 21,777 lbs per day represent the CO_2e levels.

The current BAAQMD CEQA guidelines have no quantitative GHG emissions significance threshold for construction. This GHG quantification is presented for information purpose only. The Sharp Park wetland restoration project has average CO_2e emissions of 21,777 lbs per day, which are converted to 3,593,205 pounds based on 5.5 months per one year of construction activities. This annual emission profile converts to 1,630 MT.

5.2.2 Cumulative

The impacts of climate change are the cumulative result of GHG emissions and therefore a project-level analysis of GHG emissions is also considered an analysis of a project's contribution to cumulative effects of GHGs.

BAAQMD's approach is to identify the GHG emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact. Based on this approach, the GHG emissions of the proposed project during the operation phase would not make a considerable contribution to cumulative GHG impacts.

5.3 Mitigation Measures

The estimated project-level GHG emissions from operation would not have a significant impact; as result, no mitigation is required.

5.4 Summary of Project's GHG Impacts

In summary, the air quality analysis concludes that during the long-term operation of the project, all GHG emissions are expected to be similar to current emissions levels. There are no GHG emissions thresholds established by the BAAQMD for construction activities.

SECTION 6

HEALTH RISK ANALYSIS

This section presents the methodologies used to determine the health risks and the impacts associated with the proposed project.

6.1 Methodology

6.1.1 Construction

6.1.1.1 Project-Level

During construction, toxic emissions are generated mainly from fuel combustion in the construction equipment. In order to determine the health impacts of these toxic emissions, a health risk assessment (HRA) was performed.

A HRA is an estimate of the probability that adverse health effects could occur due to exposure to toxic pollutants. A facility's air emissions, stack information, operation schedule, local weather conditions, chemical dose-response data, etc. are fed into a computer model to produce an estimate of the health risks to nearby people (receptors). HRA is performed in 3 steps: hazard identification, exposure assessment, and risk characterization.

Hazard Identification

Hazard identification refers to the identification of substances as carcinogens, reproductive toxins, chronic toxins, or acute toxins, or to the identification of a type of exposure as hazardous. Regulated hazardous substances are listed in BAAQMD's toxic rule and ARB's regulated toxic lists. The toxic air contaminants (TACs) used in the HRA include $PM_{2.5}$, diesel particulate matter (DPM) and acrolein. DPM and acrolein are byproducts of diesel fuel combustion. Sources of $PM_{2.5}$ include activities such as earthmoving. There are other TACs from diesel combustion besides DPM and acrolein, but they are less potent and thus are not included in the HRA.

Exposure Assessment

Exposure assessment is the identification and quantification of all routes of human exposure to substances of concern. The Industrial Source Code Short Term Version 3 (ISCST3) model issued by EPA was used for estimation of offsite concentrations of TACs. Based on land use surrounding the proposed project and EPA guidelines, an urban profile was assumed. Meteorology data from the BAAQMD's Fort Funston Station were used. The model selection is consistent with the BAAQMD CEQA guidelines. The following inputs were used for the ISCST3 model.

1. Emission Source Models

Construction activities were modeled as area sources placed over the area of wetland restoration activities. The project is expected to require soil export activities using haul trucks which have the potential to emit toxic air contaminants (TACs). Haul trucks travelling to and from the site were modeled as an area source extending ¼ mile from the project site. Pollutants modeled include $PM_{2.5}$, DPM, and acrolein which are emitted from heavy construction equipment and haul trucks.

2. Site Elevation

Elevation data and aerial photography was obtained from the United States Geological Survey (USGS) Seamless Data Warehouse [Ref. 5].

3. Receptor Models

Modeled sensitive receptor locations included residents located to the north and south of the project site. The project site is currently surrounded by a golf course which is expected to be operational during construction activities. Therefore, sensitive receptor locations were placed in the golf course to account for people who may be present during construction activities. Receptor locations were placed at 50-meter intervals. Construction emission sources and receptors included in the model are presented in Figure 3. To estimate a worst-case health impact, the nearest sensitive receptor was assumed to be a residential child at the project fence line.

Risk Characterization

Risk characterization is the final step of the HRA. It quantifies the human health risk based on the exposure assessment and dose-response relationships (cancer potency factors and reference exposure levels). In this assessment, three types of human health effects were considered: 1) cancer, 2) chronic effects, and 3) acute effects. Health risks including cancer, chronic, and acute risks are calculated based on the Office of Environmental Health and Hazard Assessment (OEHHA) guidelines. In order to present the worst-case scenario, the BAAQMD recommends that cancer risk be weighted by a factor of 10 for exposure that occurs to an individual from the third trimester of pregnancy to two years of age. Health risk (cancer, chronic, and acute) was calculated using the ARB Hot Spots Analysis Reporting Program (HARP) which is based on OEHHA risk factors [Ref. 6]. Annual $PM_{2.5}$ emissions from construction activities were also modeled to determine impacts on sensitive receptors.

Following is a summary of the OEHHA method to determine the cancer, chronic and acute health risk:

Cancer Risk

The cancer risks were calculated as the individual excess lifetime cancer risk (i.e., the probability that an individual may develop cancer from a lifetime exposure to the chemicals of concern).

There are different pathways that a toxicant can enter a human body. Gaseous toxicants can enter a human body through the inhalation pathway. Gaseous toxicants can also be deposited on soil, surface water, or plants, which can then enter a human body through ingestion and dermal pathways. Semi-volatile and metal toxicants can enter the body through inhalation, ingestion and dermal pathways.

For inhalation pathway, the cancer risk is computed using the following equation:

$$CRinh = (GLC \times CP \times CRAF \times BR \times EF \times ED \times 10^{-6}) / AT \quad \text{Eq. 1}$$

Where:

CRinh = Cancer Risk through inhalation
GLC = Annual Average Ground-level concentration (from air dispersion model)
CP = Cancer Potency factor
BR = Daily Breathing Rate
EF = Exposure frequency
ED = Exposure Duration
AT = Average Time Period
CRAF = Cancer risk adjustment factors:
1.7 for resident receptors exposure
1.0 for offsite worker exposure

OEHHA revised the HRA guideline in May 2009, which included procedures to consider the increased susceptibility of infants and children to carcinogens compared to adults. The revised procedures require incorporation of age sensitivity factors (ASFs) in the calculation of cancer risk for infants, children and adolescents. The ASFs results in weighting cancer risk by a factor of 10 for exposure that occurs from the third trimester of pregnancy to 2 years of age and a factor of 3 for exposure that occurs from 2 years through 15 years of age.

For the proposed project, the risks due to exposure of DPM thru the non-inhalation pathways are not considered. This is consisted with the BAAQMD guidelines [Ref. 7].

Chronic Risk

The potential for long-term chronic health effects is quantified by comparing the predicted level of exposure to a reference exposure level (REL). This ratio of predicted exposure to reference exposure is referred to as a chronic hazard index (HIc). HIc is calculated by summing the ratios of each toxic substance over its REL. The equation for estimating HIc is as follows:

$$HIc = \sum Ci / \text{chronic RELi}$$

Where:

Ci = Ground-level concentration of substance i (annual average concentration)
RELi = Chronic Reference Exposure Level for substance i.

Acute Risk

In the same manner as the quantification of chronic health effects, the potential for short-term acute health effects was quantified using a hazard index. The acute hazard index (HIa) is calculated by dividing the maximum estimated hourly concentration of each toxic air pollutant by its reference short-term exposure levels. The equation for estimating HIa is as follows:

$$HIa = \sum Ci / \text{Acute RELi}$$

Where:

Ci = Maximum hourly ground-level concentration of substance i
RELi = Acute Reference Exposure Level for substance i.

Table 5 provides the HRA input parameters.

6.1.1.2 Cumulative

Cumulative health risk was determined by obtaining risk values from nearby sources of toxics from the BAAQMD website. Within 1,000 feet of the project area, there is only one source, which is a gas station owned and operated by the SFRPD for refueling of golf carts. Tetra Tech contacted the BAAQMD for the health risks from this facility. The BAAQMD determined that the risk from the SFRPD gas station is insignificant.

The project is located within 1,000 feet of a Highway 1, which is a major roadway. Vehicles on Highway 1 emit TACs and $PM_{2.5}$. Health risk impacts from these nearby traffic flows on Highway 1 were determined using BAAQMD roadway screening models.

Relative to the project site at Sharp Park in San Mateo County, Highway 1 runs north and south and is approximately 400 feet from the project site. Based on this location, the BAAQMD screening model was used to determine risks and $PM_{2.5}$ emissions from Highway 1 [Ref. 8, 9]. The risk values and $PM_{2.5}$ emissions profiles were added to project-level risks to determine the cumulative risks for the project.

6.1.2 Operational

6.1.2.1 Project-Level

During operation, planned activities would result in operational emissions. However, because proposed operations are expected to be substantially similar to current operations, negligible changes are anticipated in the operation emissions. As a result, health risks from these operation emissions are not quantified.

6.1.2.2 Cumulative

Planned activities would result in operational emissions. However, because proposed operations are expected to be substantially similar to current operations, negligible changes are anticipated in the operation emissions. As a result, health risks from these operation emissions are not quantified.

6.2 Results of Analysis

6.2.1 Project Level

Table 6 summarizes the HRA results. The construction emissions would result in a less than significant impact with regard to TACs and health risk. Cancer risk and $PM_{2.5}$ concentrations are presented in Figures 4 and 5 respectively. Figure 4 identifies the locations of the highest cancer risk, chronic risk and acute risk. Figure 5 shows the location of the highest $PM_{2.5}$ concentrations. Appendix B provides the dispersion and risk model files. The output file data is provided electronically on CD.

6.2.2. Cumulative

As shown in Table 6, the cumulative emissions would result in a less than significant impact related to TACs and health risk.

6.3 Mitigation Measures

The estimated health risk is below the BAAQMD thresholds; therefore, no mitigation is required.

6.4 Summary of Project's Health Risk Impacts

In summary, the HRA concludes that toxic emissions during short-term construction do not exceed the significance thresholds established by the BAAQMD. During the long-term operation of the project, all emissions and health risks are expected to be remained at current levels.

Table 5. HRA Model Input Parameters

Input Parameters – ISCST3 MODEL		
Diesel Particulate Matter Run (Cancer and Chronic Risk)	**On-site Construction**	**Haul Route**
DPM Emission Sources Modeled as Area Source, m^2	153,994	22,052
Hours of Emissions, hrs/day	8	8
Emission Rate, g/s	3	3
Emission Rate, g/s-m^2	1.95E-05	1.36E-04
Diesel Particulate Matter Run (Acute Risk)		
Emission Sources Modeled as Area Source, m^2	153,994	22,052
Hours of Emissions, hrs/day	8	8
Emission Rate, g/s	1	1
Emission Rate, g/s-m^2	6.49E-06	4.53E-05
$PM_{2.5}$ Run		
Emission Sources Modeled as Area Source, m^2	153,994	22,052
Hours of Emissions, hrs/day	8	8
Seconds per day	28800	28800
Emission Rate, lbs/day	0.5	
Emission Rate, g/s	0.00845	8.41E-05
Emission Rage, g/s-m^2	5.49E-08	3.82E-09

Input Parameters - HARP MODEL		
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	1.10E+00	
Breathing Rate, (L/kg-day)	302	
Exposure Frequency (day/years)	365	
Exposure Duration (years)	1	
Average Time Period (days)	25,550	
Cancer Risk Adjustment Factor Resident	1.7	
Cancer Risk Adjustment Factor worker	1	
Age Sensitive Factors		
Third Trimester of pregnancy to 2 years of age	10	
2 years through 15 years of age	3	
Acrolein Acute Inhalation REL, $\mu g/m^3$	2.5	Eyes; Respiratory System
Acrolein Chronic Inhalation REL, $\mu g/m^3$	0.35	Eyes; Respiratory System

DPM Acute Inhalation REL, $\mu g/m^3$	0	N/A
DPM Chronic Inhalation REL, $\mu g/m^3$	5.0	Respiratory System

Annual Emissions (lbs/year)

	On-site Construction	**Haul Truck**
PM_{10} (DPM)	51.59	2.044
$PM_{2.5}$	47.46	1.881
Acrolein	0.67	0.027

Hourly Emissions (lbs/hr)

	On-site Construction	**Haul Truck**
PM_{10} (DPM)	0.07	5.81E-03
$PM_{2.5}$	0.07	5.34E-03
Acrolein	9.5E-04	7.56E-05

g/s – grams per second
g/s-m^2 – grams per second per square meters
hrs/day – hours per day
L/kg-day – liters per kilograms per day
m^2 – square meters
mg/kg-day – milligrams per kilograms per day
$\mu g/m^3$ – micrograms per cubic meters
N/A – not applicable

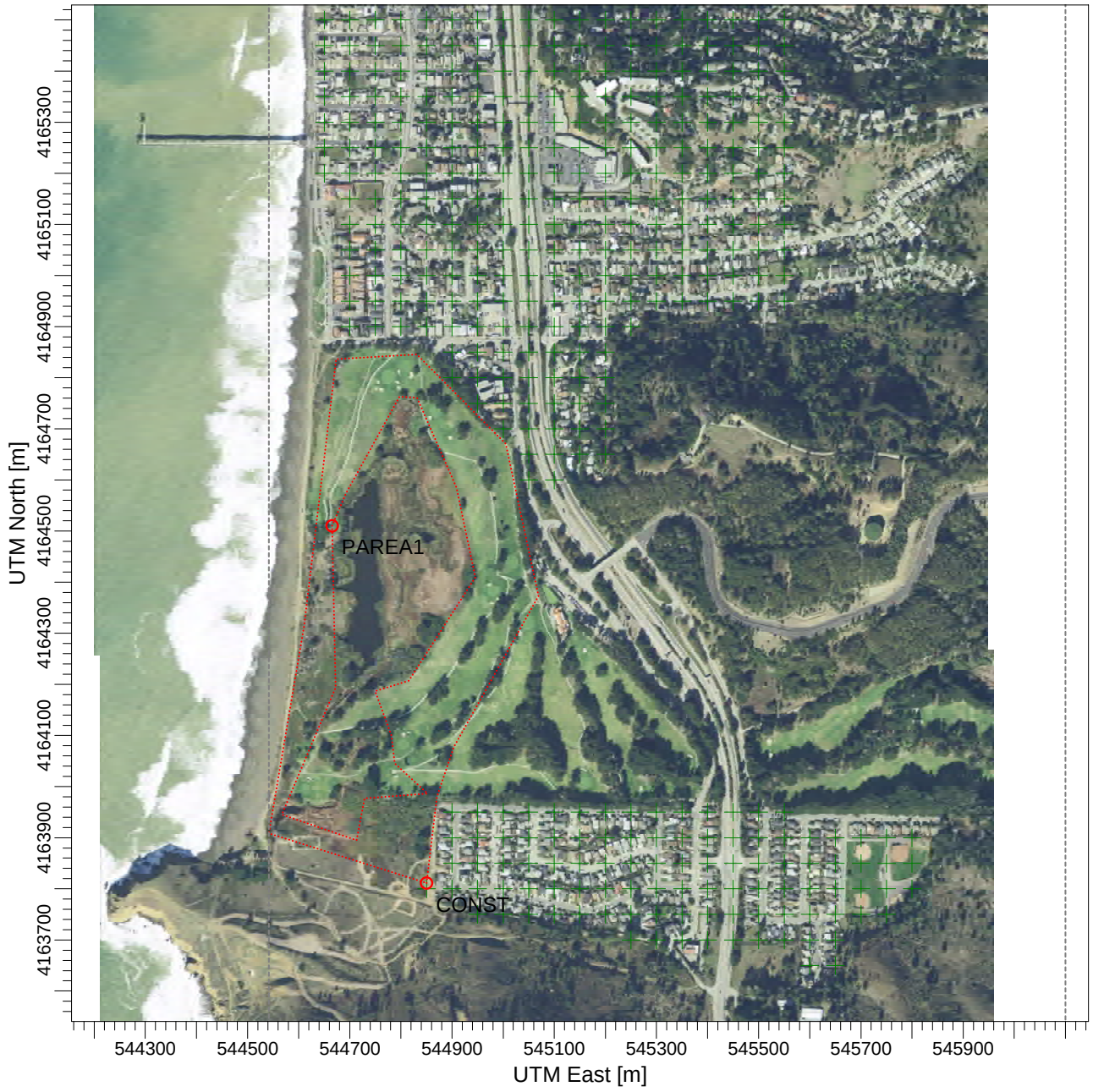
Table 6. CEQA Thresholds of Significance for Construction Emissions and Health Risks

	Health Risk (Individual Project)	**Health Risk (Cumulative)**
BAAQMD Threshold for Construction Emissions	Cancer Risk < 10 in a million, Chronic Index <1, Acute Index <1, Ambient $PM_{2.5}$ < 0.3 ug/m^3 annual average, Zone of Impact = 1,000 feet from fence line	Cancer Risk < 100 in a million, Chronic Index <10, Acute Index (no threshold)Ambient $PM_{2.5}$ < 0.8 ug/m^3 annual average (from all local sources), Zone of Impact = 1,000 feet from fence line
Sharp Park Construction Emissions	Cancer Risk = 0.62 in a million, Chronic Risk = 0.00248, Acute Risk = 0.0088 $PM_{2.5}$ = 0.04 ug/m^3	Cancer Risk = 2.22 in a million, Chronic Risk = 0.0045, $PM_{2.5}$ = 0.061 ug/m^3 (Note 1)
Exceed Thresholds?	**No**	**No**

Note 1:

- Cumulative risks and $PM_{2.5}$ emission include contributions from Highway 1:
  Cancer risk = 1.6 in a million
  Chronic risk = 0.002
  $PM_{2.5}$ = 0.021 µg/m^3
- Risks and $PM_{2.5}$ emissions for the SFRPD's gas station are insignificant based on information provided by BAAQMD (Ref. 10)

Figure 3. Modeled Emissions Sources and Receptors

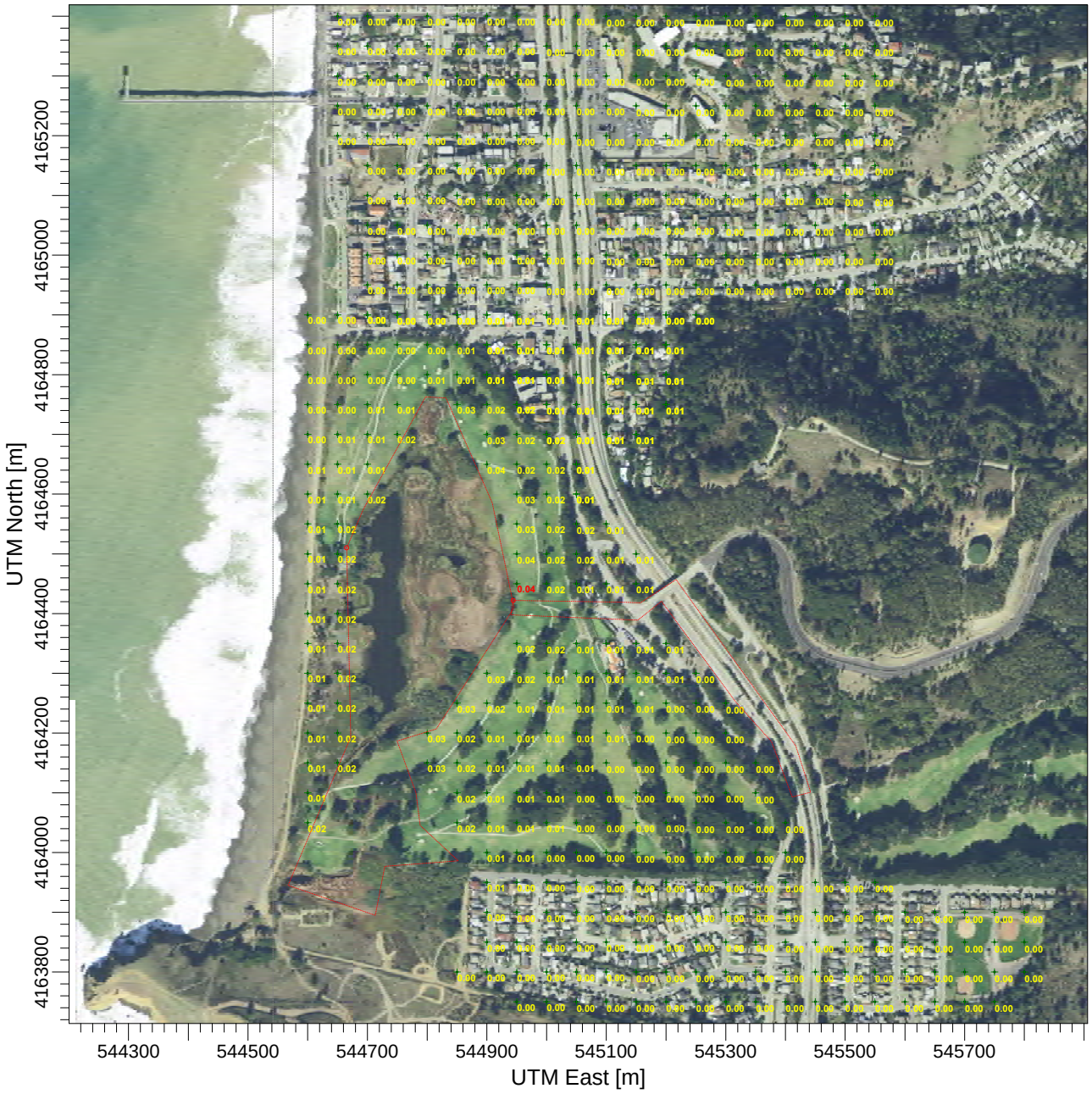


COMMENTS:	SOURCES: **2**	COMPANY NAME:	
	RECEPTORS: **483**	MODELER:	
		SCALE: 1:12,506 0 0.4 km	
		DATE: **1/20/2011**	PROJECT NO.:

Figure 4. Health Risk Summary



Figure 5. PM2.5 Emission Profile



COMMENTS: Construction PM2.5 Annual	SOURCES: **2**	COMPANY NAME:	
	RECEPTORS: **668**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:10,720 0 0.4 km	
	MAX: **0.03922 ug/m^3**	DATE: **8/28/2011**	PROJECT NO.:

SECTION 7

CONCLUSIONS

This air quality analysis for the proposed Sharp Park wetland restoration project has the following conclusions.

7.1 Construction - Short-Term Impacts

During the construction phase, the short-term NOx emissions would exceed BAAQMD significant thresholds. Mitigation measures are proposed that can reduce such impacts.

All other short-term criteria air pollutant emissions would not exceed BAAQMD significant threshold.

The HRA concluded that toxic emissions during short-term construction do not exceed the significant health risk thresholds established by the BAAQMD.

7.2 Operation - Long-Term Impacts

During operation, planned maintenance activities would remain similar to current levels at the Park.

SECTION 8

REFERENCES

1. BAAQMD CEQA Guidelines, June 2010, http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx

2. Federal and State Air Quality Standards, http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm

3. Bay Area Air Pollution Summary, 2009, http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx

4. ARB's Urban Emission Model, 2007, http://www.urbemis.com

5. Elevation Data, http://seamless.usgs.gov/ (Accessed January 2011)

6. California Air Resources Board - HotSpots Analysis and Reporting Program http://www.arb.ca.gov/toxics/harp/harp.htm

7. BAAQMD Air Toxic Analysis Guideline, "Recommended Methods for Screening and Modeling Local Risks and Hazards", May 2010, Page 79.

8. BAAQMD Air Toxic Analysis Guideline, "Recommended Methods for Screening and Modeling Local Risks and Hazards", May 2010, Section 3.1.2, Page 18.

9. BAAQMD Highway Screening Analysis Tool, "San Mateo County – 6ft Elevation"

10. Email from Ms. Andrea Gordon of BAAQMD on June 16,2011

APPENDIX A

URBEMIS MODEL RUNS

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
400	GRID	545550	4162650	6.74E-05	1.46E-06	9.80916E-09	1.40131E-10	1.40131E-09
402	GRID	545450	4162750	6.97E-05	1.62E-06	1.01499E-08	1.44999E-10	1.44999E-09
406	GRID	545400	4162800	7.12E-05	1.88E-06	1.04081E-08	1.48688E-10	1.48688E-09
401	GRID	545550	4162700	7.23E-05	1.53E-06	1.05164E-08	1.50234E-10	1.50234E-09
403	GRID	545500	4162750	7.37E-05	1.58E-06	1.0714E-08	1.53058E-10	1.53058E-09
407	GRID	545450	4162800	7.55E-05	1.70E-06	1.09851E-08	1.56931E-10	1.56931E-09
412	GRID	545400	4162850	7.72E-05	1.98E-06	1.12776E-08	1.61108E-10	1.61108E-09
404	GRID	545550	4162750	7.75E-05	1.61E-06	1.12578E-08	1.60826E-10	1.60826E-09
408	GRID	545500	4162800	7.95E-05	1.66E-06	1.15493E-08	1.6499E-10	1.6499E-09
405	GRID	545600	4162750	8.10E-05	1.69E-06	1.17761E-08	1.6823E-10	1.6823E-09
413	GRID	545450	4162850	8.15E-05	1.80E-06	1.18546E-08	1.69351E-10	1.69351E-09
409	GRID	545550	4162800	8.32E-05	1.70E-06	1.20943E-08	1.72775E-10	1.72775E-09
418	GRID	545400	4162900	8.39E-05	2.09E-06	1.22446E-08	1.74923E-10	1.74923E-09
414	GRID	545500	4162850	8.57E-05	1.75E-06	1.24504E-08	1.77863E-10	1.77863E-09
410	GRID	545600	4162800	8.66E-05	1.80E-06	1.25834E-08	1.79763E-10	1.79763E-09
424	GRID	545350	4162950	8.66E-05	2.59E-06	1.26964E-08	1.81378E-10	1.81378E-09
419	GRID	545450	4162900	8.84E-05	1.90E-06	1.28508E-08	1.83582E-10	1.83582E-09
411	GRID	545650	4162800	8.93E-05	1.90E-06	1.29788E-08	1.85411E-10	1.85411E-09
415	GRID	545550	4162850	8.93E-05	1.81E-06	1.2965E-08	1.85214E-10	1.85214E-09
431	GRID	545300	4163000	8.95E-05	3.29E-06	1.32076E-08	1.8868E-10	1.8868E-09
425	GRID	545400	4162950	9.13E-05	2.21E-06	1.33079E-08	1.90113E-10	1.90113E-09
420	GRID	545500	4162900	9.24E-05	1.86E-06	1.34162E-08	1.91659E-10	1.91659E-09
416	GRID	545600	4162850	9.24E-05	1.91E-06	1.34237E-08	1.91767E-10	1.91767E-09
432	GRID	545350	4163000	9.46E-05	2.77E-06	1.38624E-08	1.98034E-10	1.98034E-09
417	GRID	545650	4162850	9.50E-05	2.03E-06	1.38203E-08	1.97433E-10	1.97433E-09
426	GRID	545450	4162950	9.57E-05	2.01E-06	1.39129E-08	1.98755E-10	1.98755E-09
421	GRID	545550	4162900	9.59E-05	1.93E-06	1.39332E-08	1.99046E-10	1.99046E-09
422	GRID	545600	4162900	9.88E-05	2.05E-06	1.43615E-08	2.05165E-10	2.05165E-09
427	GRID	545500	4162950	9.95E-05	1.98E-06	1.44466E-08	2.06379E-10	2.06379E-09
433	GRID	545400	4163000	9.93E-05	2.35E-06	1.44689E-08	2.06698E-10	2.06698E-09
423	GRID	545650	4162900	1.01E-04	2.18E-06	1.4729E-08	2.10414E-10	2.10414E-09
428	GRID	545550	4162950	1.03E-04	2.06E-06	1.49661E-08	2.13802E-10	2.13802E-09
434	GRID	545450	4163000	1.04E-04	2.13E-06	1.50713E-08	2.15304E-10	2.15304E-09
445	GRID	545350	4163050	1.04E-04	2.96E-06	1.51576E-08	2.16537E-10	2.16537E-09
429	GRID	545600	4162950	1.06E-04	2.20E-06	1.53969E-08	2.19956E-10	2.19956E-09
435	GRID	545500	4163000	1.08E-04	2.11E-06	1.56062E-08	2.22946E-10	2.22946E-09
430	GRID	545650	4162950	1.08E-04	2.34E-06	1.57022E-08	2.24318E-10	2.24318E-09
446	GRID	545400	4163050	1.08E-04	2.51E-06	1.57907E-08	2.25582E-10	2.25582E-09
436	GRID	545550	4163000	1.11E-04	2.21E-06	1.60966E-08	2.29952E-10	2.29952E-09
447	GRID	545450	4163050	1.13E-04	2.28E-06	1.63602E-08	2.33717E-10	2.33717E-09
437	GRID	545600	4163000	1.14E-04	2.37E-06	1.64995E-08	2.35707E-10	2.35707E-09
458	GRID	545350	4163100	1.14E-04	3.19E-06	1.66163E-08	2.37375E-10	2.37375E-09
438	GRID	545650	4163000	1.15E-04	2.52E-06	1.67744E-08	2.39634E-10	2.39634E-09
448	GRID	545500	4163050	1.16E-04	2.27E-06	1.68964E-08	2.41377E-10	2.41377E-09
439	GRID	545700	4163000	1.17E-04	2.68E-06	1.69871E-08	2.42673E-10	2.42673E-09
444	GRID	545950	4163000	1.16E-04	4.14E-06	1.71005E-08	2.44292E-10	2.44292E-09
443	GRID	545900	4163000	1.16E-04	3.79E-06	1.71136E-08	2.4448E-10	2.4448E-09
440	GRID	545750	4163000	1.17E-04	2.86E-06	1.70756E-08	2.43937E-10	2.43937E-09
442	GRID	545850	4163000	1.17E-04	3.43E-06	1.71255E-08	2.4465E-10	2.4465E-09
441	GRID	545800	4163000	1.17E-04	3.11E-06	1.7112E-08	2.44457E-10	2.44457E-09
459	GRID	545400	4163100	1.18E-04	2.70E-06	1.72114E-08	2.45878E-10	2.45878E-09
449	GRID	545550	4163050	1.20E-04	2.39E-06	1.73576E-08	2.47966E-10	2.47966E-09
450	GRID	545600	4163050	1.22E-04	2.57E-06	1.77313E-08	2.53305E-10	2.53305E-09
460	GRID	545450	4163100	1.23E-04	2.45E-06	1.78101E-08	2.5443E-10	2.5443E-09
451	GRID	545650	4163050	1.24E-04	2.74E-06	1.79783E-08	2.56833E-10	2.56833E-09
457	GRID	545950	4163050	1.23E-04	4.56E-06	1.81419E-08	2.59169E-10	2.59169E-09
456	GRID	545900	4163050	1.23E-04	4.22E-06	1.81563E-08	2.59375E-10	2.59375E-09
455	GRID	545850	4163050	1.24E-04	3.82E-06	1.81631E-08	2.59474E-10	2.59474E-09
452	GRID	545700	4163050	1.24E-04	2.92E-06	1.80985E-08	2.58549E-10	2.58549E-09
453	GRID	545750	4163050	1.24E-04	3.14E-06	1.81615E-08	2.59451E-10	2.59451E-09
454	GRID	545800	4163050	1.24E-04	3.45E-06	1.81738E-08	2.59626E-10	2.59626E-09
470	GRID	545350	4163150	1.25E-04	3.44E-06	1.82676E-08	2.60966E-10	2.60966E-09
461	GRID	545500	4163100	1.26E-04	2.44E-06	1.83159E-08	2.61655E-10	2.61655E-09
462	GRID	545550	4163100	1.29E-04	2.60E-06	1.87821E-08	2.68316E-10	2.68316E-09
471	GRID	545400	4163150	1.30E-04	2.90E-06	1.88565E-08	2.69379E-10	2.69379E-09
463	GRID	545600	4163100	1.31E-04	2.80E-06	1.9095E-08	2.72785E-10	2.72785E-09
469	GRID	545900	4163100	1.31E-04	4.68E-06	1.9332E-08	2.76171E-10	2.76171E-09
468	GRID	545850	4163100	1.32E-04	4.26E-06	1.93668E-08	2.76668E-10	2.76668E-09
464	GRID	545650	4163100	1.32E-04	2.99E-06	1.9281E-08	2.75443E-10	2.75443E-09
467	GRID	545800	4163100	1.32E-04	3.84E-06	1.94016E-08	2.77165E-10	2.77165E-09
465	GRID	545700	4163100	1.33E-04	3.20E-06	1.93745E-08	2.76779E-10	2.76779E-09
466	GRID	545750	4163100	1.33E-04	3.47E-06	1.94135E-08	2.77335E-10	2.77335E-09
472	GRID	545450	4163150	1.34E-04	2.64E-06	1.94209E-08	2.77442E-10	2.77442E-09
473	GRID	545500	4163150	1.37E-04	2.65E-06	1.99305E-08	2.84721E-10	2.84721E-09

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
474	GRID	545550	4163150	1.40E-04	2.84E-06	2.03371E-08	2.9053E-10	2.9053E-09
475	GRID	545600	4163150	1.42E-04	3.06E-06	2.0622E-08	2.94601E-10	2.94601E-09
478	GRID	545750	4163150	1.42E-04	3.87E-06	2.07692E-08	2.96703E-10	2.96703E-09
476	GRID	545650	4163150	1.42E-04	3.29E-06	2.07498E-08	2.96425E-10	2.96425E-09
477	GRID	545700	4163150	1.42E-04	3.54E-06	2.07849E-08	2.96927E-10	2.96927E-09
381	GRID	544650	4165600	2.85E-04	4.46E-06	4.11982E-08	5.88545E-10	5.88545E-09
362	GRID	544650	4165550	3.03E-04	4.53E-06	4.37434E-08	6.24906E-10	6.24906E-09
382	GRID	544700	4165600	3.18E-04	5.04E-06	4.60345E-08	6.57636E-10	6.57636E-09
343	GRID	544650	4165500	3.23E-04	4.63E-06	4.66093E-08	6.65847E-10	6.65847E-09
363	GRID	544700	4165550	3.41E-04	5.11E-06	4.92123E-08	7.03032E-10	7.03032E-09
324	GRID	544650	4165450	3.45E-04	4.78E-06	4.97996E-08	7.11423E-10	7.11423E-09
383	GRID	544750	4165600	3.56E-04	5.70E-06	5.15147E-08	7.35924E-10	7.35924E-09
344	GRID	544700	4165500	3.65E-04	5.19E-06	5.27094E-08	7.52992E-10	7.52992E-09
305	GRID	544650	4165400	3.72E-04	4.97E-06	5.363E-08	7.66143E-10	7.66143E-09
2	GRID	545650	4163650	3.69E-04	1.42E-05	5.46264E-08	7.80377E-10	7.80377E-09
364	GRID	544750	4165550	3.81E-04	5.81E-06	5.50169E-08	7.85955E-10	7.85955E-09
1	GRID	545600	4163650	3.81E-04	1.23E-05	5.59472E-08	7.99246E-10	7.99246E-09
384	GRID	544800	4165600	3.92E-04	6.38E-06	5.66817E-08	8.09739E-10	8.09739E-09
325	GRID	544700	4165450	3.94E-04	5.29E-06	5.68442E-08	8.12059E-10	8.12059E-09
286	GRID	544650	4165350	4.01E-04	5.24E-06	5.77873E-08	8.25533E-10	8.25533E-09
345	GRID	544750	4165500	4.12E-04	5.92E-06	5.94685E-08	8.4955E-10	8.4955E-09
11	GRID	545650	4163700	4.12E-04	1.75E-05	6.1112E-08	8.73029E-10	8.73029E-09
365	GRID	544800	4165550	4.23E-04	6.57E-06	6.11459E-08	8.73513E-10	8.73513E-09
306	GRID	544700	4165400	4.25E-04	5.45E-06	6.13033E-08	8.75762E-10	8.75762E-09
385	GRID	544850	4165600	4.27E-04	6.99E-06	6.18399E-08	8.83428E-10	8.83428E-09
10	GRID	545600	4163700	4.25E-04	1.54E-05	6.27246E-08	8.96066E-10	8.96066E-09
28	GRID	545750	4163750	4.25E-04	2.03E-05	6.34152E-08	9.05931E-10	9.05931E-09
267	GRID	544650	4165300	4.34E-04	5.58E-06	6.25897E-08	8.94139E-10	8.94139E-09
9	GRID	545550	4163700	4.43E-04	1.31E-05	6.49208E-08	9.2744E-10	9.2744E-09
27	GRID	545700	4163750	4.41E-04	2.11E-05	6.57464E-08	9.39235E-10	9.39235E-09
326	GRID	544750	4165450	4.45E-04	6.02E-06	6.4237E-08	9.17672E-10	9.17672E-09
48	GRID	545800	4163800	4.52E-04	2.39E-05	6.77327E-08	9.6761E-10	9.6761E-09
346	GRID	544800	4165500	4.59E-04	6.76E-06	6.62426E-08	9.46323E-10	9.46323E-09
386	GRID	544900	4165600	4.59E-04	7.58E-06	6.63606E-08	9.48009E-10	9.48009E-09
8	GRID	545500	4163700	4.59E-04	1.14E-05	6.69005E-08	9.55722E-10	9.55722E-09
287	GRID	544700	4165350	4.61E-04	5.66E-06	6.64038E-08	9.48626E-10	9.48626E-09
26	GRID	545650	4163750	4.59E-04	2.13E-05	6.83193E-08	9.7599E-10	9.7599E-09
366	GRID	544850	4165550	4.63E-04	7.30E-06	6.69542E-08	9.56489E-10	9.56489E-09
248	GRID	544650	4165250	4.72E-04	6.03E-06	6.8041E-08	9.72015E-10	9.72015E-09
47	GRID	545750	4163800	4.70E-04	2.43E-05	7.03181E-08	1.00454E-09	1.00454E-08
7	GRID	545450	4163700	4.76E-04	1.04E-05	6.92976E-08	9.89965E-10	9.89965E-09
25	GRID	545600	4163750	4.76E-04	1.98E-05	7.06285E-08	1.00898E-09	1.00898E-08
307	GRID	544750	4165400	4.85E-04	6.16E-06	6.996E-08	9.99429E-10	9.99429E-09
387	GRID	544950	4165600	4.87E-04	8.22E-06	7.05707E-08	1.00815E-09	1.00815E-08
46	GRID	545700	4163800	4.90E-04	2.50E-05	7.32832E-08	1.0469E-09	1.0469E-08
6	GRID	545400	4163700	4.94E-04	1.15E-05	7.19834E-08	1.02833E-09	1.02833E-08
327	GRID	544800	4165450	4.99E-04	6.93E-06	7.19719E-08	1.02817E-09	1.02817E-08
367	GRID	544900	4165550	4.99E-04	7.98E-06	7.21213E-08	1.0303E-09	1.0303E-08
24	GRID	545550	4163750	4.96E-04	1.66E-05	7.30285E-08	1.04326E-09	1.04326E-08
268	GRID	544700	4165300	5.03E-04	5.95E-06	7.24663E-08	1.03523E-09	1.03523E-08
67	GRID	545800	4163850	4.96E-04	2.97E-05	7.48993E-08	1.06999E-09	1.06999E-08
347	GRID	544850	4165500	5.03E-04	7.60E-06	7.27011E-08	1.03859E-09	1.03859E-08
5	GRID	545350	4163700	5.12E-04	1.35E-05	7.48074E-08	1.06868E-09	1.06868E-08
45	GRID	545650	4163800	5.10E-04	2.60E-05	7.62734E-08	1.08962E-09	1.08962E-08
229	GRID	544650	4165200	5.16E-04	6.60E-06	7.44593E-08	1.0637E-09	1.0637E-08
388	GRID	545000	4165600	5.19E-04	9.00E-06	7.51177E-08	1.07311E-09	1.07311E-08
23	GRID	545500	4163750	5.19E-04	1.41E-05	7.5846E-08	1.08351E-09	1.08351E-08
66	GRID	545750	4163850	5.19E-04	3.02E-05	7.81311E-08	1.11616E-09	1.11616E-08
4	GRID	545300	4163700	5.28E-04	1.42E-05	7.71261E-08	1.1018E-09	1.1018E-08
288	GRID	544750	4165350	5.32E-04	6.32E-06	7.66387E-08	1.09484E-09	1.09484E-08
368	GRID	544950	4165550	5.32E-04	8.69E-06	7.69752E-08	1.09965E-09	1.09965E-08
44	GRID	545600	4163800	5.32E-04	2.55E-05	7.9367E-08	1.13381E-09	1.13381E-08
3	GRID	545250	4163700	5.39E-04	1.46E-05	7.87608E-08	1.12515E-09	1.12515E-08
22	GRID	545450	4163750	5.43E-04	1.27E-05	7.91309E-08	1.13044E-09	1.13044E-08
348	GRID	544900	4165500	5.45E-04	8.40E-06	7.88351E-08	1.12622E-09	1.12622E-08
308	GRID	544800	4165400	5.48E-04	7.10E-06	7.89675E-08	1.12811E-09	1.12811E-08
65	GRID	545700	4163850	5.43E-04	3.07E-05	8.16923E-08	1.16703E-09	1.16703E-08
389	GRID	545050	4165600	5.50E-04	9.88E-06	7.96799E-08	1.13828E-09	1.13828E-08
328	GRID	544850	4165450	5.52E-04	7.90E-06	7.97155E-08	1.13879E-09	1.13879E-08
86	GRID	545800	4163900	5.43E-04	3.80E-05	8.27344E-08	1.18192E-09	1.18192E-08
249	GRID	544700	4165250	5.54E-04	6.35E-06	7.98114E-08	1.14016E-09	1.14016E-08
43	GRID	545550	4163800	5.59E-04	2.19E-05	8.2655E-08	1.18079E-09	1.18079E-08
369	GRID	545000	4165550	5.68E-04	9.52E-06	8.21648E-08	1.17378E-09	1.17378E-08
21	GRID	545400	4163750	5.70E-04	1.41E-05	8.31346E-08	1.18764E-09	1.18764E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
64	GRID	545650	4163850	5.68E-04	3.18E-05	8.53414E-08	1.21916E-09	1.21916E-08
85	GRID	545750	4163900	5.70E-04	3.89E-05	8.66627E-08	1.23804E-09	1.23804E-08
390	GRID	545100	4165600	5.81E-04	1.09E-05	8.42671E-08	1.20382E-09	1.20382E-08
269	GRID	544750	4165300	5.85E-04	6.56E-06	8.42781E-08	1.20397E-09	1.20397E-08
349	GRID	544950	4165500	5.85E-04	9.17E-06	8.46498E-08	1.20928E-09	1.20928E-08
42	GRID	545500	4163800	5.88E-04	1.81E-05	8.62348E-08	1.23193E-09	1.23193E-08
20	GRID	545350	4163750	5.99E-04	1.64E-05	8.75807E-08	1.25115E-09	1.25115E-08
329	GRID	544900	4165450	5.99E-04	8.82E-06	8.65009E-08	1.23573E-09	1.23573E-08
63	GRID	545600	4163850	5.97E-04	3.28E-05	8.95991E-08	1.27999E-09	1.27999E-08
289	GRID	544800	4165350	6.03E-04	7.28E-06	8.69163E-08	1.24166E-09	1.24166E-08
370	GRID	545050	4165550	6.03E-04	1.05E-05	8.73733E-08	1.24819E-09	1.24819E-08
309	GRID	544850	4165400	6.08E-04	8.20E-06	8.76806E-08	1.25258E-09	1.25258E-08
84	GRID	545700	4163900	5.99E-04	3.96E-05	9.08828E-08	1.29833E-09	1.29833E-08
230	GRID	544700	4165200	6.12E-04	6.87E-06	8.81248E-08	1.25893E-09	1.25893E-08
391	GRID	545150	4165600	6.14E-04	1.21E-05	8.91838E-08	1.27405E-09	1.27405E-08
41	GRID	545450	4163800	6.19E-04	1.58E-05	9.03449E-08	1.29064E-09	1.29064E-08
350	GRID	545000	4165500	6.25E-04	1.01E-05	9.04795E-08	1.29256E-09	1.29256E-08
19	GRID	545300	4163750	6.25E-04	1.69E-05	9.14588E-08	1.30655E-09	1.30655E-08
62	GRID	545550	4163850	6.28E-04	3.00E-05	9.36339E-08	1.33763E-09	1.33763E-08
83	GRID	545650	4163900	6.32E-04	4.06E-05	9.57744E-08	1.36821E-09	1.36821E-08
371	GRID	545100	4165550	6.39E-04	1.16E-05	9.26069E-08	1.32296E-09	1.32296E-08
250	GRID	544750	4165250	6.48E-04	6.89E-06	9.31977E-08	1.3314E-09	1.3314E-08
330	GRID	544950	4165450	6.45E-04	9.79E-06	9.32939E-08	1.33277E-09	1.33277E-08
392	GRID	545200	4165600	6.45E-04	1.32E-05	9.37836E-08	1.33977E-09	1.33977E-08
18	GRID	545250	4163750	6.50E-04	1.72E-05	9.49823E-08	1.35689E-09	1.35689E-08
40	GRID	545400	4163800	6.54E-04	1.76E-05	9.56789E-08	1.36684E-09	1.36684E-08
310	GRID	544900	4165400	6.63E-04	9.35E-06	9.57663E-08	1.36809E-09	1.36809E-08
351	GRID	545050	4165500	6.66E-04	1.12E-05	9.63469E-08	1.37638E-09	1.37638E-08
61	GRID	545500	4163850	6.63E-04	2.41E-05	9.78631E-08	1.39804E-09	1.39804E-08
270	GRID	544800	4165300	6.70E-04	7.50E-06	9.64533E-08	1.3779E-09	1.3779E-08
17	GRID	545200	4163750	6.70E-04	1.74E-05	9.78595E-08	1.39799E-09	1.39799E-08
290	GRID	544850	4165350	6.74E-04	8.49E-06	9.7229E-08	1.38899E-09	1.38899E-08
82	GRID	545600	4163900	6.68E-04	4.22E-05	1.01083E-07	1.44405E-09	1.44405E-08
372	GRID	545150	4165550	6.77E-04	1.29E-05	9.81699E-08	1.40243E-09	1.40243E-08
211	GRID	544700	4165150	6.81E-04	7.54E-06	9.80441E-08	1.40063E-09	1.40063E-08
393	GRID	545250	4165600	6.79E-04	1.44E-05	9.87002E-08	1.41E-09	1.41E-08
16	GRID	545150	4163750	6.86E-04	1.69E-05	1.00015E-07	1.42879E-09	1.42879E-08
331	GRID	545000	4165450	6.92E-04	1.08E-05	1.00087E-07	1.42981E-09	1.42981E-08
39	GRID	545350	4163800	6.94E-04	2.04E-05	1.01772E-07	1.45389E-09	1.45389E-08
15	GRID	545100	4163750	6.97E-04	1.65E-05	1.01537E-07	1.45053E-09	1.45053E-08
12	GRID	544950	4163750	7.01E-04	1.77E-05	1.02346E-07	1.46209E-09	1.46209E-08
14	GRID	545050	4163750	7.03E-04	1.66E-05	1.025E-07	1.46429E-09	1.46429E-08
60	GRID	545450	4163850	7.03E-04	2.02E-05	1.03015E-07	1.47164E-09	1.47164E-08
13	GRID	545000	4163750	7.08E-04	1.71E-05	1.03209E-07	1.47442E-09	1.47442E-08
352	GRID	545100	4165500	7.08E-04	1.24E-05	1.02544E-07	1.46491E-09	1.46491E-08
394	GRID	545300	4165600	7.08E-04	1.55E-05	1.02983E-07	1.47119E-09	1.47119E-08
373	GRID	545200	4165550	7.14E-04	1.41E-05	1.03733E-07	1.4819E-09	1.4819E-08
81	GRID	545550	4163900	7.06E-04	4.22E-05	1.06471E-07	1.52101E-09	1.52101E-08
311	GRID	544950	4165400	7.19E-04	1.04E-05	1.03839E-07	1.48342E-09	1.48342E-08
231	GRID	544750	4165200	7.23E-04	7.34E-06	1.04036E-07	1.48623E-09	1.48623E-08
395	GRID	545350	4165600	7.32E-04	1.67E-05	1.06632E-07	1.52332E-09	1.52332E-08
38	GRID	545300	4163800	7.37E-04	2.05E-05	1.07818E-07	1.54026E-09	1.54026E-08
291	GRID	544900	4165350	7.41E-04	9.79E-06	1.0692E-07	1.52744E-09	1.52744E-08
332	GRID	545050	4165450	7.41E-04	1.19E-05	1.07222E-07	1.53174E-09	1.53174E-08
251	GRID	544800	4165250	7.50E-04	7.77E-06	1.07901E-07	1.54144E-09	1.54144E-08
374	GRID	545250	4165550	7.48E-04	1.54E-05	1.08675E-07	1.5525E-09	1.5525E-08
353	GRID	545150	4165500	7.50E-04	1.38E-05	1.08753E-07	1.55362E-09	1.55362E-08
59	GRID	545400	4163850	7.50E-04	2.28E-05	1.10046E-07	1.57209E-09	1.57209E-08
271	GRID	544850	4165300	7.55E-04	8.78E-06	1.08679E-07	1.55255E-09	1.55255E-08
396	GRID	545400	4165600	7.52E-04	1.77E-05	1.09635E-07	1.56621E-09	1.56621E-08
80	GRID	545500	4163900	7.50E-04	3.43E-05	1.11678E-07	1.59541E-09	1.59541E-08
193	GRID	544700	4165100	7.66E-04	8.39E-06	1.10207E-07	1.57438E-09	1.57438E-08
397	GRID	545450	4165600	7.66E-04	1.88E-05	1.11687E-07	1.59553E-09	1.59553E-08
312	GRID	545000	4165400	7.75E-04	1.15E-05	1.11912E-07	1.59875E-09	1.59875E-08
398	GRID	545500	4165600	7.70E-04	1.98E-05	1.12471E-07	1.60674E-09	1.60674E-08
399	GRID	545550	4165600	7.70E-04	2.08E-05	1.1261E-07	1.60871E-09	1.60871E-08
375	GRID	545300	4165550	7.79E-04	1.68E-05	1.133E-07	1.61857E-09	1.61857E-08
37	GRID	545250	4163800	7.79E-04	2.09E-05	1.1389E-07	1.627E-09	1.627E-08
333	GRID	545100	4165450	7.90E-04	1.33E-05	1.14394E-07	1.63421E-09	1.63421E-08
354	GRID	545200	4165500	7.92E-04	1.52E-05	1.14975E-07	1.6425E-09	1.6425E-08
79	GRID	545450	4163900	8.01E-04	2.73E-05	1.17963E-07	1.68518E-09	1.68518E-08
100	GRID	545550	4163950	7.90E-04	5.96E-05	1.20986E-07	1.72837E-09	1.72837E-08
292	GRID	544950	4165350	8.06E-04	1.10E-05	1.16286E-07	1.66123E-09	1.66123E-08
376	GRID	545350	4165550	8.04E-04	1.80E-05	1.16961E-07	1.67088E-09	1.67088E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
58	GRID	545350	4163850	8.04E-04	2.58E-05	1.18066E-07	1.68666E-09	1.68666E-08
212	GRID	544750	4165150	8.17E-04	7.95E-06	1.17433E-07	1.67761E-09	1.67761E-08
36	GRID	545200	4163800	8.21E-04	2.07E-05	1.19886E-07	1.71265E-09	1.71265E-08
377	GRID	545400	4165550	8.21E-04	1.92E-05	1.19672E-07	1.7096E-09	1.7096E-08
380	GRID	545550	4165550	8.24E-04	2.28E-05	1.20491E-07	1.7213E-09	1.7213E-08
313	GRID	545050	4165400	8.30E-04	1.28E-05	1.20023E-07	1.71462E-09	1.71462E-08
355	GRID	545250	4165500	8.28E-04	1.67E-05	1.20259E-07	1.71798E-09	1.71798E-08
378	GRID	545450	4165550	8.30E-04	2.04E-05	1.21103E-07	1.73004E-09	1.73004E-08
379	GRID	545500	4165550	8.30E-04	2.16E-05	1.21279E-07	1.73255E-09	1.73255E-08
272	GRID	544900	4165300	8.35E-04	1.02E-05	1.20293E-07	1.71847E-09	1.71847E-08
334	GRID	545150	4165450	8.39E-04	1.48E-05	1.2158E-07	1.73685E-09	1.73685E-08
232	GRID	544800	4165200	8.48E-04	8.14E-06	1.21897E-07	1.74138E-09	1.74138E-08
252	GRID	544850	4165250	8.53E-04	9.08E-06	1.22665E-07	1.75236E-09	1.75236E-08
99	GRID	545500	4163950	8.46E-04	5.37E-05	1.28067E-07	1.82953E-09	1.82953E-08
356	GRID	545300	4165500	8.59E-04	1.82E-05	1.24909E-07	1.78441E-09	1.78441E-08
35	GRID	545150	4163800	8.59E-04	2.02E-05	1.25198E-07	1.78854E-09	1.78854E-08
78	GRID	545400	4163900	8.59E-04	3.08E-05	1.26704E-07	1.81006E-09	1.81006E-08
175	GRID	544700	4165050	8.66E-04	9.44E-06	1.24617E-07	1.78024E-09	1.78024E-08
57	GRID	545300	4163850	8.64E-04	2.57E-05	1.2661E-07	1.80871E-09	1.80871E-08
293	GRID	545000	4165350	8.73E-04	1.23E-05	1.25982E-07	1.79974E-09	1.79974E-08
361	GRID	545550	4165500	8.79E-04	2.49E-05	1.28715E-07	1.83879E-09	1.83879E-08
335	GRID	545200	4165450	8.84E-04	1.64E-05	1.28144E-07	1.83062E-09	1.83062E-08
357	GRID	545350	4165500	8.81E-04	1.96E-05	1.28279E-07	1.83255E-09	1.83255E-08
314	GRID	545100	4165400	8.88E-04	1.43E-05	1.28476E-07	1.83537E-09	1.83537E-08
360	GRID	545500	4165500	8.93E-04	2.35E-05	1.30428E-07	1.86326E-09	1.86326E-08
358	GRID	545400	4165500	8.95E-04	2.09E-05	1.30368E-07	1.86241E-09	1.86241E-08
34	GRID	545100	4163800	8.97E-04	2.01E-05	1.30572E-07	1.86532E-09	1.86532E-08
655	GRID	544600	4164900	8.99E-04	1.62E-05	1.30337E-07	1.86195E-09	1.86195E-08
359	GRID	545450	4165500	8.99E-04	2.23E-05	1.31203E-07	1.87433E-09	1.87433E-08
273	GRID	544950	4165300	9.13E-04	1.18E-05	1.3161E-07	1.88015E-09	1.88015E-08
98	GRID	545450	4163950	9.08E-04	3.93E-05	1.34894E-07	1.92706E-09	1.92706E-08
336	GRID	545250	4165450	9.22E-04	1.81E-05	1.33769E-07	1.91099E-09	1.91099E-08
194	GRID	544750	4165100	9.30E-04	8.75E-06	1.33709E-07	1.91012E-09	1.91012E-08
56	GRID	545250	4163850	9.28E-04	2.59E-05	1.35838E-07	1.94054E-09	1.94054E-08
77	GRID	545350	4163900	9.26E-04	3.35E-05	1.366E-07	1.95143E-09	1.95143E-08
33	GRID	545050	4163800	9.33E-04	2.06E-05	1.35718E-07	1.93883E-09	1.93883E-08
294	GRID	545050	4165350	9.39E-04	1.38E-05	1.35689E-07	1.93842E-09	1.93842E-08
342	GRID	545550	4165450	9.37E-04	2.73E-05	1.37306E-07	1.96151E-09	1.96151E-08
315	GRID	545150	4165400	9.42E-04	1.61E-05	1.36333E-07	1.94761E-09	1.94761E-08
253	GRID	544900	4165250	9.50E-04	1.08E-05	1.36847E-07	1.95496E-09	1.95496E-08
337	GRID	545300	4165450	9.50E-04	1.98E-05	1.38128E-07	1.97325E-09	1.97325E-08
341	GRID	545500	4165450	9.59E-04	2.59E-05	1.40274E-07	2.00392E-09	2.00392E-08
213	GRID	544800	4165150	9.68E-04	8.67E-06	1.39085E-07	1.98692E-09	1.98692E-08
32	GRID	545000	4163800	9.66E-04	2.16E-05	1.4061E-07	2.00871E-09	2.00871E-08
233	GRID	544850	4165200	9.73E-04	9.44E-06	1.39828E-07	1.99754E-09	1.99754E-08
338	GRID	545350	4165450	9.70E-04	2.13E-05	1.41206E-07	2.01722E-09	2.01722E-08
340	GRID	545450	4165450	9.73E-04	2.44E-05	1.41962E-07	2.02803E-09	2.02803E-08
339	GRID	545400	4165450	9.77E-04	2.29E-05	1.42382E-07	2.03403E-09	2.03403E-08
157	GRID	544700	4165000	9.88E-04	1.09E-05	1.42259E-07	2.03228E-09	2.03228E-08
97	GRID	545400	4163950	9.79E-04	4.41E-05	1.45713E-07	2.08161E-09	2.08161E-08
274	GRID	545000	4165300	9.93E-04	1.32E-05	1.4322E-07	2.04599E-09	2.04599E-08
316	GRID	545200	4165400	9.91E-04	1.78E-05	1.43556E-07	2.05079E-09	2.05079E-08
31	GRID	544950	4163800	9.97E-04	2.27E-05	1.45197E-07	2.07424E-09	2.07424E-08
29	GRID	544850	4163800	9.99E-04	2.35E-05	1.45639E-07	2.08056E-09	2.08056E-08
55	GRID	545200	4163850	9.99E-04	2.56E-05	1.45928E-07	2.08469E-09	2.08469E-08
323	GRID	545550	4165400	9.97E-04	3.02E-05	1.46277E-07	2.08967E-09	2.08967E-08
295	GRID	545100	4165350	1.01E-03	1.54E-05	1.45435E-07	2.07764E-09	2.07764E-08
76	GRID	545300	4163900	1.01E-03	3.33E-05	1.47984E-07	2.11405E-09	2.11405E-08
30	GRID	544900	4163800	1.01E-03	2.34E-05	1.47516E-07	2.10736E-09	2.10736E-08
317	GRID	545250	4165400	1.03E-03	1.97E-05	1.49206E-07	2.13152E-09	2.13152E-08
322	GRID	545500	4165400	1.03E-03	2.87E-05	1.50487E-07	2.14982E-09	2.14982E-08
254	GRID	544950	4165250	1.05E-03	1.25E-05	1.50725E-07	2.15321E-09	2.15321E-08
321	GRID	545450	4165400	1.05E-03	2.70E-05	1.53418E-07	2.19168E-09	2.19168E-08
318	GRID	545300	4165400	1.06E-03	2.16E-05	1.53285E-07	2.18979E-09	2.18979E-08
296	GRID	545150	4165350	1.07E-03	1.74E-05	1.54267E-07	2.20382E-09	2.20382E-08
304	GRID	545550	4165350	1.06E-03	3.36E-05	1.55944E-07	2.22777E-09	2.22777E-08
319	GRID	545350	4165400	1.07E-03	2.35E-05	1.55134E-07	2.21619E-09	2.21619E-08
320	GRID	545400	4165400	1.07E-03	2.52E-05	1.55385E-07	2.21978E-09	2.21978E-08
656	GRID	544650	4164900	1.07E-03	1.59E-05	1.54371E-07	2.2053E-09	2.2053E-08
275	GRID	545050	4165300	1.07E-03	1.49E-05	1.54866E-07	2.21238E-09	2.21238E-08
176	GRID	544750	4165050	1.08E-03	9.79E-06	1.54455E-07	2.2065E-09	2.2065E-08
96	GRID	545350	4163950	1.07E-03	4.59E-05	1.58323E-07	2.26175E-09	2.26175E-08
54	GRID	545150	4163850	1.08E-03	2.54E-05	1.56677E-07	2.23825E-09	2.23825E-08
234	GRID	544900	4165200	1.09E-03	1.13E-05	1.57204E-07	2.24577E-09	2.24577E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
75	GRID	545250	4163900	1.10E-03	3.34E-05	1.60989E-07	2.29984E-09	2.29984E-08
303	GRID	545500	4165350	1.10E-03	3.18E-05	1.61397E-07	2.30567E-09	2.30567E-08
297	GRID	545200	4165350	1.12E-03	1.94E-05	1.61845E-07	2.31207E-09	2.31207E-08
195	GRID	544800	4165100	1.12E-03	9.35E-06	1.61364E-07	2.3052E-09	2.3052E-08
214	GRID	544850	4165150	1.13E-03	9.97E-06	1.61769E-07	2.31098E-09	2.31098E-08
489	GRID	545400	4164000	1.11E-03	6.95E-05	1.68342E-07	2.40489E-09	2.40489E-08
285	GRID	545550	4165300	1.13E-03	3.75E-05	1.65686E-07	2.36694E-09	2.36694E-08
139	GRID	544700	4164950	1.14E-03	1.29E-05	1.64401E-07	2.34859E-09	2.34859E-08
302	GRID	545450	4165350	1.14E-03	2.99E-05	1.65874E-07	2.36963E-09	2.36963E-08
255	GRID	545000	4165250	1.14E-03	1.44E-05	1.64615E-07	2.35164E-09	2.35164E-08
276	GRID	545100	4165300	1.15E-03	1.68E-05	1.65905E-07	2.37007E-09	2.37007E-08
298	GRID	545250	4165350	1.15E-03	2.16E-05	1.67229E-07	2.38898E-09	2.38898E-08
642	GRID	544600	4164850	1.16E-03	1.92E-05	1.67207E-07	2.38867E-09	2.38867E-08
53	GRID	545100	4163850	1.16E-03	2.60E-05	1.6849E-07	2.40701E-09	2.40701E-08
301	GRID	545400	4165350	1.16E-03	2.80E-05	1.69084E-07	2.41548E-09	2.41548E-08
299	GRID	545300	4165350	1.17E-03	2.37E-05	1.70065E-07	2.42951E-09	2.42951E-08
95	GRID	545300	4163950	1.17E-03	4.56E-05	1.72545E-07	2.46493E-09	2.46493E-08
300	GRID	545350	4165350	1.17E-03	2.58E-05	1.70684E-07	2.43834E-09	2.43834E-08
284	GRID	545500	4165300	1.18E-03	3.55E-05	1.72699E-07	2.46712E-09	2.46712E-08
266	GRID	545550	4165250	1.20E-03	4.21E-05	1.7648E-07	2.52114E-09	2.52114E-08
74	GRID	545200	4163900	1.20E-03	3.37E-05	1.76238E-07	2.51768E-09	2.51768E-08
235	GRID	544950	4165200	1.21E-03	1.34E-05	1.74617E-07	2.49454E-09	2.49454E-08
277	GRID	545150	4165300	1.22E-03	1.90E-05	1.75725E-07	2.51036E-09	2.51036E-08
283	GRID	545450	4165300	1.22E-03	3.34E-05	1.79052E-07	2.55789E-09	2.55789E-08
488	GRID	545350	4164000	1.22E-03	6.90E-05	1.83161E-07	2.61659E-09	2.61659E-08
256	GRID	545050	4165250	1.24E-03	1.62E-05	1.78505E-07	2.55007E-09	2.55007E-08
52	GRID	545050	4163850	1.24E-03	2.73E-05	1.81025E-07	2.58608E-09	2.58608E-08
158	GRID	544750	4165000	1.26E-03	1.11E-05	1.81263E-07	2.58947E-09	2.58947E-08
265	GRID	545500	4165250	1.26E-03	3.99E-05	1.84735E-07	2.63907E-09	2.63907E-08
278	GRID	545200	4165300	1.26E-03	2.13E-05	1.83036E-07	2.6148E-09	2.6148E-08
282	GRID	545400	4165300	1.26E-03	3.11E-05	1.84113E-07	2.63018E-09	2.63018E-08
215	GRID	544900	4165150	1.28E-03	1.18E-05	1.83898E-07	2.62712E-09	2.62712E-08
247	GRID	545550	4165200	1.27E-03	4.74E-05	1.88008E-07	2.68582E-09	2.68582E-08
279	GRID	545250	4165300	1.29E-03	2.38E-05	1.87507E-07	2.67868E-09	2.67868E-08
281	GRID	545350	4165300	1.29E-03	2.87E-05	1.87577E-07	2.67967E-09	2.67967E-08
502	GRID	545400	4164050	1.26E-03	1.33E-04	1.98006E-07	2.82865E-09	2.82865E-08
94	GRID	545250	4163950	1.29E-03	4.71E-05	1.90188E-07	2.71697E-09	2.71697E-08
280	GRID	545300	4165300	1.30E-03	2.63E-05	1.8881E-07	2.69728E-09	2.69728E-08
177	GRID	544800	4165050	1.32E-03	1.04E-05	1.90035E-07	2.71479E-09	2.71479E-08
196	GRID	544850	4165100	1.32E-03	1.06E-05	1.90061E-07	2.71515E-09	2.71515E-08
257	GRID	545100	4165250	1.32E-03	1.83E-05	1.91165E-07	2.73094E-09	2.73094E-08
264	GRID	545450	4165250	1.32E-03	3.76E-05	1.92952E-07	2.75646E-09	2.75646E-08
73	GRID	545150	4163900	1.33E-03	3.47E-05	1.93805E-07	2.76864E-09	2.76864E-08
236	GRID	545000	4165200	1.33E-03	1.55E-05	1.92031E-07	2.7433E-09	2.7433E-08
51	GRID	545000	4163850	1.34E-03	2.87E-05	1.94219E-07	2.77456E-09	2.77456E-08
246	GRID	545500	4165200	1.34E-03	4.52E-05	1.97834E-07	2.82621E-09	2.82621E-08
127	GRID	544700	4164900	1.36E-03	1.55E-05	1.95517E-07	2.7931E-09	2.7931E-08
657	GRID	544700	4164900	1.36E-03	1.55E-05	1.95517E-07	2.7931E-09	2.7931E-08
487	GRID	545300	4164000	1.34E-03	7.23E-05	2.01702E-07	2.88145E-09	2.88145E-08
228	GRID	545550	4165150	1.35E-03	5.37E-05	2.00003E-07	2.85719E-09	2.85719E-08
643	GRID	544650	4164850	1.37E-03	1.93E-05	1.97958E-07	2.82798E-09	2.82798E-08
263	GRID	545400	4165250	1.37E-03	3.49E-05	2.00181E-07	2.85972E-09	2.85972E-08
258	GRID	545150	4165250	1.39E-03	2.08E-05	2.01024E-07	2.87177E-09	2.87177E-08
262	GRID	545350	4165250	1.42E-03	3.22E-05	2.06129E-07	2.94471E-09	2.94471E-08
245	GRID	545450	4165200	1.42E-03	4.25E-05	2.07915E-07	2.97022E-09	2.97022E-08
501	GRID	545350	4164050	1.38E-03	1.44E-04	2.17576E-07	3.10822E-09	3.10822E-08
216	GRID	544950	4165150	1.43E-03	1.43E-05	2.05799E-07	2.93999E-09	2.93999E-08
259	GRID	545200	4165250	1.44E-03	2.35E-05	2.07751E-07	2.96787E-09	2.96787E-08
93	GRID	545200	4163950	1.43E-03	5.01E-05	2.11213E-07	3.01733E-09	3.01733E-08
50	GRID	544950	4163850	1.44E-03	2.97E-05	2.09581E-07	2.99401E-09	2.99401E-08
237	GRID	545050	4165200	1.45E-03	1.77E-05	2.08507E-07	2.97867E-09	2.97867E-08
261	GRID	545300	4165250	1.44E-03	2.94E-05	2.0953E-07	2.99329E-09	2.99329E-08
210	GRID	545550	4165100	1.43E-03	6.12E-05	2.12795E-07	3.03993E-09	3.03993E-08
227	GRID	545500	4165150	1.44E-03	5.13E-05	2.12023E-07	3.0289E-09	3.0289E-08
260	GRID	545250	4165250	1.45E-03	2.65E-05	2.10384E-07	3.00548E-09	3.00548E-08
72	GRID	545100	4163900	1.47E-03	3.62E-05	2.14617E-07	3.06596E-09	3.06596E-08
244	GRID	545400	4165200	1.49E-03	3.95E-05	2.17629E-07	3.10899E-09	3.10899E-08
140	GRID	544750	4164950	1.51E-03	1.30E-05	2.16702E-07	3.09574E-09	3.09574E-08
486	GRID	545250	4164000	1.50E-03	8.03E-05	2.2471E-07	3.21014E-09	3.21014E-08
197	GRID	544900	4165100	1.52E-03	1.25E-05	2.18858E-07	3.12654E-09	3.12654E-08
192	GRID	545550	4165050	1.52E-03	7.00E-05	2.25776E-07	3.22537E-09	3.22537E-08
226	GRID	545450	4165150	1.52E-03	4.84E-05	2.23968E-07	3.19954E-09	3.19954E-08
238	GRID	545100	4165200	1.54E-03	2.01E-05	2.22156E-07	3.17365E-09	3.17365E-08
209	GRID	545500	4165100	1.53E-03	5.87E-05	2.26704E-07	3.23863E-09	3.23863E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
243	GRID	545350	4165200	1.55E-03	3.63E-05	2.2605E-07	3.22929E-09	3.22929E-08
49	GRID	544900	4163850	1.57E-03	3.02E-05	2.28024E-07	3.25748E-09	3.25748E-08
217	GRID	545000	4165150	1.58E-03	1.69E-05	2.27091E-07	3.24416E-09	3.24416E-08
500	GRID	545300	4164050	1.54E-03	1.62E-04	2.42078E-07	3.45826E-09	3.45826E-08
178	GRID	544850	4165050	1.59E-03	1.15E-05	2.28214E-07	3.2602E-09	3.2602E-08
159	GRID	544800	4165000	1.60E-03	1.17E-05	2.28885E-07	3.26979E-09	3.26979E-08
629	GRID	544600	4164800	1.59E-03	2.27E-05	2.30125E-07	3.2875E-09	3.2875E-08
239	GRID	545150	4165200	1.60E-03	2.30E-05	2.31443E-07	3.30633E-09	3.30633E-08
242	GRID	545300	4165200	1.60E-03	3.30E-05	2.32545E-07	3.32207E-09	3.32207E-08
174	GRID	545550	4165000	1.60E-03	8.06E-05	2.38691E-07	3.40987E-09	3.40987E-08
92	GRID	545150	4163950	1.61E-03	5.20E-05	2.36525E-07	3.37892E-09	3.37892E-08
225	GRID	545400	4165150	1.61E-03	4.51E-05	2.36166E-07	3.37381E-09	3.37381E-08
240	GRID	545200	4165200	1.63E-03	2.62E-05	2.36015E-07	3.37164E-09	3.37164E-08
241	GRID	545250	4165200	1.63E-03	2.95E-05	2.36175E-07	3.37393E-09	3.37393E-08
191	GRID	545500	4165050	1.63E-03	6.77E-05	2.42245E-07	3.46065E-09	3.46065E-08
208	GRID	545450	4165100	1.64E-03	5.56E-05	2.41476E-07	3.44966E-09	3.44966E-08
71	GRID	545050	4163900	1.65E-03	3.77E-05	2.40182E-07	3.43117E-09	3.43117E-08
156	GRID	545550	4164950	1.67E-03	9.35E-05	2.50665E-07	3.58093E-09	3.58093E-08
224	GRID	545350	4165150	1.70E-03	4.14E-05	2.47681E-07	3.5383E-09	3.5383E-08
485	GRID	545200	4164000	1.68E-03	8.35E-05	2.51781E-07	3.59688E-09	3.59688E-08
218	GRID	545050	4165150	1.71E-03	1.95E-05	2.46152E-07	3.51646E-09	3.51646E-08
198	GRID	544950	4165100	1.72E-03	1.53E-05	2.47134E-07	3.53048E-09	3.53048E-08
644	GRID	544700	4164850	1.72E-03	1.90E-05	2.47991E-07	3.54272E-09	3.54272E-08
514	GRID	545350	4164100	1.56E-03	5.32E-04	2.98488E-07	4.26412E-09	4.26412E-08
173	GRID	545500	4165000	1.73E-03	7.86E-05	2.57416E-07	3.67737E-09	3.67737E-08
207	GRID	545400	4165100	1.75E-03	5.19E-05	2.56464E-07	3.66377E-09	3.66377E-08
499	GRID	545250	4164050	1.73E-03	1.57E-04	2.67944E-07	3.82777E-09	3.82777E-08
190	GRID	545450	4165050	1.76E-03	6.44E-05	2.59831E-07	3.71188E-09	3.71188E-08
223	GRID	545300	4165150	1.77E-03	3.74E-05	2.57891E-07	3.68415E-09	3.68415E-08
219	GRID	545100	4165150	1.80E-03	2.23E-05	2.59863E-07	3.71233E-09	3.71233E-08
222	GRID	545250	4165150	1.83E-03	3.33E-05	2.65236E-07	3.78908E-09	3.78908E-08
91	GRID	545100	4163950	1.83E-03	5.29E-05	2.6834E-07	3.83343E-09	3.83343E-08
155	GRID	545500	4164950	1.82E-03	9.17E-05	2.72597E-07	3.89424E-09	3.89424E-08
128	GRID	544750	4164900	1.85E-03	1.54E-05	2.65222E-07	3.78889E-09	3.78889E-08
658	GRID	544750	4164900	1.85E-03	1.54E-05	2.65222E-07	3.78889E-09	3.78889E-08
220	GRID	545150	4165150	1.85E-03	2.56E-05	2.673E-07	3.81857E-09	3.81857E-08
179	GRID	544900	4165050	1.86E-03	1.33E-05	2.66822E-07	3.81174E-09	3.81174E-08
221	GRID	545200	4165150	1.86E-03	2.94E-05	2.6879E-07	3.83986E-09	3.83986E-08
513	GRID	545300	4164100	1.75E-03	3.66E-04	3.01187E-07	4.30267E-09	4.30267E-08
206	GRID	545350	4165100	1.86E-03	4.75E-05	2.71694E-07	3.88134E-09	3.88134E-08
70	GRID	545000	4163900	1.87E-03	3.89E-05	2.71097E-07	3.87281E-09	3.87281E-08
172	GRID	545450	4165000	1.88E-03	7.51E-05	2.78476E-07	3.97822E-09	3.97822E-08
199	GRID	545000	4165100	1.90E-03	1.84E-05	2.73571E-07	3.90816E-09	3.90816E-08
189	GRID	545400	4165050	1.89E-03	6.01E-05	2.78242E-07	3.97489E-09	3.97489E-08
484	GRID	545150	4164000	1.92E-03	8.18E-05	2.84804E-07	4.06864E-09	4.06864E-08
630	GRID	544650	4164800	1.92E-03	2.32E-05	2.77101E-07	3.95859E-09	3.95859E-08
141	GRID	544800	4164950	1.98E-03	1.34E-05	2.83947E-07	4.05639E-09	4.05639E-08
160	GRID	544850	4165000	1.97E-03	1.27E-05	2.81945E-07	4.02779E-09	4.02779E-08
205	GRID	545300	4165100	1.96E-03	4.29E-05	2.85605E-07	4.08008E-09	4.08008E-08
498	GRID	545200	4164050	1.96E-03	1.43E-04	2.9921E-07	4.27442E-09	4.27442E-08
154	GRID	545450	4164950	1.99E-03	8.82E-05	2.96496E-07	4.23565E-09	4.23565E-08
188	GRID	545350	4165050	2.03E-03	5.52E-05	2.97504E-07	4.25006E-09	4.25006E-08
200	GRID	545050	4165100	2.04E-03	2.15E-05	2.93975E-07	4.19965E-09	4.19965E-08
171	GRID	545400	4165000	2.04E-03	7.06E-05	3.00956E-07	4.29937E-09	4.29937E-08
204	GRID	545250	4165100	2.05E-03	3.80E-05	2.97591E-07	4.2513E-09	4.2513E-08
512	GRID	545250	4164100	1.97E-03	2.78E-04	3.20638E-07	4.58054E-09	4.58054E-08
528	GRID	545350	4164150	1.76E-03	9.26E-04	3.82499E-07	5.46426E-09	5.46426E-08
180	GRID	544950	4165050	2.12E-03	1.63E-05	3.04009E-07	4.34299E-09	4.34299E-08
201	GRID	545100	4165100	2.13E-03	2.49E-05	3.06178E-07	4.37397E-09	4.37397E-08
203	GRID	545200	4165100	2.12E-03	3.32E-05	3.06103E-07	4.3729E-09	4.3729E-08
69	GRID	544950	4163900	2.13E-03	3.95E-05	3.08579E-07	4.40827E-09	4.40827E-08
90	GRID	545050	4163950	2.13E-03	5.34E-05	3.10233E-07	4.4319E-09	4.4319E-08
202	GRID	545150	4165100	2.15E-03	2.87E-05	3.09582E-07	4.4226E-09	4.4226E-08
527	GRID	545300	4164150	1.99E-03	5.65E-04	3.63153E-07	5.1879E-09	5.1879E-08
187	GRID	545300	4165050	2.17E-03	4.97E-05	3.16361E-07	4.51944E-09	4.51944E-08
153	GRID	545400	4164950	2.19E-03	8.35E-05	3.23717E-07	4.62453E-09	4.62453E-08
170	GRID	545350	4165000	2.22E-03	6.48E-05	3.25175E-07	4.64536E-09	4.64536E-08
483	GRID	545100	4164000	2.22E-03	7.88E-05	3.27805E-07	4.68293E-09	4.68293E-08
497	GRID	545150	4164050	2.25E-03	1.28E-04	3.38272E-07	4.83245E-09	4.83245E-08
186	GRID	545250	4165050	2.29E-03	4.38E-05	3.32644E-07	4.75206E-09	4.75206E-08
181	GRID	545000	4165050	2.34E-03	2.01E-05	3.35605E-07	4.79436E-09	4.79436E-08
511	GRID	545200	4164100	2.27E-03	2.24E-04	3.55126E-07	5.07323E-09	5.07323E-08
617	GRID	544600	4164750	2.31E-03	2.67E-05	3.33378E-07	4.76254E-09	4.76254E-08
161	GRID	544900	4165000	2.34E-03	1.45E-05	3.34801E-07	4.78288E-09	4.78288E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
645	GRID	544750	4164850	2.36E-03	1.88E-05	3.38586E-07	4.83694E-09	4.83694E-08
526	GRID	545250	4164150	2.27E-03	4.03E-04	3.80614E-07	5.43734E-09	5.43734E-08
169	GRID	545300	4165000	2.40E-03	5.83E-05	3.50548E-07	5.00783E-09	5.00783E-08
152	GRID	545350	4164950	2.40E-03	7.71E-05	3.53223E-07	5.04604E-09	5.04604E-08
185	GRID	545200	4165050	2.40E-03	3.80E-05	3.47661E-07	4.96658E-09	4.96658E-08
182	GRID	545050	4165050	2.47E-03	2.40E-05	3.55171E-07	5.07387E-09	5.07387E-08
631	GRID	544700	4164800	2.45E-03	2.35E-05	3.51927E-07	5.02753E-09	5.02753E-08
68	GRID	544900	4163900	2.47E-03	3.94E-05	3.57368E-07	5.10526E-09	5.10526E-08
184	GRID	545150	4165050	2.49E-03	3.26E-05	3.59571E-07	5.13672E-09	5.13672E-08
183	GRID	545100	4165050	2.52E-03	2.80E-05	3.62087E-07	5.17267E-09	5.17267E-08
541	GRID	545300	4164200	2.25E-03	8.38E-04	4.39344E-07	6.27634E-09	6.27634E-08
142	GRID	544850	4164950	2.54E-03	1.44E-05	3.6331E-07	5.19014E-09	5.19014E-08
89	GRID	545000	4163950	2.54E-03	5.34E-05	3.68859E-07	5.26942E-09	5.26942E-08
129	GRID	544800	4164900	2.56E-03	1.58E-05	3.66679E-07	5.23828E-09	5.23828E-08
659	GRID	544800	4164900	2.56E-03	1.58E-05	3.66679E-07	5.23828E-09	5.23828E-08
168	GRID	545250	4165000	2.58E-03	5.12E-05	3.74896E-07	5.35565E-09	5.35565E-08
151	GRID	545300	4164950	2.65E-03	6.93E-05	3.86976E-07	5.52824E-09	5.52824E-08
482	GRID	545050	4164000	2.65E-03	7.61E-05	3.87943E-07	5.54205E-09	5.54205E-08
496	GRID	545100	4164050	2.65E-03	1.16E-04	3.93556E-07	5.62222E-09	5.62222E-08
162	GRID	544950	4165000	2.67E-03	1.76E-05	3.82788E-07	5.4684E-09	5.4684E-08
510	GRID	545150	4164100	2.63E-03	1.87E-04	4.00557E-07	5.72224E-09	5.72224E-08
525	GRID	545200	4164150	2.60E-03	3.14E-04	4.15467E-07	5.93525E-09	5.93525E-08
167	GRID	545200	4165000	2.76E-03	4.41E-05	3.9923E-07	5.70329E-09	5.70329E-08
540	GRID	545250	4164200	2.58E-03	5.82E-04	4.50467E-07	6.43525E-09	6.43525E-08
150	GRID	545250	4164950	2.89E-03	6.08E-05	4.20617E-07	6.00882E-09	6.00882E-08
166	GRID	545150	4165000	2.89E-03	3.76E-05	4.17315E-07	5.96165E-09	5.96165E-08
163	GRID	545000	4165000	2.92E-03	2.20E-05	4.18274E-07	5.97535E-09	5.97535E-08
618	GRID	544650	4164750	2.98E-03	2.79E-05	4.2861E-07	6.123E-09	6.123E-08
165	GRID	545100	4165000	2.98E-03	3.19E-05	4.29188E-07	6.13125E-09	6.13125E-08
164	GRID	545050	4165000	3.00E-03	2.69E-05	4.31641E-07	6.1663E-09	6.1663E-08
553	GRID	545300	4164250	2.54E-03	1.47E-03	5.7094E-07	8.15628E-09	8.15628E-08
143	GRID	544900	4164950	3.07E-03	1.61E-05	4.39616E-07	6.28023E-09	6.28023E-08
149	GRID	545200	4164950	3.14E-03	5.19E-05	4.5422E-07	6.48886E-09	6.48886E-08
524	GRID	545150	4164150	3.05E-03	2.55E-04	4.70435E-07	6.7205E-09	6.7205E-08
539	GRID	545200	4164200	3.00E-03	4.39E-04	4.90338E-07	7.00483E-09	7.00483E-08
88	GRID	544950	4163950	3.14E-03	5.30E-05	4.54371E-07	6.49102E-09	6.49102E-08
509	GRID	545100	4164100	3.12E-03	1.61E-04	4.66633E-07	6.66618E-09	6.66618E-08
138	GRID	545250	4164900	3.21E-03	7.33E-05	4.66766E-07	6.66808E-09	6.66808E-08
495	GRID	545050	4164050	3.18E-03	1.07E-04	4.68355E-07	6.69079E-09	6.69079E-08
552	GRID	545250	4164250	2.94E-03	8.91E-04	5.45115E-07	7.78736E-09	7.78736E-08
668	GRID	545250	4164900	3.21E-03	7.33E-05	4.66766E-07	6.66808E-09	6.66808E-08
481	GRID	545000	4164000	3.27E-03	7.35E-05	4.7631E-07	6.80443E-09	6.80443E-08
148	GRID	545150	4164950	3.36E-03	4.38E-05	4.84755E-07	6.92507E-09	6.92507E-08
632	GRID	544750	4164800	3.38E-03	2.34E-05	4.85011E-07	6.92873E-09	6.92873E-08
130	GRID	544850	4164900	3.47E-03	1.67E-05	4.96733E-07	7.09618E-09	7.09618E-08
607	GRID	544600	4164700	3.45E-03	3.20E-05	4.95749E-07	7.08212E-09	7.08212E-08
660	GRID	544850	4164900	3.47E-03	1.67E-05	4.96733E-07	7.09618E-09	7.09618E-08
144	GRID	544950	4164950	3.49E-03	1.93E-05	5.00279E-07	7.14684E-09	7.14684E-08
137	GRID	545200	4164900	3.54E-03	6.23E-05	5.12731E-07	7.32473E-09	7.32473E-08
147	GRID	545100	4164950	3.54E-03	3.68E-05	5.09102E-07	7.27289E-09	7.27289E-08
667	GRID	545200	4164900	3.54E-03	6.23E-05	5.12731E-07	7.32473E-08	7.32473E-08
646	GRID	544800	4164850	3.56E-03	1.90E-05	5.09735E-07	7.28193E-09	7.28193E-08
551	GRID	545200	4164250	3.43E-03	6.20E-04	5.76287E-07	8.23267E-09	8.23267E-08
538	GRID	545150	4164200	3.54E-03	3.44E-04	5.52833E-07	7.89762E-09	7.89762E-08
146	GRID	545050	4164950	3.67E-03	3.04E-05	5.27212E-07	7.5316E-09	7.5316E-08
145	GRID	545000	4164950	3.67E-03	2.43E-05	5.26346E-07	7.51923E-09	7.51923E-08
523	GRID	545100	4164150	3.65E-03	2.14E-04	5.50222E-07	7.86031E-09	7.86031E-08
563	GRID	545250	4164300	3.29E-03	1.38E-03	6.64874E-07	9.4982E-09	9.4982E-08
508	GRID	545050	4164100	3.76E-03	1.43E-04	5.55896E-07	7.94138E-09	7.94138E-08
136	GRID	545150	4164900	3.90E-03	5.19E-05	5.61966E-07	8.02808E-09	8.02808E-08
666	GRID	545150	4164900	3.90E-03	5.19E-05	5.61966E-07	8.02808E-09	8.02808E-08
126	GRID	545200	4164850	3.96E-03	7.62E-05	5.74925E-07	8.21322E-09	8.21322E-08
654	GRID	545200	4164850	3.96E-03	7.62E-05	5.74925E-07	8.21322E-09	8.21322E-08
494	GRID	545000	4164050	4.01E-03	9.97E-05	5.84603E-07	8.35147E-09	8.35147E-08
87	GRID	544900	4163950	4.07E-03	5.18E-05	5.87292E-07	8.38989E-09	8.38989E-08
562	GRID	545200	4164300	3.90E-03	8.91E-04	6.81381E-07	9.73401E-09	9.73401E-08
619	GRID	544700	4164750	4.16E-03	2.87E-05	5.96691E-07	8.52416E-09	8.52416E-08
135	GRID	545100	4164900	4.23E-03	4.29E-05	6.0822E-07	8.68885E-09	8.68885E-08
550	GRID	545150	4164250	4.07E-03	4.63E-04	6.45839E-07	9.22626E-09	9.22626E-08
665	GRID	545100	4164900	4.23E-03	4.29E-05	6.0822E-07	8.68885E-09	8.68885E-08
131	GRID	544900	4164900	4.30E-03	1.84E-05	6.14236E-07	8.7748E-09	8.7748E-08
661	GRID	544900	4164900	4.30E-03	1.84E-05	6.14236E-07	8.7748E-09	8.7748E-08
537	GRID	545100	4164200	4.25E-03	2.81E-04	6.45326E-07	9.21894E-09	9.21894E-08
480	GRID	544950	4164000	4.34E-03	7.09E-05	6.28044E-07	8.97206E-09	8.97206E-08

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
119	GRID	545200	4164800	4.38E-03	9.52E-05	6.37848E-07	9.11211E-09	9.11211E-08
641	GRID	545200	4164800	4.38E-03	9.52E-05	6.37848E-07	9.11211E-09	9.11211E-08
125	GRID	545150	4164850	4.47E-03	6.29E-05	6.45916E-07	9.22737E-09	9.22737E-08
522	GRID	545050	4164150	4.43E-03	1.84E-04	6.56867E-07	9.38381E-09	9.38381E-08
653	GRID	545150	4164850	4.47E-03	6.29E-05	6.45916E-07	9.22737E-09	9.22737E-08
134	GRID	545050	4164900	4.52E-03	3.47E-05	6.48248E-07	9.26069E-09	9.26069E-08
664	GRID	545050	4164900	4.52E-03	3.47E-05	6.48248E-07	9.26069E-09	9.26069E-08
132	GRID	544950	4164900	4.67E-03	2.17E-05	6.68573E-07	9.55104E-09	9.55104E-08
662	GRID	544950	4164900	4.67E-03	2.17E-05	6.68573E-07	9.55104E-09	9.55104E-08
133	GRID	545000	4164900	4.70E-03	2.72E-05	6.72521E-07	9.60744E-09	9.60744E-08
663	GRID	545000	4164900	4.70E-03	2.72E-05	6.72521E-07	9.60744E-09	9.60744E-08
608	GRID	544650	4164700	4.72E-03	3.38E-05	6.76631E-07	9.66616E-09	9.66616E-08
571	GRID	545200	4164350	4.32E-03	1.40E-03	8.14413E-07	1.16345E-08	1.16345E-07
112	GRID	545200	4164750	4.76E-03	1.23E-04	6.95612E-07	9.93732E-09	9.93732E-08
507	GRID	545000	4164100	4.76E-03	1.29E-04	6.96491E-07	9.94988E-09	9.94988E-08
628	GRID	545200	4164750	4.76E-03	1.23E-04	6.95612E-07	9.93732E-09	9.93732E-08
561	GRID	545150	4164300	4.67E-03	6.42E-04	7.56888E-07	1.08127E-08	1.08127E-07
600	GRID	544600	4164650	4.90E-03	3.92E-05	7.02761E-07	1.00394E-08	1.00394E-07
124	GRID	545100	4164850	5.01E-03	5.11E-05	7.20289E-07	1.02898E-08	1.02898E-07
652	GRID	545100	4164850	5.01E-03	5.11E-05	7.20289E-07	1.02898E-08	1.02898E-07
549	GRID	545100	4164250	4.92E-03	3.69E-04	7.52825E-07	1.07546E-08	1.07546E-07
118	GRID	545150	4164800	5.05E-03	7.80E-05	7.30469E-07	1.04353E-08	1.04353E-07
640	GRID	545150	4164800	5.05E-03	7.80E-05	7.30469E-07	1.04353E-08	1.04353E-07
536	GRID	545050	4164200	5.16E-03	2.36E-04	7.68851E-07	1.09836E-08	1.09836E-07
647	GRID	544850	4164850	5.28E-03	1.98E-05	7.53872E-07	1.07696E-08	1.07696E-07
493	GRID	544950	4164050	5.43E-03	9.26E-05	7.86413E-07	1.12345E-08	1.12345E-07
123	GRID	545050	4164850	5.54E-03	4.01E-05	7.94787E-07	1.13541E-08	1.13541E-07
521	GRID	545000	4164150	5.50E-03	1.63E-04	8.05964E-07	1.15138E-08	1.15138E-07
651	GRID	545050	4164850	5.54E-03	4.01E-05	7.94787E-07	1.13541E-08	1.13541E-07
570	GRID	545150	4164350	5.28E-03	1.01E-03	8.95435E-07	1.27919E-08	1.27919E-07
633	GRID	544800	4164800	5.63E-03	2.35E-05	8.0509E-07	1.15013E-08	1.15013E-07
111	GRID	545150	4164750	5.63E-03	9.97E-05	8.15938E-07	1.16563E-08	1.16563E-07
627	GRID	545150	4164750	5.63E-03	9.97E-05	8.15938E-07	1.16563E-08	1.16563E-07
117	GRID	545100	4164800	5.85E-03	6.20E-05	8.42267E-07	1.20324E-08	1.20324E-07
560	GRID	545100	4164300	5.70E-03	4.99E-04	8.82321E-07	1.26046E-08	1.26046E-07
639	GRID	545100	4164800	5.85E-03	6.20E-05	8.42267E-07	1.20324E-08	1.20324E-07
122	GRID	545000	4164850	6.05E-03	3.10E-05	8.6638E-07	1.23769E-08	1.23769E-07
650	GRID	545000	4164850	6.05E-03	3.10E-05	8.6638E-07	1.23769E-08	1.23769E-07
548	GRID	545050	4164250	6.05E-03	3.02E-04	9.05026E-07	1.29289E-08	1.29289E-07
106	GRID	545150	4164700	6.14E-03	1.32E-04	8.9347E-07	1.27639E-08	1.27639E-07
616	GRID	545150	4164700	6.14E-03	1.32E-04	8.9347E-07	1.27639E-08	1.27639E-07
506	GRID	544950	4164100	6.32E-03	1.18E-04	9.16813E-07	1.30973E-08	1.30973E-07
120	GRID	544900	4164850	6.37E-03	2.17E-05	9.09415E-07	1.29916E-08	1.29916E-07
648	GRID	544900	4164850	6.37E-03	2.17E-05	9.09415E-07	1.29916E-08	1.29916E-07
121	GRID	544950	4164850	6.41E-03	2.51E-05	9.16243E-07	1.30892E-08	1.30892E-07
649	GRID	544950	4164850	6.41E-03	2.51E-05	9.16243E-07	1.30892E-08	1.30892E-07
535	GRID	545000	4164200	6.41E-03	2.04E-04	9.41668E-07	1.34524E-08	1.34524E-07
479	GRID	544900	4164000	6.52E-03	6.76E-05	9.38127E-07	1.34018E-08	1.34018E-07
594	GRID	544600	4164600	6.57E-03	4.95E-05	9.41891E-07	1.34556E-08	1.34556E-07
110	GRID	545100	4164750	6.72E-03	7.77E-05	9.68091E-07	1.38299E-08	1.38299E-07
626	GRID	545100	4164750	6.72E-03	7.77E-05	9.68091E-07	1.38299E-08	1.38299E-07
116	GRID	545050	4164800	6.74E-03	4.74E-05	9.66954E-07	1.38136E-08	1.38136E-07
620	GRID	544750	4164750	6.77E-03	2.92E-05	9.67524E-07	1.38218E-08	1.38218E-07
638	GRID	545050	4164800	6.74E-03	4.74E-05	9.66954E-07	1.38136E-08	1.38136E-07
569	GRID	545100	4164350	6.61E-03	8.19E-04	1.05783E-06	1.51118E-08	1.51118E-07
601	GRID	544650	4164650	6.94E-03	4.19E-05	9.94684E-07	1.42098E-08	1.42098E-07
580	GRID	545150	4164450	6.41E-03	1.95E-03	1.19014E-06	1.7002E-08	1.7002E-07
587	GRID	545150	4164500	6.77E-03	7.88E-04	1.07549E-06	1.53641E-08	1.53641E-07
520	GRID	544950	4164150	7.10E-03	1.47E-04	1.03187E-06	1.4741E-08	1.4741E-07
559	GRID	545050	4164300	7.17E-03	4.07E-04	1.07829E-06	1.54041E-08	1.54041E-07
609	GRID	544700	4164700	7.30E-03	3.55E-05	1.04447E-06	1.4921E-08	1.4921E-07
105	GRID	545100	4164700	7.55E-03	1.01E-04	1.08872E-06	1.55532E-08	1.55532E-07
615	GRID	545100	4164700	7.55E-03	1.01E-04	1.08872E-06	1.55532E-08	1.55532E-07
547	GRID	545000	4164250	7.61E-03	2.57E-04	1.12033E-06	1.60046E-08	1.60046E-07
115	GRID	545000	4164800	7.75E-03	3.68E-05	1.10804E-06	1.58291E-08	1.58291E-07
637	GRID	545000	4164800	7.75E-03	3.68E-05	1.10804E-06	1.58291E-08	1.58291E-07
109	GRID	545050	4164750	8.04E-03	5.83E-05	1.1523E-06	1.64614E-08	1.64614E-07
625	GRID	545050	4164750	8.04E-03	5.83E-05	1.1523E-06	1.64614E-08	1.64614E-07
534	GRID	544950	4164200	8.19E-03	1.82E-04	1.19205E-06	1.70292E-08	1.70292E-07
492	GRID	544900	4164050	8.28E-03	8.63E-05	1.19115E-06	1.70164E-08	1.70164E-07
588	GRID	544600	4164550	8.32E-03	6.21E-05	1.19404E-06	1.70576E-08	1.70576E-07
529	GRID	544600	4164200	8.61E-03	9.70E-05	1.2402E-06	1.77172E-08	1.77172E-07
568	GRID	545050	4164350	8.57E-03	7.27E-04	1.32351E-06	1.89073E-08	1.89073E-07
114	GRID	544950	4164800	8.86E-03	3.02E-05	1.26555E-06	1.80792E-08	1.80792E-07

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
636	GRID	544950	4164800	8.86E-03	3.02E-05	1.26555E-06	1.80792E-08	1.80792E-07
579	GRID	545100	4164450	8.32E-03	1.76E-03	1.43631E-06	2.05187E-08	2.05187E-07
505	GRID	544900	4164100	8.99E-03	1.08E-04	1.29558E-06	1.85083E-08	1.85083E-07
515	GRID	544600	4164150	9.06E-03	8.50E-05	1.30188E-06	1.85982E-08	1.85982E-07
586	GRID	545100	4164500	8.84E-03	7.35E-04	1.3628E-06	1.94685E-08	1.94685E-07
593	GRID	545100	4164550	8.95E-03	3.73E-04	1.32704E-06	1.89577E-08	1.89577E-07
542	GRID	544600	4164250	9.08E-03	1.09E-04	1.30851E-06	1.8693E-08	1.8693E-07
104	GRID	545050	4164700	9.35E-03	7.61E-05	1.3418E-06	1.91686E-08	1.91686E-07
614	GRID	545050	4164700	9.35E-03	7.61E-05	1.3418E-06	1.91686E-08	1.91686E-07
558	GRID	545000	4164300	9.33E-03	3.48E-04	1.37739E-06	1.96771E-08	1.96771E-07
519	GRID	544900	4164150	9.57E-03	1.32E-04	1.38149E-06	1.97356E-08	1.97356E-07
554	GRID	544600	4164300	9.62E-03	1.18E-04	1.38582E-06	1.97974E-08	1.97974E-07
595	GRID	544650	4164600	9.62E-03	5.33E-05	1.37658E-06	1.96654E-08	1.96654E-07
108	GRID	545000	4164750	9.70E-03	4.56E-05	1.38816E-06	1.98309E-08	1.98309E-07
624	GRID	545000	4164750	9.70E-03	4.56E-05	1.38816E-06	1.98309E-08	1.98309E-07
581	GRID	544600	4164500	9.77E-03	7.50E-05	1.40186E-06	2.00266E-08	2.00266E-07
634	GRID	544850	4164800	9.84E-03	2.43E-05	1.40414E-06	2.00591E-08	2.00591E-07
113	GRID	544900	4164800	9.97E-03	2.62E-05	1.42343E-06	2.03347E-08	2.03347E-07
635	GRID	544900	4164800	9.97E-03	2.62E-05	1.42343E-06	2.03347E-08	2.03347E-07
546	GRID	544950	4164250	9.95E-03	2.29E-04	1.44918E-06	2.07025E-08	2.07025E-07
564	GRID	544600	4164350	9.99E-03	1.17E-04	1.43957E-06	2.05653E-08	2.05653E-07
572	GRID	544600	4164400	1.02E-02	1.05E-04	1.4695E-06	2.09929E-08	2.09929E-07
574	GRID	544600	4164450	1.02E-02	8.82E-05	1.46711E-06	2.09588E-08	2.09588E-07
102	GRID	545050	4164650	1.06E-02	1.08E-04	1.52058E-06	2.17226E-08	2.17226E-07
606	GRID	545050	4164650	1.06E-02	1.08E-04	1.52058E-06	2.17226E-08	2.17226E-07
503	GRID	544600	4164100	1.09E-02	7.31E-05	1.56637E-06	2.23768E-08	2.23768E-07
533	GRID	544900	4164200	1.09E-02	1.62E-04	1.5759E-06	2.25128E-08	2.25128E-07
602	GRID	544700	4164650	1.14E-02	4.46E-05	1.62887E-06	2.32695E-08	2.32695E-07
101	GRID	545050	4164600	1.15E-02	1.70E-04	1.66576E-06	2.37966E-08	2.37966E-07
599	GRID	545050	4164600	1.15E-02	1.70E-04	1.66576E-06	2.37966E-08	2.37966E-07
103	GRID	545000	4164700	1.18E-02	5.98E-05	1.69441E-06	2.42058E-08	2.42058E-07
613	GRID	545000	4164700	1.18E-02	5.98E-05	1.69441E-06	2.42058E-08	2.42058E-07
567	GRID	545000	4164350	1.18E-02	6.27E-04	1.76249E-06	2.51784E-08	2.51784E-07
578	GRID	545050	4164450	1.14E-02	1.58E-03	1.8536E-06	2.64799E-08	2.64799E-07
107	GRID	544950	4164750	1.20E-02	3.76E-05	1.70709E-06	2.4387E-08	2.4387E-07
623	GRID	544950	4164750	1.20E-02	3.76E-05	1.70709E-06	2.4387E-08	2.4387E-07
592	GRID	545050	4164550	1.21E-02	3.02E-04	1.76369E-06	2.51956E-08	2.51956E-07
585	GRID	545050	4164500	1.21E-02	6.15E-04	1.81143E-06	2.58776E-08	2.58776E-07
589	GRID	544650	4164550	1.26E-02	6.90E-05	1.8098E-06	2.58542E-08	2.58542E-07
557	GRID	544950	4164300	1.29E-02	3.14E-04	1.87636E-06	2.68052E-08	2.68052E-07
530	GRID	544650	4164200	1.34E-02	1.07E-04	1.92608E-06	2.75155E-08	2.75155E-07
518	GRID	544850	4164150	1.36E-02	1.20E-04	1.95332E-06	2.79045E-08	2.79045E-07
610	GRID	544750	4164700	1.38E-02	3.67E-05	1.96682E-06	2.80974E-08	2.80974E-07
504	GRID	544850	4164100	1.38E-02	9.88E-05	1.98516E-06	2.83595E-08	2.83595E-07
543	GRID	544650	4164250	1.40E-02	1.23E-04	2.00452E-06	2.86361E-08	2.86361E-07
605	GRID	545000	4164650	1.40E-02	8.35E-05	1.99884E-06	2.85548E-08	2.85548E-07
490	GRID	544600	4164050	1.40E-02	6.22E-05	2.00847E-06	2.86925E-08	2.86925E-07
545	GRID	544900	4164250	1.41E-02	2.05E-04	2.03509E-06	2.90727E-08	2.90727E-07
491	GRID	544850	4164050	1.43E-02	8.02E-05	2.04906E-06	2.92723E-08	2.92723E-07
555	GRID	544650	4164300	1.46E-02	1.38E-04	2.10173E-06	3.00247E-08	3.00247E-07
565	GRID	544650	4164350	1.52E-02	1.42E-04	2.17829E-06	3.11184E-08	3.11184E-07
582	GRID	544650	4164500	1.52E-02	8.66E-05	2.18308E-06	3.11868E-08	3.11868E-07
622	GRID	544900	4164750	1.54E-02	3.28E-05	2.19126E-06	3.13037E-08	3.13037E-07
532	GRID	544850	4164200	1.54E-02	1.47E-04	2.20756E-06	3.15366E-08	3.15366E-07
573	GRID	544650	4164400	1.55E-02	1.27E-04	2.22052E-06	3.17217E-08	3.17217E-07
612	GRID	544950	4164700	1.55E-02	4.89E-05	2.21574E-06	3.16535E-08	3.16535E-07
575	GRID	544650	4164450	1.55E-02	1.05E-04	2.22688E-06	3.18126E-08	3.18126E-07
598	GRID	545000	4164600	1.58E-02	1.26E-04	2.27426E-06	3.24895E-08	3.24895E-07
516	GRID	544650	4164150	1.63E-02	9.08E-05	2.33262E-06	3.33232E-08	3.33232E-07
591	GRID	545000	4164550	1.72E-02	2.09E-04	2.48254E-06	3.54649E-08	3.54649E-07
596	GRID	544700	4164600	1.74E-02	5.78E-05	2.48636E-06	3.55194E-08	3.55194E-07
566	GRID	544950	4164350	1.76E-02	5.39E-04	2.5802E-06	3.686E-08	3.686E-07
577	GRID	545000	4164450	1.73E-02	1.25E-03	2.64692E-06	3.78131E-08	3.78131E-07
584	GRID	545000	4164500	1.79E-02	4.27E-04	2.61179E-06	3.73113E-08	3.73113E-07
604	GRID	544950	4164650	1.94E-02	6.68E-05	2.76652E-06	3.95218E-08	3.95218E-07
556	GRID	544900	4164300	2.04E-02	2.81E-04	2.94917E-06	4.2131E-08	4.2131E-07
517	GRID	544800	4164150	2.09E-02	1.11E-04	2.99782E-06	4.28261E-08	4.28261E-07
621	GRID	544850	4164750	2.12E-02	3.07E-05	3.02757E-06	4.3251E-08	4.3251E-07
611	GRID	544900	4164700	2.17E-02	4.28E-05	3.09901E-06	4.42715E-08	4.42715E-07
531	GRID	544800	4164200	2.29E-02	1.36E-04	3.28338E-06	4.69054E-08	4.69054E-07
597	GRID	544950	4164600	2.31E-02	9.52E-05	3.30929E-06	4.72756E-08	4.72756E-07
544	GRID	544850	4164250	2.45E-02	1.86E-04	3.51236E-06	5.01766E-08	5.01766E-07
590	GRID	544950	4164550	2.65E-02	1.43E-04	3.79142E-06	5.41631E-08	5.41631E-07
603	GRID	544900	4164650	2.89E-02	5.70E-05	4.12778E-06	5.89682E-08	5.89682E-07

Table B1. Cancer Risks Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	DPM GLC from Haul truck	Cancer Risk (70 Yr Exposure)	Cancer Risk (1 Yr Exposure)	Cancer Risk (1 Yr Exposure adjusted by ASF)
583	GRID	544950	4164500	2.89E-02	2.47E-04	4.15482E-06	5.93546E-08	5.93546E-07
576	GRID	544950	4164450	3.09E-02	5.59E-04	4.48448E-06	6.40639E-08	6.40639E-07
								6.40639E-07

Sample Calculation:

At the receptor (#576), which has the highest cancer risk:

Cancer = [(3.09E-2 + 5.59E-4)) x 1.1 x 302 x 365 x 3 x 0.00001] / 25550 [70 years exposure] =

Cancer ={ [(3.09E-02 + 5.59E-4) x 1.1 x 302 x 365 x 3 x 0.00001] / 25550} x (1/70) [1 years exposure] =

Cancer ={ [(3.09E-2 + 5.59E-4) x 1.1 x 302 x 365 x 3 x 0.00001] / 25550} x (1/70) x 10 [1 Year exposure for infants] =

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	Annual (µg/m3) DPM GLC from Haul truck	1-hr (ug/m3) Acrolein GLC from construction	1-hr (ug/m3) Acrolein GLC from Haul truck	Chronic Index Hic	Acute Index Hia	Annual (ug/m3) PM2.5 GLC from construction	Annual (ug/m3) PM2.5 GLC from Haul truck
400	GRID	545550	4162650	6.74E-05	1.46E-06	2.82E-06	3.78E-07	5.44E-06	4.67E-04	8.00E-05	0.00E+00
402	GRID	545450	4162750	6.97E-05	1.62E-06	2.85E-06	2.95E-07	5.64E-06	4.59E-04	8.00E-05	0.00E+00
406	GRID	545400	4162800	7.12E-05	1.88E-06	2.84E-06	2.48E-07	5.77E-06	4.51E-04	8.00E-05	0.00E+00
401	GRID	545550	4162700	7.23E-05	1.53E-06	2.94E-06	3.99E-07	5.83E-06	4.88E-04	9.00E-05	0.00E+00
403	GRID	545500	4162750	7.37E-05	1.58E-06	2.99E-06	3.60E-07	5.95E-06	4.90E-04	9.00E-05	0.00E+00
407	GRID	545450	4162800	7.55E-05	1.70E-06	3.02E-06	3.13E-07	6.09E-06	4.87E-04	9.00E-05	0.00E+00
412	GRID	545400	4162850	7.72E-05	1.98E-06	3.04E-06	2.66E-07	6.26E-06	4.83E-04	9.00E-05	0.00E+00
404	GRID	545550	4162750	7.75E-05	1.61E-06	3.05E-06	4.23E-07	6.26E-06	5.07E-04	9.00E-05	0.00E+00
408	GRID	545500	4162800	7.95E-05	1.66E-06	3.12E-06	3.86E-07	6.41E-06	5.12E-04	9.00E-05	0.00E+00
405	GRID	545600	4162750	8.10E-05	1.69E-06	3.02E-06	4.67E-07	6.53E-06	5.09E-04	1.00E-04	0.00E+00
413	GRID	545450	4162850	8.15E-05	1.80E-06	3.18E-06	3.37E-07	6.59E-06	5.13E-04	1.00E-04	0.00E+00
409	GRID	545550	4162800	8.32E-05	1.70E-06	3.13E-06	4.49E-07	6.71E-06	5.23E-04	1.00E-04	0.00E+00
418	GRID	545400	4162900	8.39E-05	2.09E-06	3.22E-06	2.84E-07	6.80E-06	5.12E-04	1.00E-04	0.00E+00
414	GRID	545500	4162850	8.57E-05	1.75E-06	3.23E-06	4.10E-07	6.91E-06	5.31E-04	1.00E-04	0.00E+00
410	GRID	545600	4162800	8.66E-05	1.80E-06	3.06E-06	4.91E-07	6.98E-06	5.19E-04	1.00E-04	0.00E+00
424	GRID	545350	4162950	8.66E-05	2.59E-06	3.25E-06	3.13E-07	7.05E-06	5.21E-04	1.00E-04	0.00E+00
419	GRID	545450	4162900	8.84E-05	1.90E-06	3.31E-06	3.60E-07	7.13E-06	5.36E-04	1.00E-04	0.00E+00
411	GRID	545650	4162800	8.93E-05	1.90E-06	2.90E-06	4.93E-07	7.21E-06	4.96E-04	1.10E-04	0.00E+00
415	GRID	545550	4162850	8.93E-05	1.81E-06	3.20E-06	4.78E-07	7.20E-06	5.37E-04	1.10E-04	0.00E+00
431	GRID	545300	4163000	8.95E-05	3.29E-06	3.27E-06	4.96E-07	7.34E-06	5.50E-04	1.10E-04	0.00E+00
425	GRID	545400	4162950	9.13E-05	2.21E-06	3.38E-06	3.05E-07	7.39E-06	5.38E-04	1.10E-04	0.00E+00
420	GRID	545500	4162900	9.24E-05	1.86E-06	3.31E-06	4.38E-07	7.44E-06	5.49E-04	1.10E-04	0.00E+00
416	GRID	545600	4162850	9.24E-05	1.91E-06	3.08E-06	5.14E-07	7.46E-06	5.25E-04	1.10E-04	0.00E+00
432	GRID	545350	4163000	9.46E-05	2.77E-06	3.44E-06	3.37E-07	7.70E-06	5.52E-04	1.10E-04	0.00E+00
417	GRID	545650	4162850	9.50E-05	2.03E-06	2.87E-06	5.06E-07	7.67E-06	4.93E-04	1.10E-04	0.00E+00
426	GRID	545450	4162950	9.57E-05	2.01E-06	3.44E-06	3.86E-07	7.72E-06	5.57E-04	1.10E-04	0.00E+00
421	GRID	545550	4162900	9.59E-05	1.93E-06	3.24E-06	5.06E-07	7.73E-06	5.47E-04	1.10E-04	0.00E+00
422	GRID	545600	4162900	9.88E-05	2.05E-06	3.07E-06	5.40E-07	7.98E-06	5.27E-04	1.20E-04	0.00E+00
427	GRID	545500	4162950	9.95E-05	1.98E-06	3.38E-06	4.70E-07	8.03E-06	5.64E-04	1.20E-04	0.00E+00
433	GRID	545400	4163000	9.93E-05	2.35E-06	3.51E-06	3.29E-07	8.04E-06	5.62E-04	1.20E-04	0.00E+00
423	GRID	545650	4162900	1.01E-04	2.18E-06	2.81E-06	5.19E-07	8.18E-06	4.86E-04	1.20E-04	0.00E+00
428	GRID	545550	4162950	1.03E-04	2.06E-06	3.27E-06	5.38E-07	8.31E-06	5.55E-04	1.20E-04	0.00E+00
434	GRID	545450	4163000	1.04E-04	2.13E-06	3.54E-06	4.12E-07	8.36E-06	5.75E-04	1.20E-04	0.00E+00
445	GRID	545350	4163050	1.04E-04	2.96E-06	3.61E-06	3.63E-07	8.42E-06	5.80E-04	1.20E-04	0.00E+00
429	GRID	545600	4162950	1.06E-04	2.20E-06	3.04E-06	5.64E-07	8.54E-06	5.26E-04	1.20E-04	0.00E+00
435	GRID	545500	4163000	1.08E-04	2.11E-06	3.44E-06	5.01E-07	8.67E-06	5.76E-04	1.30E-04	0.00E+00
430	GRID	545650	4162950	1.08E-04	2.34E-06	2.72E-06	5.32E-07	8.72E-06	4.74E-04	1.30E-04	0.00E+00
446	GRID	545400	4163050	1.08E-04	2.51E-06	3.64E-06	3.52E-07	8.76E-06	5.84E-04	1.30E-04	0.00E+00
436	GRID	545550	4163000	1.11E-04	2.21E-06	3.26E-06	5.71E-07	8.94E-06	5.60E-04	1.30E-04	0.00E+00
447	GRID	545450	4163050	1.13E-04	2.28E-06	3.61E-06	4.44E-07	9.08E-06	5.92E-04	1.30E-04	0.00E+00
437	GRID	545600	4163000	1.14E-04	2.37E-06	2.97E-06	5.90E-07	9.16E-06	5.20E-04	1.30E-04	0.00E+00
458	GRID	545350	4163100	1.14E-04	3.19E-06	3.77E-06	3.91E-07	9.23E-06	6.06E-04	1.30E-04	0.00E+00
438	GRID	545650	4163000	1.15E-04	2.52E-06	2.59E-06	5.40E-07	9.32E-06	4.57E-04	1.40E-04	0.00E+00
448	GRID	545500	4163050	1.16E-04	2.27E-06	3.48E-06	5.38E-07	9.38E-06	5.86E-04	1.40E-04	0.00E+00
439	GRID	545700	4163000	1.17E-04	2.68E-06	2.40E-06	4.31E-07	9.42E-06	4.13E-04	1.40E-04	0.00E+00
444	GRID	545950	4163000	1.16E-04	4.14E-06	1.41E-06	4.20E-07	9.49E-06	2.68E-04	1.40E-04	0.00E+00
443	GRID	545900	4163000	1.16E-04	3.79E-06	1.62E-06	3.94E-07	9.50E-06	2.95E-04	1.40E-04	0.00E+00
440	GRID	545750	4163000	1.17E-04	2.86E-06	2.16E-06	2.95E-07	9.48E-06	3.59E-04	1.40E-04	0.00E+00
442	GRID	545850	4163000	1.17E-04	3.43E-06	1.80E-06	3.37E-07	9.50E-06	3.12E-04	1.40E-04	0.00E+00
441	GRID	545800	4163000	1.17E-04	3.11E-06	1.92E-06	2.66E-07	9.50E-06	3.20E-04	1.40E-04	0.00E+00
459	GRID	545400	4163100	1.18E-04	2.70E-06	3.77E-06	3.78E-07	9.56E-06	6.04E-04	1.40E-04	0.00E+00
449	GRID	545550	4163050	1.20E-04	2.39E-06	3.23E-06	6.05E-07	9.64E-06	5.60E-04	1.40E-04	0.00E+00
450	GRID	545600	4163050	1.22E-04	2.57E-06	2.88E-06	6.13E-07	9.84E-06	5.10E-04	1.40E-04	0.00E+00
460	GRID	545450	4163100	1.23E-04	2.45E-06	3.67E-06	4.78E-07	9.88E-06	6.06E-04	1.40E-04	0.00E+00
451	GRID	545650	4163050	1.24E-04	2.74E-06	2.56E-06	5.45E-07	9.98E-06	4.53E-04	1.50E-04	0.00E+00
457	GRID	545950	4163050	1.23E-04	4.56E-06	1.29E-06	4.41E-07	1.01E-05	2.52E-04	1.50E-04	0.00E+00
456	GRID	545900	4163050	1.23E-04	4.22E-06	1.52E-06	4.33E-07	1.01E-05	2.86E-04	1.50E-04	0.00E+00
455	GRID	545850	4163050	1.24E-04	3.82E-06	1.73E-06	3.84E-07	1.01E-05	3.10E-04	1.50E-04	0.00E+00
452	GRID	545700	4163050	1.24E-04	2.92E-06	2.34E-06	4.15E-07	1.01E-05	4.03E-04	1.50E-04	0.00E+00
453	GRID	545750	4163050	1.24E-04	3.14E-06	2.06E-06	2.69E-07	1.01E-05	3.40E-04	1.50E-04	0.00E+00
454	GRID	545800	4163050	1.24E-04	3.45E-06	1.91E-06	3.11E-07	1.01E-05	3.24E-04	1.50E-04	0.00E+00
470	GRID	545350	4163150	1.25E-04	3.44E-06	3.90E-06	4.25E-07	1.01E-05	6.31E-04	1.50E-04	0.00E+00
461	GRID	545500	4163100	1.26E-04	2.44E-06	3.48E-06	5.77E-07	1.02E-05	5.93E-04	1.50E-04	0.00E+00
462	GRID	545550	4163100	1.29E-04	2.60E-06	3.16E-06	6.45E-07	1.04E-05	5.56E-04	1.50E-04	0.00E+00
471	GRID	545400	4163150	1.30E-04	2.90E-06	3.87E-06	4.07E-07	1.05E-05	6.22E-04	1.50E-04	0.00E+00
463	GRID	545600	4163100	1.31E-04	2.80E-06	2.74E-06	6.39E-07	1.06E-05	4.93E-04	1.50E-04	0.00E+00
469	GRID	545900	4163100	1.31E-04	4.68E-06	1.40E-06	4.67E-07	1.07E-05	2.72E-04	1.50E-04	0.00E+00
468	GRID	545850	4163100	1.32E-04	4.26E-06	1.64E-06	4.33E-07	1.08E-05	3.03E-04	1.60E-04	0.00E+00
464	GRID	545650	4163100	1.32E-04	2.99E-06	2.52E-06	5.45E-07	1.07E-05	4.48E-04	1.60E-04	0.00E+00
467	GRID	545800	4163100	1.32E-04	3.84E-06	1.86E-06	3.63E-07	1.08E-05	3.24E-04	1.60E-04	0.00E+00
465	GRID	545700	4163100	1.33E-04	3.20E-06	2.25E-06	3.94E-07	1.08E-05	3.86E-04	1.60E-04	0.00E+00
466	GRID	545750	4163100	1.33E-04	3.47E-06	2.01E-06	2.79E-07	1.08E-05	3.35E-04	1.60E-04	0.00E+00
472	GRID	545450	4163150	1.34E-04	2.64E-06	3.71E-06	5.14E-07	1.08E-05	6.18E-04	1.60E-04	0.00E+00
473	GRID	545500	4163150	1.37E-04	2.65E-06	3.44E-06	6.18E-07	1.11E-05	5.95E-04	1.60E-04	0.00E+00
474	GRID	545550	4163150	1.40E-04	2.84E-06	3.06E-06	6.84E-07	1.13E-05	5.47E-04	1.70E-04	0.00E+00
475	GRID	545600	4163150	1.42E-04	3.06E-06	2.70E-06	6.60E-07	1.14E-05	4.91E-04	1.70E-04	0.00E+00
478	GRID	545750	4163150	1.42E-04	3.87E-06	1.98E-06	3.31E-07	1.15E-05	3.37E-04	1.70E-04	0.00E+00
476	GRID	545650	4163150	1.42E-04	3.29E-06	2.45E-06	5.40E-07	1.15E-05	4.37E-04	1.70E-04	0.00E+00
477	GRID	545700	4163150	1.42E-04	3.54E-06	2.13E-06	3.68E-07	1.15E-05	3.64E-04	1.70E-04	0.00E+00
381	GRID	544650	4165600	2.85E-04	4.46E-06	1.15E-05	4.38E-07	2.29E-05	1.74E-03	3.40E-04	0.00E+00
362	GRID	544650	4165550	3.03E-04	4.53E-06	1.22E-05	4.54E-07	2.43E-05	1.85E-03	3.60E-04	0.00E+00
382	GRID	544700	4165600	3.18E-04	5.04E-06	9.90E-06	5.11E-07	2.56E-05	1.52E-03	3.80E-04	0.00E+00
343	GRID	544650	4165500	3.23E-04	4.63E-06	1.30E-05	5.27E-07	2.59E-05	1.97E-03	3.80E-04	0.00E+00
363	GRID	544700	4165550	3.41E-04	5.11E-06	1.07E-05	5.04E-07	2.73E-05	1.64E-03	4.00E-04	0.00E+00
324	GRID	544650	4165450	3.45E-04	4.78E-06	1.37E-05	5.95E-07	2.77E-05	2.09E-03	4.10E-04	0.00E+00
383	GRID	544750	4165600	3.56E-04	5.70E-06	1.08E-05	5.56E-07	2.85E-05	1.66E-03	4.20E-04	0.00E+00
344	GRID	544700	4165500	3.65E-04	5.19E-06	1.16E-05	4.91E-07	2.93E-05	1.77E-03	4.30E-04	0.00E+00
305	GRID	544650	4165400	3.72E-04	4.97E-06	1.45E-05	6.50E-07	2.97E-05	2.22E-03	4.40E-04	0.00E+00
2	GRID	545650	4163650	3.69E-04	1.42E-05	3.84E-06	1.13E-06	3.04E-05	7.28E-04	4.40E-04	0.00E+00
364	GRID	544750	4165550	3.81E-04	5.81E-06	1.14E-05	5.66E-07	3.06E-05	1.75E-03	4.50E-04	0.00E+00

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	Annual (µg/m3) DPM GLC from Haul truck	1-hr (ug/m3) Acrolein GLC from construction	1-hr (ug/m3) Acrolein GLC from Haul truck	Chronic Index Hic	Acute Index Hia	Annual (ug/m3) PM2.5 GLC from construction	Annual (ug/m3) PM2.5 GLC from Haul truck
1	GRID	545600	4163650	3.81E-04	1.23E-05	3.97E-06	9.79E-07	3.11E-05	7.21E-04	4.50E-04	0.00E+00
384	GRID	544800	4165600	3.92E-04	6.38E-06	1.31E-05	5.92E-07	3.15E-05	1.99E-03	4.60E-04	0.00E+00
325	GRID	544700	4165450	3.94E-04	5.29E-06	1.26E-05	5.14E-07	3.15E-05	1.92E-03	4.60E-04	0.00E+00
286	GRID	544650	4165350	4.01E-04	5.24E-06	1.53E-05	6.86E-07	3.21E-05	2.34E-03	4.70E-04	0.00E+00
345	GRID	544750	4165500	4.12E-04	5.92E-06	1.21E-05	5.71E-07	3.30E-05	1.84E-03	4.90E-04	0.00E+00
11	GRID	545650	4163700	4.12E-04	1.75E-05	3.87E-06	1.19E-06	3.39E-05	7.40E-04	4.90E-04	0.00E+00
365	GRID	544800	4165550	4.23E-04	6.57E-06	1.38E-05	6.11E-07	3.39E-05	2.11E-03	5.00E-04	0.00E+00
306	GRID	544700	4165400	4.25E-04	5.45E-06	1.37E-05	6.00E-07	3.40E-05	2.09E-03	5.00E-04	0.00E+00
385	GRID	544850	4165600	4.27E-04	6.99E-06	1.36E-05	5.82E-07	3.43E-05	2.07E-03	5.00E-04	0.00E+00
10	GRID	545600	4163700	4.25E-04	1.54E-05	4.07E-06	1.24E-06	3.49E-05	7.77E-04	5.00E-04	0.00E+00
28	GRID	545750	4163750	4.25E-04	2.03E-05	3.71E-06	6.03E-07	3.53E-05	6.29E-04	5.00E-04	0.00E+00
267	GRID	544650	4165300	4.34E-04	5.58E-06	1.61E-05	6.99E-07	3.48E-05	2.45E-03	5.10E-04	0.00E+00
9	GRID	545550	4163700	4.43E-04	1.31E-05	4.30E-06	8.51E-07	3.60E-05	7.51E-04	5.20E-04	0.00E+00
27	GRID	545700	4163750	4.41E-04	2.11E-05	3.74E-06	9.03E-07	3.66E-05	6.76E-04	5.20E-04	0.00E+00
326	GRID	544750	4165450	4.45E-04	6.02E-06	1.28E-05	5.66E-07	3.57E-05	1.95E-03	5.30E-04	0.00E+00
48	GRID	545800	4163800	4.52E-04	2.39E-05	4.10E-06	3.65E-07	3.77E-05	6.50E-04	5.30E-04	0.00E+00
346	GRID	544800	4165500	4.59E-04	6.76E-06	1.47E-05	6.18E-07	3.68E-05	2.23E-03	5.40E-04	0.00E+00
386	GRID	544900	4165600	4.59E-04	7.58E-06	1.23E-05	5.11E-07	3.68E-05	1.87E-03	5.40E-04	0.00E+00
8	GRID	545500	4163700	4.59E-04	1.14E-05	4.49E-06	1.51E-06	3.72E-05	8.77E-04	5.40E-04	0.00E+00
287	GRID	544700	4165350	4.61E-04	5.66E-06	1.49E-05	6.78E-07	3.69E-05	2.27E-03	5.40E-04	0.00E+00
26	GRID	545650	4163750	4.59E-04	2.13E-05	3.80E-06	1.17E-06	3.79E-05	7.28E-04	5.40E-04	0.00E+00
366	GRID	544850	4165550	4.63E-04	7.30E-06	1.44E-05	6.21E-07	3.71E-05	2.19E-03	5.50E-04	0.00E+00
248	GRID	544650	4165250	4.72E-04	6.03E-06	1.69E-05	7.25E-07	3.79E-05	2.57E-03	5.60E-04	0.00E+00
47	GRID	545750	4163800	4.70E-04	2.43E-05	4.00E-06	3.86E-07	3.91E-05	6.40E-04	5.60E-04	0.00E+00
7	GRID	545450	4163700	4.76E-04	1.04E-05	4.66E-06	1.52E-06	3.85E-05	9.01E-04	5.60E-04	0.00E+00
25	GRID	545600	4163750	4.76E-04	1.98E-05	3.97E-06	1.49E-06	3.92E-05	7.97E-04	5.60E-04	0.00E+00
307	GRID	544750	4165400	4.85E-04	6.16E-06	1.35E-05	5.51E-07	3.88E-05	2.06E-03	5.70E-04	0.00E+00
387	GRID	544950	4165600	4.87E-04	8.22E-06	1.10E-05	6.08E-07	3.92E-05	1.69E-03	5.80E-04	0.00E+00
46	GRID	545700	4163800	4.90E-04	2.50E-05	3.93E-06	7.91E-07	4.07E-05	6.89E-04	5.80E-04	0.00E+00
6	GRID	545400	4163700	4.94E-04	1.15E-05	4.69E-06	1.17E-06	4.00E-05	8.57E-04	5.80E-04	0.00E+00
327	GRID	544800	4165450	4.99E-04	6.93E-06	1.56E-05	6.37E-07	4.00E-05	2.37E-03	5.90E-04	0.00E+00
367	GRID	544900	4165550	4.99E-04	7.98E-06	1.29E-05	5.69E-07	4.00E-05	1.97E-03	5.90E-04	0.00E+00
24	GRID	545550	4163750	4.96E-04	1.66E-05	4.20E-06	1.17E-06	4.06E-05	7.84E-04	5.90E-04	0.00E+00
268	GRID	544700	4165300	5.03E-04	5.95E-06	1.61E-05	7.38E-07	4.03E-05	2.46E-03	5.90E-04	0.00E+00
67	GRID	545800	4163850	4.96E-04	2.97E-05	4.59E-06	3.84E-07	4.16E-05	7.28E-04	5.90E-04	0.00E+00
347	GRID	544850	4165500	5.03E-04	7.60E-06	1.51E-05	6.58E-07	4.04E-05	2.31E-03	5.90E-04	0.00E+00
5	GRID	545350	4163700	5.12E-04	1.35E-05	4.62E-06	1.49E-06	4.16E-05	8.90E-04	6.00E-04	0.00E+00
45	GRID	545650	4163800	5.10E-04	2.60E-05	3.90E-06	1.11E-06	4.24E-05	7.32E-04	6.00E-04	0.00E+00
229	GRID	544650	4165200	5.16E-04	6.60E-06	1.76E-05	8.43E-07	4.14E-05	2.70E-03	6.10E-04	0.00E+00
388	GRID	545000	4165600	5.19E-04	9.00E-06	8.36E-06	7.18E-07	4.17E-05	1.33E-03	6.10E-04	0.00E+00
23	GRID	545500	4163750	5.19E-04	1.41E-05	4.49E-06	1.59E-06	4.21E-05	8.88E-04	6.10E-04	0.00E+00
66	GRID	545750	4163850	5.19E-04	3.02E-05	4.49E-06	4.44E-07	4.34E-05	7.21E-04	6.10E-04	0.00E+00
4	GRID	545300	4163700	5.28E-04	1.42E-05	4.36E-06	1.54E-06	4.28E-05	8.65E-04	6.20E-04	0.00E+00
288	GRID	544750	4165350	5.32E-04	6.32E-06	1.44E-05	5.90E-07	4.25E-05	2.19E-03	6.30E-04	0.00E+00
368	GRID	544950	4165550	5.32E-04	8.69E-06	1.13E-05	6.08E-07	4.28E-05	1.74E-03	6.30E-04	0.00E+00
44	GRID	545600	4163800	5.32E-04	2.55E-05	3.93E-06	1.58E-06	4.41E-05	8.03E-04	6.30E-04	0.00E+00
3	GRID	545250	4163700	5.39E-04	1.46E-05	5.31E-06	1.46E-06	4.37E-05	9.89E-04	6.40E-04	0.00E+00
22	GRID	545450	4163750	5.43E-04	1.27E-05	4.85E-06	1.75E-06	4.40E-05	9.61E-04	6.40E-04	0.00E+00
348	GRID	544900	4165500	5.45E-04	8.40E-06	1.36E-05	6.24E-07	4.37E-05	2.08E-03	6.40E-04	0.00E+00
308	GRID	544800	4165400	5.48E-04	7.10E-06	1.67E-05	6.45E-07	4.38E-05	2.53E-03	6.50E-04	0.00E+00
65	GRID	545700	4163850	5.43E-04	3.07E-05	4.39E-06	5.11E-07	4.53E-05	7.14E-04	6.40E-04	0.00E+00
389	GRID	545050	4165600	5.50E-04	9.88E-06	9.21E-06	7.91E-07	4.42E-05	1.46E-03	6.50E-04	0.00E+00
328	GRID	544850	4165450	5.52E-04	7.90E-06	1.60E-05	6.84E-07	4.42E-05	2.44E-03	6.50E-04	0.00E+00
86	GRID	545800	4163900	5.43E-04	3.80E-05	5.18E-06	4.38E-07	4.60E-05	8.19E-04	6.40E-04	0.00E+00
249	GRID	544700	4165250	5.54E-04	6.35E-06	1.74E-05	7.72E-07	4.42E-05	2.65E-03	6.50E-04	0.00E+00
43	GRID	545550	4163800	5.59E-04	2.19E-05	4.03E-06	1.62E-06	4.59E-05	8.24E-04	6.60E-04	0.00E+00
369	GRID	545000	4165550	5.68E-04	9.52E-06	8.82E-06	7.25E-07	4.56E-05	1.39E-03	6.70E-04	0.00E+00
21	GRID	545400	4163750	5.70E-04	1.41E-05	5.18E-06	1.34E-06	4.62E-05	9.52E-04	6.70E-04	0.00E+00
64	GRID	545650	4163850	5.68E-04	3.18E-05	4.26E-06	1.07E-06	4.74E-05	7.80E-04	6.70E-04	0.00E+00
85	GRID	545750	4163900	5.70E-04	3.89E-05	5.12E-06	4.57E-07	4.82E-05	8.13E-04	6.70E-04	0.00E+00
390	GRID	545100	4165600	5.81E-04	1.09E-05	9.18E-06	7.96E-07	4.68E-05	1.46E-03	6.90E-04	0.00E+00
269	GRID	544750	4165300	5.85E-04	6.56E-06	1.54E-05	6.91E-07	4.67E-05	2.35E-03	6.90E-04	0.00E+00
349	GRID	544950	4165500	5.85E-04	9.17E-06	1.16E-05	6.05E-07	4.69E-05	1.78E-03	6.90E-04	0.00E+00
42	GRID	545500	4163800	5.88E-04	1.81E-05	4.23E-06	1.61E-06	4.78E-05	8.53E-04	6.90E-04	0.00E+00
20	GRID	545350	4163750	5.99E-04	1.64E-05	5.44E-06	1.72E-06	4.86E-05	1.05E-03	7.10E-04	0.00E+00
329	GRID	544900	4165450	5.99E-04	8.82E-06	1.43E-05	6.78E-07	4.81E-05	2.19E-03	7.10E-04	0.00E+00
63	GRID	545600	4163850	5.97E-04	3.28E-05	4.16E-06	1.57E-06	4.97E-05	8.39E-04	7.00E-04	0.00E+00
289	GRID	544800	4165350	6.03E-04	7.28E-06	1.78E-05	6.39E-07	4.83E-05	2.70E-03	7.10E-04	0.00E+00
370	GRID	545050	4165550	6.03E-04	1.05E-05	9.84E-06	8.17E-07	4.85E-05	1.56E-03	7.10E-04	0.00E+00
309	GRID	544850	4165400	6.08E-04	8.20E-06	1.70E-05	7.02E-07	4.87E-05	2.59E-03	7.20E-04	0.00E+00
84	GRID	545700	4163900	5.99E-04	3.96E-05	5.02E-06	5.56E-07	5.05E-05	8.14E-04	7.10E-04	0.00E+00
230	GRID	544700	4165200	6.12E-04	6.87E-06	1.88E-05	7.72E-07	4.89E-05	2.85E-03	7.20E-04	0.00E+00
391	GRID	545150	4165600	6.14E-04	1.21E-05	1.13E-05	7.20E-07	4.95E-05	1.76E-03	7.20E-04	0.00E+00
41	GRID	545450	4163800	6.19E-04	1.58E-05	4.56E-06	2.03E-06	5.01E-05	9.60E-04	7.30E-04	0.00E+00
350	GRID	545000	4165500	6.25E-04	1.01E-05	9.74E-06	7.36E-07	5.02E-05	1.53E-03	7.40E-04	0.00E+00
19	GRID	545300	4163750	6.25E-04	1.69E-05	5.61E-06	1.65E-06	5.07E-05	1.06E-03	7.40E-04	0.00E+00
62	GRID	545550	4163850	6.28E-04	3.00E-05	4.13E-06	2.12E-06	5.20E-05	9.11E-04	7.40E-04	0.00E+00
83	GRID	545650	4163900	6.32E-04	4.06E-05	4.89E-06	7.02E-07	5.31E-05	8.17E-04	7.50E-04	0.00E+00
371	GRID	545100	4165550	6.39E-04	1.16E-05	1.05E-05	8.38E-07	5.15E-05	1.65E-03	7.50E-04	0.00E+00
250	GRID	544750	4165250	6.48E-04	6.89E-06	1.65E-05	7.80E-07	5.18E-05	2.53E-03	7.60E-04	0.00E+00
330	GRID	544950	4165450	6.45E-04	9.79E-06	1.19E-05	6.03E-07	5.18E-05	1.82E-03	7.60E-04	0.00E+00
392	GRID	545200	4165600	6.45E-04	1.32E-05	1.24E-05	6.03E-07	5.21E-05	1.90E-03	7.60E-04	0.00E+00
18	GRID	545250	4163750	6.50E-04	1.72E-05	5.54E-06	1.55E-06	5.27E-05	1.04E-03	7.70E-04	0.00E+00
40	GRID	545400	4163800	6.54E-04	1.76E-05	4.98E-06	1.56E-06	5.32E-05	9.54E-04	7.70E-04	0.00E+00
310	GRID	544900	4165400	6.63E-04	9.35E-06	1.51E-05	7.31E-07	5.32E-05	2.31E-03	7.80E-04	0.00E+00
351	GRID	545050	4165500	6.66E-04	1.12E-05	1.05E-05	8.40E-07	5.35E-05	1.65E-03	7.90E-04	0.00E+00
61	GRID	545500	4163850	6.63E-04	2.41E-05	4.13E-06	1.49E-06	5.43E-05	8.22E-04	7.80E-04	0.00E+00
270	GRID	544800	4165300	6.70E-04	7.50E-06	1.91E-05	6.21E-07	5.36E-05	2.89E-03	7.90E-04	0.00E+00
17	GRID	545200	4163750	6.70E-04	1.74E-05	6.07E-06	1.40E-06	5.43E-05	1.09E-03	7.90E-04	0.00E+00
290	GRID	544850	4165350	6.74E-04	8.49E-06	1.81E-05	7.18E-07	5.39E-05	2.75E-03	8.00E-04	0.00E+00

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3)		1-hr (ug/m3)		Chronic	Acute	Annual (ug/m3)	
				DPM GLC	DPM GLC	Acrolein GLC	Acrolein GLC	Index	Index	PM2.5 GLC	PM2.5 GLC
				from construction	from Haul truck	from construction	from Haul truck	Hic	Hia	from construction	from Haul truck
82	GRID	545600	4163900	6.68E-04	4.22E-05	4.95E-06	1.50E-06	5.60E-05	9.41E-04	7.90E-04	0.00E+00
372	GRID	545150	4165550	6.77E-04	1.29E-05	1.25E-05	7.70E-07	5.45E-05	1.94E-03	8.00E-04	0.00E+00
211	GRID	544700	4165150	6.81E-04	7.54E-06	2.01E-05	8.90E-07	5.45E-05	3.07E-03	8.00E-04	0.00E+00
393	GRID	545250	4165600	6.79E-04	1.44E-05	1.20E-05	6.94E-07	5.47E-05	1.85E-03	8.00E-04	0.00E+00
16	GRID	545150	4163750	6.86E-04	1.69E-05	6.56E-06	1.15E-06	5.55E-05	1.13E-03	8.10E-04	0.00E+00
331	GRID	545000	4165450	6.92E-04	1.08E-05	1.07E-05	7.41E-07	5.56E-05	1.67E-03	8.20E-04	0.00E+00
39	GRID	545350	4163800	6.94E-04	2.04E-05	5.51E-06	1.98E-06	5.65E-05	1.09E-03	8.20E-04	0.00E+00
15	GRID	545100	4163750	6.97E-04	1.65E-05	6.62E-06	1.06E-06	5.64E-05	1.12E-03	8.20E-04	0.00E+00
12	GRID	544950	4163750	7.01E-04	1.77E-05	1.18E-05	1.01E-06	5.69E-05	1.87E-03	8.30E-04	0.00E+00
14	GRID	545050	4163750	7.03E-04	1.66E-05	7.48E-06	1.05E-06	5.70E-05	1.24E-03	8.30E-04	0.00E+00
60	GRID	545450	4163850	7.03E-04	2.02E-05	4.26E-06	2.40E-06	5.72E-05	9.72E-04	8.30E-04	0.00E+00
13	GRID	545000	4163750	7.08E-04	1.71E-05	1.01E-05	1.04E-06	5.72E-05	1.62E-03	8.30E-04	0.00E+00
352	GRID	545100	4165500	7.08E-04	1.24E-05	1.20E-05	8.79E-07	5.70E-05	1.88E-03	8.40E-04	0.00E+00
394	GRID	545300	4165600	7.08E-04	1.55E-05	1.05E-05	7.54E-07	5.71E-05	1.64E-03	8.40E-04	0.00E+00
373	GRID	545200	4165550	7.14E-04	1.41E-05	1.31E-05	6.29E-07	5.75E-05	2.00E-03	8.40E-04	0.00E+00
81	GRID	545550	4163900	7.06E-04	4.22E-05	5.15E-06	2.26E-06	5.91E-05	1.08E-03	8.30E-04	0.00E+00
311	GRID	544950	4165400	7.19E-04	1.04E-05	1.22E-05	6.65E-07	5.76E-05	1.87E-03	8.50E-04	0.00E+00
231	GRID	544750	4165200	7.23E-04	7.34E-06	1.78E-05	8.43E-07	5.78E-05	2.72E-03	8.50E-04	0.00E+00
395	GRID	545350	4165600	7.32E-04	1.67E-05	8.30E-06	7.54E-07	5.92E-05	1.32E-03	8.60E-04	0.00E+00
38	GRID	545300	4163800	7.37E-04	2.05E-05	6.07E-06	1.76E-06	5.98E-05	1.14E-03	8.70E-04	0.00E+00
291	GRID	544900	4165350	7.41E-04	9.79E-06	1.59E-05	7.72E-07	5.93E-05	2.43E-03	8.70E-04	0.00E+00
332	GRID	545050	4165450	7.41E-04	1.19E-05	1.10E-05	8.64E-07	5.95E-05	1.74E-03	8.70E-04	0.00E+00
251	GRID	544800	4165250	7.50E-04	7.77E-06	2.06E-05	6.86E-07	5.99E-05	3.11E-03	8.90E-04	0.00E+00
374	GRID	545250	4165550	7.48E-04	1.54E-05	1.21E-05	7.23E-07	6.04E-05	1.87E-03	8.80E-04	0.00E+00
353	GRID	545150	4165500	7.50E-04	1.38E-05	1.37E-05	8.22E-07	6.04E-05	2.11E-03	8.90E-04	0.00E+00
59	GRID	545400	4163850	7.50E-04	2.28E-05	4.49E-06	1.82E-06	6.11E-05	9.23E-04	8.90E-04	0.00E+00
271	GRID	544850	4165300	7.55E-04	8.78E-06	1.93E-05	7.33E-07	6.03E-05	2.92E-03	8.90E-04	0.00E+00
396	GRID	545400	4165600	7.52E-04	1.77E-05	6.00E-06	6.94E-07	6.09E-05	9.79E-04	8.90E-04	0.00E+00
80	GRID	545500	4163900	7.50E-04	3.43E-05	5.38E-06	2.21E-06	6.20E-05	1.11E-03	8.90E-04	0.00E+00
193	GRID	544700	4165100	7.66E-04	8.39E-06	2.15E-05	1.00E-06	6.11E-05	3.29E-03	9.00E-04	0.00E+00
397	GRID	545450	4165600	7.66E-04	1.88E-05	5.90E-06	6.16E-07	6.20E-05	9.54E-04	9.00E-04	0.00E+00
312	GRID	545000	4165400	7.75E-04	1.15E-05	1.16E-05	7.44E-07	6.21E-05	1.81E-03	9.10E-04	0.00E+00
398	GRID	545500	4165600	7.70E-04	1.98E-05	6.66E-06	5.27E-07	6.25E-05	1.05E-03	9.10E-04	0.00E+00
399	GRID	545550	4165600	7.70E-04	2.08E-05	7.02E-06	4.96E-07	6.25E-05	1.10E-03	9.10E-04	0.00E+00
375	GRID	545300	4165550	7.79E-04	1.68E-05	1.01E-05	7.85E-07	6.29E-05	1.59E-03	9.20E-04	0.00E+00
37	GRID	545250	4163800	7.79E-04	2.09E-05	6.56E-06	1.67E-06	6.33E-05	1.20E-03	9.20E-04	0.00E+00
333	GRID	545100	4165450	7.90E-04	1.33E-05	1.35E-05	9.24E-07	6.35E-05	2.11E-03	9.30E-04	0.00E+00
354	GRID	545200	4165500	7.92E-04	1.52E-05	1.36E-05	6.76E-07	6.38E-05	2.08E-03	9.30E-04	0.00E+00
79	GRID	545450	4163900	8.01E-04	2.73E-05	5.57E-06	2.95E-06	6.54E-05	1.24E-03	9.40E-04	0.00E+00
100	GRID	545550	4163950	7.90E-04	5.96E-05	5.87E-06	2.15E-06	6.72E-05	1.17E-03	9.30E-04	1.00E-05
292	GRID	544950	4165350	8.06E-04	1.10E-05	1.24E-05	7.41E-07	6.46E-05	1.92E-03	9.50E-04	0.00E+00
376	GRID	545350	4165550	8.04E-04	1.80E-05	7.64E-06	7.85E-07	6.49E-05	1.23E-03	9.50E-04	0.00E+00
58	GRID	545350	4163850	8.04E-04	2.58E-05	4.92E-06	2.23E-06	6.55E-05	1.05E-03	9.50E-04	0.00E+00
212	GRID	544750	4165150	8.17E-04	7.95E-06	1.92E-05	8.69E-07	6.52E-05	2.93E-03	9.60E-04	0.00E+00
36	GRID	545200	4163800	8.21E-04	2.07E-05	6.85E-06	1.49E-06	6.65E-05	1.22E-03	9.70E-04	0.00E+00
377	GRID	545400	4165550	8.21E-04	1.92E-05	5.84E-06	7.15E-07	6.64E-05	9.57E-04	9.70E-04	0.00E+00
380	GRID	545550	4165550	8.24E-04	2.28E-05	7.35E-06	5.40E-07	6.69E-05	1.15E-03	9.70E-04	0.00E+00
313	GRID	545050	4165400	8.30E-04	1.28E-05	1.26E-05	8.85E-07	6.66E-05	1.96E-03	9.80E-04	0.00E+00
355	GRID	545250	4165500	8.28E-04	1.67E-05	1.20E-05	7.54E-07	6.68E-05	1.86E-03	9.80E-04	0.00E+00
378	GRID	545450	4165550	8.30E-04	2.04E-05	6.79E-06	6.34E-07	6.72E-05	1.08E-03	9.80E-04	0.00E+00
379	GRID	545500	4165550	8.30E-04	2.16E-05	7.28E-06	5.35E-07	6.73E-05	1.14E-03	9.80E-04	0.00E+00
272	GRID	544900	4165300	8.35E-04	1.02E-05	1.67E-05	8.04E-07	6.68E-05	2.56E-03	9.80E-04	0.00E+00
334	GRID	545150	4165450	8.39E-04	1.48E-05	1.46E-05	8.77E-07	6.74E-05	2.27E-03	9.90E-04	0.00E+00
232	GRID	544800	4165200	8.48E-04	8.14E-06	2.23E-05	8.09E-07	6.77E-05	3.38E-03	1.00E-03	0.00E+00
252	GRID	544850	4165250	8.53E-04	9.08E-06	2.06E-05	7.31E-07	6.80E-05	3.11E-03	1.01E-03	0.00E+00
99	GRID	545500	4163950	8.46E-04	5.37E-05	6.23E-06	3.44E-06	7.11E-05	1.41E-03	1.00E-03	1.00E-05
356	GRID	545300	4165500	8.59E-04	1.82E-05	9.54E-06	8.19E-07	6.94E-05	1.51E-03	1.01E-03	0.00E+00
35	GRID	545150	4163800	8.59E-04	2.02E-05	6.82E-06	1.20E-06	6.96E-05	1.17E-03	1.02E-03	0.00E+00
78	GRID	545400	4163900	8.59E-04	3.08E-05	5.80E-06	2.30E-06	7.03E-05	1.18E-03	1.01E-03	0.00E+00
175	GRID	544700	4165050	8.66E-04	9.44E-06	2.29E-05	1.05E-06	6.92E-05	3.49E-03	1.02E-03	0.00E+00
57	GRID	545300	4163850	8.64E-04	2.57E-05	5.54E-06	1.89E-06	7.02E-05	1.09E-03	1.02E-03	0.00E+00
293	GRID	545000	4165350	8.73E-04	1.23E-05	1.26E-05	7.44E-07	6.99E-05	1.95E-03	1.03E-03	0.00E+00
361	GRID	545550	4165500	8.79E-04	2.49E-05	7.80E-06	5.87E-07	7.15E-05	1.23E-03	1.04E-03	0.00E+00
335	GRID	545200	4165450	8.84E-04	1.64E-05	1.38E-05	7.31E-07	7.11E-05	2.13E-03	1.04E-03	0.00E+00
357	GRID	545350	4165500	8.81E-04	1.96E-05	6.89E-06	8.17E-07	7.13E-05	1.12E-03	1.04E-03	0.00E+00
314	GRID	545100	4165400	8.88E-04	1.43E-05	1.51E-05	9.68E-07	7.13E-05	2.34E-03	1.05E-03	0.00E+00
360	GRID	545500	4165500	8.93E-04	2.35E-05	7.74E-06	5.43E-07	7.24E-05	1.21E-03	1.05E-03	0.00E+00
358	GRID	545400	4165500	8.95E-04	2.09E-05	6.82E-06	7.41E-07	7.24E-05	1.11E-03	1.06E-03	0.00E+00
34	GRID	545100	4163800	8.97E-04	2.01E-05	7.12E-06	1.13E-06	7.26E-05	1.20E-03	1.06E-03	0.00E+00
655	GRID	544600	4164900	8.99E-04	1.62E-05	1.63E-05	1.00E-06	7.24E-05	2.53E-03	1.06E-03	0.00E+00
359	GRID	545450	4165500	8.99E-04	2.23E-05	7.54E-06	6.52E-07	7.28E-05	1.19E-03	1.06E-03	0.00E+00
273	GRID	544950	4165300	9.13E-04	1.18E-05	1.26E-05	8.14E-07	7.31E-05	1.96E-03	1.08E-03	0.00E+00
98	GRID	545450	4163950	9.08E-04	3.93E-05	6.62E-06	3.71E-06	7.49E-05	1.51E-03	1.07E-03	0.00E+00
336	GRID	545250	4165450	9.22E-04	1.81E-05	1.16E-05	7.88E-07	7.43E-05	1.82E-03	1.09E-03	0.00E+00
194	GRID	544750	4165100	9.30E-04	8.75E-06	2.10E-05	9.32E-07	7.43E-05	3.21E-03	1.10E-03	0.00E+00
56	GRID	545250	4163850	9.28E-04	2.59E-05	6.36E-06	1.81E-06	7.55E-05	1.19E-03	1.10E-03	0.00E+00
77	GRID	545350	4163900	9.26E-04	3.35E-05	6.00E-06	2.46E-06	7.59E-05	1.24E-03	1.09E-03	0.00E+00
33	GRID	545050	4163800	9.33E-04	2.06E-05	7.21E-06	1.12E-06	7.54E-05	1.22E-03	1.10E-03	0.00E+00
294	GRID	545050	4165350	9.39E-04	1.38E-05	1.46E-05	9.05E-07	7.53E-05	2.26E-03	1.11E-03	0.00E+00
342	GRID	545550	4165450	9.37E-04	2.73E-05	8.33E-06	6.37E-07	7.62E-05	1.31E-03	1.11E-03	0.00E+00
315	GRID	545150	4165400	9.42E-04	1.61E-05	1.54E-05	9.39E-07	7.57E-05	2.39E-03	1.11E-03	0.00E+00
253	GRID	544900	4165250	9.50E-04	1.08E-05	1.76E-05	8.22E-07	7.59E-05	2.69E-03	1.12E-03	0.00E+00
337	GRID	545300	4165450	9.50E-04	1.98E-05	8.82E-06	8.58E-07	7.67E-05	1.41E-03	1.12E-03	0.00E+00
341	GRID	545500	4165450	9.59E-04	2.59E-05	8.13E-06	5.58E-07	7.78E-05	1.27E-03	1.13E-03	0.00E+00
213	GRID	544800	4165150	9.68E-04	8.67E-06	2.43E-05	9.13E-07	7.73E-05	3.68E-03	1.14E-03	0.00E+00
32	GRID	545000	4163800	9.66E-04	2.16E-05	1.03E-05	1.10E-06	7.80E-05	1.66E-03	1.14E-03	0.00E+00
233	GRID	544850	4165200	9.73E-04	9.44E-06	2.21E-05	7.10E-07	7.76E-05	3.33E-03	1.15E-03	0.00E+00
338	GRID	545350	4165450	9.70E-04	2.13E-05	6.82E-06	8.53E-07	7.83E-05	1.12E-03	1.14E-03	0.00E+00
340	GRID	545450	4165450	9.73E-04	2.44E-05	8.13E-06	6.71E-07	7.88E-05	1.28E-03	1.15E-03	0.00E+00
339	GRID	545400	4165450	9.77E-04	2.29E-05	7.74E-06	7.67E-07	7.90E-05	1.24E-03	1.15E-03	0.00E+00

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	Annual (µg/m3) DPM GLC from Haul truck	1-hr (ug/m3) Acrolein GLC from construction	1-hr (ug/m3) Acrolein GLC from Haul truck	Chronic Index Hic	Acute Index Hia	Annual (ug/m3) PM2.5 GLC from construction	Annual (ug/m3) PM2.5 GLC from Haul truck
157	GRID	544700	4165000	9.88E-04	1.09E-05	2.43E-05	1.02E-06	7.90E-05	3.70E-03	1.17E-03	0.00E+00
97	GRID	545400	4163950	9.79E-04	4.41E-05	7.12E-06	3.31E-06	8.10E-05	1.52E-03	1.16E-03	0.00E+00
274	GRID	545000	4165300	9.93E-04	1.32E-05	1.35E-05	7.41E-07	7.95E-05	2.08E-03	1.17E-03	0.00E+00
316	GRID	545200	4165400	9.91E-04	1.78E-05	1.38E-05	7.91E-07	7.97E-05	2.14E-03	1.17E-03	0.00E+00
31	GRID	544950	4163800	9.97E-04	2.27E-05	1.23E-05	1.06E-06	8.07E-05	1.95E-03	1.18E-03	0.00E+00
29	GRID	544850	4163800	9.99E-04	2.35E-05	1.83E-05	9.19E-07	8.08E-05	2.80E-03	1.18E-03	0.00E+00
55	GRID	545200	4163850	9.99E-04	2.56E-05	7.31E-06	1.58E-06	8.11E-05	1.30E-03	1.18E-03	0.00E+00
323	GRID	545550	4165400	9.97E-04	3.02E-05	8.59E-06	6.86E-07	8.12E-05	1.35E-03	1.18E-03	0.00E+00
295	GRID	545100	4165350	1.01E-03	1.54E-05	1.65E-05	1.02E-06	8.07E-05	2.55E-03	1.19E-03	0.00E+00
76	GRID	545300	4163900	1.01E-03	3.33E-05	6.20E-06	2.07E-06	8.21E-05	1.21E-03	1.19E-03	0.00E+00
30	GRID	544900	4163800	1.01E-03	2.34E-05	1.39E-05	9.89E-07	8.19E-05	2.18E-03	1.19E-03	0.00E+00
317	GRID	545250	4165400	1.03E-03	1.97E-05	1.11E-05	8.25E-07	8.29E-05	1.74E-03	1.21E-03	0.00E+00
322	GRID	545500	4165400	1.03E-03	2.87E-05	8.75E-06	6.11E-07	8.35E-05	1.37E-03	1.21E-03	0.00E+00
254	GRID	544950	4165250	1.05E-03	1.25E-05	1.40E-05	8.79E-07	8.37E-05	2.18E-03	1.23E-03	0.00E+00
321	GRID	545450	4165400	1.05E-03	2.70E-05	8.49E-06	6.89E-07	8.53E-05	1.34E-03	1.24E-03	0.00E+00
318	GRID	545300	4165400	1.06E-03	2.16E-05	7.97E-06	9.00E-07	8.51E-05	1.30E-03	1.24E-03	0.00E+00
296	GRID	545150	4165350	1.07E-03	1.74E-05	1.59E-05	1.00E-06	8.56E-05	2.47E-03	1.26E-03	0.00E+00
304	GRID	545550	4165350	1.06E-03	3.36E-05	8.62E-06	7.38E-07	8.65E-05	1.37E-03	1.25E-03	0.00E+00
319	GRID	545350	4165400	1.07E-03	2.35E-05	7.90E-06	8.90E-07	8.62E-05	1.28E-03	1.26E-03	0.00E+00
320	GRID	545400	4165400	1.07E-03	2.52E-05	8.49E-06	7.93E-07	8.62E-05	1.35E-03	1.26E-03	0.00E+00
656	GRID	544650	4164900	1.07E-03	1.59E-05	2.31E-05	9.86E-07	8.58E-05	3.52E-03	1.26E-03	0.00E+00
275	GRID	545050	4165300	1.07E-03	1.49E-05	1.67E-05	9.19E-07	8.59E-05	2.57E-03	1.27E-03	0.00E+00
176	GRID	544750	4165050	1.08E-03	9.79E-06	2.36E-05	1.09E-06	8.58E-05	3.60E-03	1.27E-03	0.00E+00
96	GRID	545350	4163950	1.07E-03	4.59E-05	7.64E-06	2.64E-06	8.78E-05	1.50E-03	1.26E-03	0.00E+00
54	GRID	545150	4163850	1.08E-03	2.54E-05	8.20E-06	1.25E-06	8.70E-05	1.38E-03	1.27E-03	0.00E+00
234	GRID	544900	4165200	1.09E-03	1.13E-05	1.85E-05	8.51E-07	8.73E-05	2.82E-03	1.29E-03	0.00E+00
75	GRID	545250	4163900	1.10E-03	3.34E-05	6.39E-06	1.98E-06	8.94E-05	1.22E-03	1.30E-03	0.00E+00
303	GRID	545500	4165350	1.10E-03	3.18E-05	9.12E-06	6.65E-07	8.95E-05	1.43E-03	1.30E-03	0.00E+00
297	GRID	545200	4165350	1.12E-03	1.94E-05	1.36E-05	8.58E-07	8.98E-05	2.11E-03	1.32E-03	0.00E+00
195	GRID	544800	4165100	1.12E-03	9.35E-06	2.66E-05	9.73E-07	8.95E-05	4.02E-03	1.33E-03	0.00E+00
214	GRID	544850	4165150	1.13E-03	9.97E-06	2.37E-05	8.14E-07	8.98E-05	3.59E-03	1.33E-03	0.00E+00
489	GRID	545400	4164000	1.11E-03	6.95E-05	6.95E-06	4.83E-06	9.35E-05	1.72E-03	1.31E-03	1.00E-05
285	GRID	545550	4165300	1.13E-03	3.75E-05	9.08E-06	7.91E-07	9.20E-05	1.44E-03	1.33E-03	0.00E+00
139	GRID	544700	4164950	1.14E-03	1.29E-05	2.59E-05	9.76E-07	9.13E-05	3.93E-03	1.35E-03	0.00E+00
302	GRID	545450	4165350	1.14E-03	2.99E-05	9.18E-06	7.07E-07	9.21E-05	1.44E-03	1.34E-03	0.00E+00
255	GRID	545000	4165250	1.14E-03	1.44E-05	1.56E-05	8.01E-07	9.14E-05	2.40E-03	1.35E-03	0.00E+00
276	GRID	545100	4165300	1.15E-03	1.68E-05	1.76E-05	1.06E-06	9.21E-05	2.73E-03	1.36E-03	0.00E+00
298	GRID	545250	4165350	1.15E-03	2.16E-05	1.03E-05	8.66E-07	9.28E-05	1.63E-03	1.36E-03	0.00E+00
642	GRID	544600	4164850	1.16E-03	1.92E-05	1.63E-05	1.26E-06	9.29E-05	2.57E-03	1.36E-03	0.00E+00
53	GRID	545100	4163850	1.16E-03	2.60E-05	8.69E-06	1.23E-06	9.35E-05	1.45E-03	1.37E-03	0.00E+00
301	GRID	545400	4165350	1.16E-03	2.80E-05	9.02E-06	8.22E-07	9.39E-05	1.44E-03	1.37E-03	0.00E+00
299	GRID	545300	4165350	1.17E-03	2.37E-05	8.03E-06	9.45E-07	9.44E-05	1.31E-03	1.38E-03	0.00E+00
95	GRID	545300	4163950	1.17E-03	4.56E-05	8.26E-06	2.31E-06	9.58E-05	1.54E-03	1.38E-03	0.00E+00
300	GRID	545350	4165350	1.17E-03	2.58E-05	8.82E-06	9.32E-07	9.48E-05	1.43E-03	1.38E-03	0.00E+00
284	GRID	545500	4165300	1.18E-03	3.55E-05	9.25E-06	7.25E-07	9.59E-05	1.46E-03	1.39E-03	0.00E+00
266	GRID	545550	4165250	1.20E-03	4.21E-05	9.97E-06	8.45E-07	9.80E-05	1.58E-03	1.41E-03	0.00E+00
74	GRID	545200	4163900	1.20E-03	3.37E-05	6.53E-06	1.69E-06	9.78E-05	1.20E-03	1.42E-03	0.00E+00
235	GRID	544950	4165200	1.21E-03	1.34E-05	1.56E-05	9.34E-07	9.70E-05	2.41E-03	1.43E-03	0.00E+00
277	GRID	545150	4165300	1.22E-03	1.90E-05	1.61E-05	1.07E-06	9.75E-05	2.51E-03	1.43E-03	0.00E+00
283	GRID	545450	4165300	1.22E-03	3.34E-05	9.71E-06	7.28E-07	9.94E-05	1.52E-03	1.44E-03	0.00E+00
488	GRID	545350	4164000	1.22E-03	6.90E-05	7.51E-06	2.87E-06	1.02E-04	1.52E-03	1.44E-03	1.00E-05
256	GRID	545050	4165250	1.24E-03	1.62E-05	1.86E-05	9.29E-07	9.91E-05	2.85E-03	1.46E-03	0.00E+00
52	GRID	545050	4163850	1.24E-03	2.73E-05	8.59E-06	1.21E-06	1.00E-04	1.43E-03	1.47E-03	0.00E+00
158	GRID	544750	4165000	1.26E-03	1.11E-05	2.63E-05	1.17E-06	1.01E-04	4.01E-03	1.49E-03	0.00E+00
265	GRID	545500	4165250	1.26E-03	3.99E-05	9.64E-06	7.88E-07	1.03E-04	1.52E-03	1.49E-03	0.00E+00
278	GRID	545200	4165300	1.26E-03	2.13E-05	1.30E-05	9.32E-07	1.02E-04	2.04E-03	1.49E-03	0.00E+00
282	GRID	545400	4165300	1.26E-03	3.11E-05	9.64E-06	8.53E-07	1.02E-04	1.53E-03	1.49E-03	0.00E+00
215	GRID	544900	4165150	1.28E-03	1.18E-05	1.94E-05	8.51E-07	1.02E-04	2.95E-03	1.51E-03	0.00E+00
247	GRID	545550	4165200	1.27E-03	4.74E-05	1.06E-05	8.98E-07	1.04E-04	1.67E-03	1.50E-03	1.00E-05
279	GRID	545250	4165300	1.29E-03	2.38E-05	9.35E-06	9.11E-07	1.04E-04	1.50E-03	1.53E-03	0.00E+00
281	GRID	545350	4165300	1.29E-03	2.87E-05	9.54E-06	9.76E-07	1.04E-04	1.54E-03	1.52E-03	0.00E+00
502	GRID	545400	4164050	1.26E-03	1.33E-04	7.08E-06	6.55E-06	1.10E-04	1.99E-03	1.48E-03	1.00E-05
94	GRID	545250	4163950	1.29E-03	4.71E-05	8.95E-06	2.18E-06	1.06E-04	1.62E-03	1.52E-03	0.00E+00
280	GRID	545300	4165300	1.30E-03	2.63E-05	9.15E-06	9.97E-07	1.05E-04	1.48E-03	1.53E-03	0.00E+00
177	GRID	544800	4165050	1.32E-03	1.04E-05	2.92E-05	9.79E-07	1.05E-04	4.41E-03	1.56E-03	0.00E+00
196	GRID	544850	4165100	1.32E-03	1.06E-05	2.56E-05	9.65E-07	1.06E-04	3.89E-03	1.56E-03	0.00E+00
257	GRID	545100	4165250	1.32E-03	1.83E-05	1.84E-05	1.10E-06	1.06E-04	2.85E-03	1.56E-03	0.00E+00
264	GRID	545450	4165250	1.32E-03	3.76E-05	9.94E-06	7.49E-07	1.07E-04	1.56E-03	1.56E-03	0.00E+00
73	GRID	545150	4163900	1.33E-03	3.47E-05	7.44E-06	1.35E-06	1.08E-04	1.29E-03	1.57E-03	0.00E+00
236	GRID	545000	4165200	1.33E-03	1.55E-05	1.84E-05	9.05E-07	1.07E-04	2.82E-03	1.57E-03	0.00E+00
51	GRID	545000	4163850	1.34E-03	2.87E-05	1.04E-05	1.17E-06	1.08E-04	1.68E-03	1.58E-03	0.00E+00
246	GRID	545500	4165200	1.34E-03	4.52E-05	1.06E-05	8.56E-07	1.10E-04	1.67E-03	1.59E-03	0.00E+00
127	GRID	544700	4164900	1.36E-03	1.55E-05	2.78E-05	1.10E-06	1.08E-04	4.22E-03	1.60E-03	0.00E+00
657	GRID	544700	4164900	1.36E-03	1.55E-05	2.78E-05	1.10E-06	1.08E-04	4.22E-03	1.60E-03	0.00E+00
487	GRID	545300	4164000	1.34E-03	7.23E-05	8.20E-06	2.64E-06	1.12E-04	1.58E-03	1.59E-03	1.00E-05
228	GRID	545550	4165150	1.35E-03	5.37E-05	1.09E-05	9.45E-07	1.11E-04	1.72E-03	1.60E-03	1.00E-05
643	GRID	544650	4164850	1.37E-03	1.93E-05	2.44E-05	1.13E-06	1.10E-04	3.73E-03	1.62E-03	0.00E+00
263	GRID	545400	4165250	1.37E-03	3.49E-05	1.03E-05	8.87E-07	1.11E-04	1.63E-03	1.62E-03	0.00E+00
258	GRID	545150	4165250	1.39E-03	2.08E-05	1.60E-05	1.15E-06	1.12E-04	2.50E-03	1.64E-03	0.00E+00
262	GRID	545350	4165250	1.42E-03	3.22E-05	1.01E-05	1.02E-06	1.14E-04	1.63E-03	1.67E-03	0.00E+00
245	GRID	545450	4165200	1.42E-03	4.25E-05	1.02E-05	7.70E-07	1.15E-04	1.61E-03	1.67E-03	0.00E+00
501	GRID	545350	4164050	1.38E-03	1.44E-04	7.02E-06	3.60E-06	1.21E-04	1.55E-03	1.63E-03	2.00E-05
216	GRID	544950	4165150	1.43E-03	1.43E-05	1.71E-05	9.68E-07	1.14E-04	2.63E-03	1.69E-03	0.00E+00
259	GRID	545200	4165250	1.44E-03	2.35E-05	1.22E-05	1.02E-06	1.15E-04	1.93E-03	1.69E-03	0.00E+00
93	GRID	545200	4163950	1.43E-03	5.01E-05	9.74E-06	1.82E-06	1.17E-04	1.69E-03	1.69E-03	1.00E-05
50	GRID	544950	4163850	1.44E-03	2.97E-05	1.29E-05	1.09E-06	1.16E-04	2.04E-03	1.70E-03	0.00E+00
237	GRID	545050	4165200	1.45E-03	1.77E-05	2.03E-05	9.37E-07	1.16E-04	3.10E-03	1.71E-03	0.00E+00
261	GRID	545300	4165250	1.44E-03	2.94E-05	1.01E-05	1.05E-06	1.16E-04	1.62E-03	1.70E-03	0.00E+00
210	GRID	545550	4165100	1.43E-03	6.12E-05	1.08E-05	9.89E-07	1.18E-04	1.72E-03	1.69E-03	1.00E-05
227	GRID	545500	4165150	1.44E-03	5.13E-05	1.12E-05	9.26E-07	1.18E-04	1.77E-03	1.70E-03	1.00E-05

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3)		1-hr (ug/m3)		Chronic	Acute	Annual (ug/m3)	
				DPM GLC	DPM GLC	Acrolein GLC	Acrolein GLC	Index	Index	PM2.5 GLC	PM2.5 GLC
				from construction	from Haul truck	from construction	from Haul truck	Hic	Hia	from construction	from Haul truck
260	GRID	545250	4165250	1.45E-03	2.65E-05	9.44E-06	9.63E-07	1.17E-04	1.52E-03	1.71E-03	0.00E+00
72	GRID	545100	4163900	1.47E-03	3.62E-05	9.08E-06	1.35E-06	1.19E-04	1.52E-03	1.74E-03	0.00E+00
244	GRID	545400	4165200	1.49E-03	3.95E-05	1.07E-05	9.21E-07	1.21E-04	1.69E-03	1.76E-03	0.00E+00
140	GRID	544750	4164950	1.51E-03	1.30E-05	2.91E-05	1.15E-06	1.20E-04	4.42E-03	1.78E-03	0.00E+00
486	GRID	545250	4164000	1.50E-03	8.03E-05	8.98E-06	2.41E-06	1.25E-04	1.67E-03	1.77E-03	1.00E-05
197	GRID	544900	4165100	1.52E-03	1.25E-05	2.03E-05	8.27E-07	1.21E-04	3.08E-03	1.80E-03	0.00E+00
192	GRID	545550	4165050	1.52E-03	7.00E-05	1.03E-05	1.03E-06	1.25E-04	1.66E-03	1.79E-03	1.00E-05
226	GRID	545450	4165150	1.52E-03	4.84E-05	1.12E-05	8.43E-07	1.24E-04	1.76E-03	1.80E-03	1.00E-05
238	GRID	545100	4165200	1.54E-03	2.01E-05	1.89E-05	1.15E-06	1.23E-04	2.93E-03	1.82E-03	0.00E+00
209	GRID	545500	4165100	1.53E-03	5.87E-05	1.15E-05	9.97E-07	1.26E-04	1.83E-03	1.81E-03	1.00E-05
243	GRID	545350	4165200	1.55E-03	3.63E-05	1.09E-05	1.08E-06	1.25E-04	1.75E-03	1.83E-03	0.00E+00
49	GRID	544900	4163850	1.57E-03	3.02E-05	1.43E-05	1.01E-06	1.27E-04	2.24E-03	1.86E-03	0.00E+00
217	GRID	545000	4165150	1.58E-03	1.69E-05	2.12E-05	1.01E-06	1.26E-04	3.24E-03	1.86E-03	0.00E+00
500	GRID	545300	4164050	1.54E-03	1.62E-04	6.92E-06	3.08E-06	1.34E-04	1.46E-03	1.81E-03	2.00E-05
178	GRID	544850	4165050	1.59E-03	1.15E-05	2.78E-05	1.09E-06	1.27E-04	4.22E-03	1.88E-03	0.00E+00
159	GRID	544800	4165000	1.60E-03	1.17E-05	3.25E-05	1.18E-06	1.27E-04	4.91E-03	1.88E-03	0.00E+00
629	GRID	544600	4164800	1.59E-03	2.27E-05	1.63E-05	1.58E-06	1.28E-04	2.61E-03	1.88E-03	0.00E+00
239	GRID	545150	4165200	1.60E-03	2.30E-05	1.55E-05	1.23E-06	1.29E-04	2.45E-03	1.89E-03	0.00E+00
242	GRID	545300	4165200	1.60E-03	3.30E-05	1.07E-05	1.11E-06	1.29E-04	1.73E-03	1.89E-03	0.00E+00
174	GRID	545550	4165000	1.60E-03	8.06E-05	9.48E-06	1.06E-06	1.32E-04	1.54E-03	1.88E-03	1.00E-05
92	GRID	545150	4163950	1.61E-03	5.20E-05	1.06E-05	1.52E-06	1.31E-04	1.78E-03	1.90E-03	1.00E-05
225	GRID	545400	4165150	1.61E-03	4.51E-05	1.09E-05	9.58E-07	1.31E-04	1.74E-03	1.91E-03	0.00E+00
240	GRID	545200	4165200	1.63E-03	2.62E-05	1.12E-05	1.11E-06	1.31E-04	1.79E-03	1.93E-03	0.00E+00
241	GRID	545250	4165200	1.63E-03	2.95E-05	1.06E-05	1.02E-06	1.31E-04	1.69E-03	1.92E-03	0.00E+00
191	GRID	545500	4165050	1.63E-03	6.77E-05	1.15E-05	1.06E-06	1.34E-04	1.83E-03	1.93E-03	1.00E-05
208	GRID	545450	4165100	1.64E-03	5.56E-05	1.19E-05	9.29E-07	1.34E-04	1.88E-03	1.94E-03	1.00E-05
71	GRID	545050	4163900	1.65E-03	3.77E-05	1.09E-05	1.30E-06	1.33E-04	1.78E-03	1.95E-03	0.00E+00
156	GRID	545550	4164950	1.67E-03	9.35E-05	8.30E-06	1.09E-06	1.39E-04	1.37E-03	1.97E-03	1.00E-05
224	GRID	545350	4165150	1.70E-03	4.14E-05	1.14E-05	1.13E-06	1.38E-04	1.84E-03	2.01E-03	0.00E+00
485	GRID	545200	4164000	1.68E-03	8.35E-05	9.97E-06	1.96E-06	1.40E-04	1.74E-03	1.99E-03	1.00E-05
218	GRID	545050	4165150	1.71E-03	1.95E-05	2.16E-05	9.37E-07	1.37E-04	3.29E-03	2.02E-03	0.00E+00
198	GRID	544950	4165100	1.72E-03	1.53E-05	2.06E-05	1.00E-06	1.37E-04	3.15E-03	2.03E-03	0.00E+00
644	GRID	544700	4164850	1.72E-03	1.90E-05	3.00E-05	1.09E-06	1.38E-04	4.54E-03	2.03E-03	0.00E+00
514	GRID	545350	4164100	1.56E-03	5.32E-04	8.20E-06	3.84E-06	1.66E-04	1.75E-03	1.85E-03	6.00E-05
173	GRID	545500	4165000	1.73E-03	7.86E-05	1.10E-05	1.12E-06	1.43E-04	1.77E-03	2.04E-03	1.00E-05
207	GRID	545400	4165100	1.75E-03	5.19E-05	1.20E-05	9.99E-07	1.42E-04	1.90E-03	2.07E-03	1.00E-05
499	GRID	545250	4164050	1.73E-03	1.57E-04	7.48E-06	2.71E-06	1.49E-04	1.49E-03	2.04E-03	2.00E-05
190	GRID	545450	4165050	1.76E-03	6.44E-05	1.23E-05	1.02E-06	1.44E-04	1.94E-03	2.08E-03	1.00E-05
223	GRID	545300	4165150	1.77E-03	3.74E-05	1.16E-05	1.18E-06	1.43E-04	1.87E-03	2.09E-03	0.00E+00
219	GRID	545100	4165150	1.80E-03	2.23E-05	1.90E-05	1.19E-06	1.44E-04	2.95E-03	2.13E-03	0.00E+00
222	GRID	545250	4165150	1.83E-03	3.33E-05	1.14E-05	1.08E-06	1.47E-04	1.83E-03	2.16E-03	0.00E+00
91	GRID	545100	4163950	1.83E-03	5.29E-05	1.16E-05	1.47E-06	1.49E-04	1.91E-03	2.16E-03	1.00E-05
155	GRID	545500	4164950	1.82E-03	9.17E-05	1.01E-05	1.18E-06	1.51E-04	1.64E-03	2.15E-03	1.00E-05
128	GRID	544750	4164900	1.85E-03	1.54E-05	3.20E-05	1.09E-06	1.47E-04	4.83E-03	2.18E-03	0.00E+00
658	GRID	544750	4164900	1.85E-03	1.54E-05	3.20E-05	1.09E-06	1.47E-04	4.83E-03	2.18E-03	0.00E+00
220	GRID	545150	4165150	1.85E-03	2.56E-05	1.47E-05	1.32E-06	1.48E-04	2.34E-03	2.19E-03	0.00E+00
179	GRID	544900	4165050	1.86E-03	1.33E-05	2.11E-05	9.89E-07	1.48E-04	3.23E-03	2.20E-03	0.00E+00
221	GRID	545200	4165150	1.86E-03	2.94E-05	1.11E-05	1.21E-06	1.49E-04	1.80E-03	2.19E-03	0.00E+00
513	GRID	545300	4164100	1.75E-03	3.66E-04	8.23E-06	3.65E-06	1.67E-04	1.73E-03	2.06E-03	4.00E-05
206	GRID	545350	4165100	1.86E-03	4.75E-05	1.17E-05	1.19E-06	1.51E-04	1.89E-03	2.20E-03	1.00E-05
70	GRID	545000	4163900	1.87E-03	3.89E-05	1.20E-05	1.22E-06	1.51E-04	1.93E-03	2.20E-03	0.00E+00
172	GRID	545450	4165000	1.88E-03	7.51E-05	1.23E-05	1.12E-06	1.55E-04	1.96E-03	2.22E-03	1.00E-05
199	GRID	545000	4165100	1.90E-03	1.84E-05	2.36E-05	1.10E-06	1.52E-04	3.61E-03	2.25E-03	0.00E+00
189	GRID	545400	4165050	1.89E-03	6.01E-05	1.28E-05	1.04E-06	1.55E-04	2.01E-03	2.24E-03	1.00E-05
484	GRID	545150	4164000	1.92E-03	8.18E-05	1.12E-05	1.70E-06	1.58E-04	1.88E-03	2.27E-03	1.00E-05
630	GRID	544650	4164800	1.92E-03	2.32E-05	2.59E-05	1.50E-06	1.54E-04	4.00E-03	2.27E-03	0.00E+00
141	GRID	544800	4164950	1.98E-03	1.34E-05	3.64E-05	1.32E-06	1.58E-04	5.51E-03	2.34E-03	0.00E+00
160	GRID	544850	4165000	1.97E-03	1.27E-05	3.03E-05	1.13E-06	1.57E-04	4.59E-03	2.32E-03	0.00E+00
205	GRID	545300	4165100	1.96E-03	4.29E-05	1.23E-05	1.26E-06	1.59E-04	1.98E-03	2.32E-03	0.00E+00
498	GRID	545200	4164050	1.96E-03	1.43E-04	8.20E-06	2.14E-06	1.66E-04	1.51E-03	2.31E-03	2.00E-05
154	GRID	545450	4164950	1.99E-03	8.82E-05	1.18E-05	1.22E-06	1.65E-04	1.90E-03	2.36E-03	1.00E-05
188	GRID	545350	4165050	2.03E-03	5.52E-05	1.29E-05	1.26E-06	1.65E-04	2.06E-03	2.40E-03	1.00E-05
200	GRID	545050	4165100	2.04E-03	2.15E-05	2.25E-05	9.97E-07	1.63E-04	3.42E-03	2.41E-03	0.00E+00
171	GRID	545400	4165000	2.04E-03	7.06E-05	1.32E-05	1.09E-06	1.67E-04	2.08E-03	2.41E-03	1.00E-05
204	GRID	545250	4165100	2.05E-03	3.80E-05	1.24E-05	1.16E-06	1.65E-04	1.97E-03	2.42E-03	0.00E+00
512	GRID	545250	4164100	1.97E-03	2.78E-04	8.30E-06	3.08E-06	1.78E-04	1.66E-03	2.33E-03	3.00E-05
528	GRID	545350	4164150	1.76E-03	9.26E-04	9.25E-06	5.06E-06	2.12E-04	2.09E-03	2.08E-03	1.00E-04
180	GRID	544950	4165050	2.12E-03	1.63E-05	2.46E-05	1.02E-06	1.69E-04	3.74E-03	2.50E-03	0.00E+00
201	GRID	545100	4165100	2.13E-03	2.49E-05	1.88E-05	1.22E-06	1.70E-04	2.92E-03	2.51E-03	0.00E+00
203	GRID	545200	4165100	2.12E-03	3.32E-05	1.22E-05	1.32E-06	1.70E-04	1.97E-03	2.50E-03	0.00E+00
69	GRID	544950	4163900	2.13E-03	3.95E-05	1.35E-05	1.13E-06	1.71E-04	2.13E-03	2.51E-03	0.00E+00
90	GRID	545050	4163950	2.13E-03	5.34E-05	1.26E-05	1.38E-06	1.72E-04	2.05E-03	2.51E-03	1.00E-05
202	GRID	545150	4165100	2.15E-03	2.87E-05	1.36E-05	1.41E-06	1.72E-04	2.19E-03	2.53E-03	0.00E+00
527	GRID	545300	4164150	1.99E-03	5.65E-04	9.48E-06	4.41E-06	2.02E-04	2.03E-03	2.34E-03	6.00E-05
187	GRID	545300	4165050	2.17E-03	4.97E-05	1.27E-05	1.35E-06	1.76E-04	2.05E-03	2.56E-03	1.00E-05
153	GRID	545400	4164950	2.19E-03	8.35E-05	1.32E-05	1.15E-06	1.80E-04	2.09E-03	2.58E-03	1.00E-05
170	GRID	545350	4165000	2.22E-03	6.48E-05	1.37E-05	1.33E-06	1.80E-04	2.19E-03	2.62E-03	1.00E-05
483	GRID	545100	4164000	2.22E-03	7.88E-05	1.27E-05	1.59E-06	1.82E-04	2.09E-03	2.62E-03	1.00E-05
497	GRID	545150	4164050	2.25E-03	1.28E-04	9.05E-06	1.88E-06	1.88E-04	1.59E-03	2.66E-03	1.00E-05
186	GRID	545250	4165050	2.29E-03	4.38E-05	1.32E-05	1.24E-06	1.85E-04	2.11E-03	2.72E-03	0.00E+00
181	GRID	545000	4165050	2.34E-03	2.01E-05	2.55E-05	1.17E-06	1.86E-04	3.90E-03	2.75E-03	0.00E+00
511	GRID	545200	4164100	2.27E-03	2.24E-04	8.33E-06	2.36E-06	1.96E-04	1.56E-03	2.67E-03	2.00E-05
617	GRID	544600	4164750	2.31E-03	2.67E-05	1.69E-05	1.69E-06	1.86E-04	2.71E-03	2.74E-03	0.00E+00
161	GRID	544900	4165000	2.34E-03	1.45E-05	2.31E-05	1.18E-06	1.86E-04	3.55E-03	2.76E-03	0.00E+00
645	GRID	544750	4164850	2.36E-03	1.88E-05	3.54E-05	1.23E-06	1.87E-04	5.36E-03	2.77E-03	0.00E+00
526	GRID	545250	4164150	2.27E-03	4.03E-04	9.67E-06	3.57E-06	2.11E-04	1.93E-03	2.67E-03	4.00E-05
169	GRID	545300	4165000	2.40E-03	5.83E-05	1.38E-05	1.45E-06	1.94E-04	2.23E-03	2.83E-03	1.00E-05
152	GRID	545350	4164950	2.40E-03	7.71E-05	1.42E-05	1.41E-06	1.96E-04	2.28E-03	2.84E-03	1.00E-05
185	GRID	545200	4165050	2.40E-03	3.80E-05	1.32E-05	1.45E-06	1.94E-04	2.14E-03	2.85E-03	0.00E+00
182	GRID	545050	4165050	2.47E-03	2.40E-05	2.30E-05	1.15E-06	1.97E-04	3.52E-03	2.91E-03	0.00E+00

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	Annual (µg/m3) DPM GLC from Haul truck	1-hr (ug/m3) Acrolein GLC from construction	1-hr (ug/m3) Acrolein GLC from Haul truck	Chronic Index Hic	Acute Index Hia	Annual (ug/m3) PM2.5 GLC from construction	Annual (ug/m3) PM2.5 GLC from Haul truck
631	GRID	544700	4164800	2.45E-03	2.35E-05	3.28E-05	1.28E-06	1.96E-04	4.97E-03	2.90E-03	0.00E+00
68	GRID	544900	4163900	2.47E-03	3.94E-05	1.52E-05	1.04E-06	1.99E-04	2.37E-03	2.92E-03	0.00E+00
184	GRID	545150	4165050	2.49E-03	3.26E-05	1.30E-05	1.50E-06	1.99E-04	2.12E-03	2.94E-03	0.00E+00
183	GRID	545100	4165050	2.52E-03	2.80E-05	1.81E-05	1.25E-06	2.01E-04	2.82E-03	2.97E-03	0.00E+00
541	GRID	545300	4164200	2.25E-03	8.38E-04	1.06E-05	5.40E-06	2.44E-04	2.33E-03	2.65E-03	9.00E-05
142	GRID	544850	4164950	2.54E-03	1.44E-05	3.31E-05	1.28E-06	2.01E-04	5.04E-03	2.99E-03	0.00E+00
89	GRID	545000	4163950	2.54E-03	5.34E-05	1.35E-05	1.27E-06	2.05E-04	2.15E-03	2.99E-03	1.00E-05
129	GRID	544800	4164900	2.56E-03	1.58E-05	4.13E-05	1.32E-06	2.04E-04	6.24E-03	3.03E-03	0.00E+00
659	GRID	544800	4164900	2.56E-03	1.58E-05	4.13E-05	1.32E-06	2.04E-04	6.24E-03	3.03E-03	0.00E+00
168	GRID	545250	4165000	2.58E-03	5.12E-05	1.38E-05	1.34E-06	2.08E-04	2.22E-03	3.05E-03	1.00E-05
151	GRID	545300	4164950	2.65E-03	6.93E-05	1.48E-05	1.56E-06	2.14E-04	2.38E-03	3.11E-03	1.00E-05
482	GRID	545050	4164000	2.65E-03	7.61E-05	1.47E-05	1.46E-06	2.15E-04	2.36E-03	3.12E-03	1.00E-05
496	GRID	545100	4164050	2.65E-03	1.16E-04	1.01E-05	1.71E-06	2.18E-04	1.73E-03	3.12E-03	1.00E-05
162	GRID	544950	4165000	2.67E-03	1.76E-05	2.81E-05	9.86E-07	2.13E-04	4.25E-03	3.17E-03	0.00E+00
510	GRID	545150	4164100	2.63E-03	1.87E-04	8.36E-06	2.06E-06	2.22E-04	1.52E-03	3.10E-03	2.00E-05
525	GRID	545200	4164150	2.60E-03	3.14E-04	9.87E-06	2.64E-06	2.31E-04	1.83E-03	3.08E-03	3.00E-05
167	GRID	545200	4165000	2.76E-03	4.41E-05	1.43E-05	1.60E-06	2.21E-04	2.32E-03	3.24E-03	0.00E+00
540	GRID	545250	4164200	2.58E-03	5.82E-04	1.10E-05	4.23E-06	2.50E-04	2.22E-03	3.05E-03	6.00E-05
150	GRID	545250	4164950	2.89E-03	6.08E-05	1.50E-05	1.46E-06	2.33E-04	2.40E-03	3.40E-03	1.00E-05
166	GRID	545150	4165000	2.89E-03	3.76E-05	1.42E-05	1.61E-06	2.31E-04	2.30E-03	3.41E-03	0.00E+00
163	GRID	545000	4165000	2.92E-03	2.20E-05	2.70E-05	1.22E-06	2.32E-04	4.12E-03	3.43E-03	0.00E+00
618	GRID	544650	4164750	2.98E-03	2.79E-05	2.75E-05	1.81E-06	2.37E-04	4.29E-03	3.51E-03	0.00E+00
165	GRID	545100	4165000	2.98E-03	3.19E-05	1.70E-05	1.27E-06	2.38E-04	2.66E-03	3.52E-03	0.00E+00
164	GRID	545050	4165000	3.00E-03	2.69E-05	2.31E-05	1.31E-06	2.39E-04	3.56E-03	3.54E-03	0.00E+00
553	GRID	545300	4164250	2.54E-03	1.47E-03	1.11E-05	6.84E-06	3.17E-04	2.62E-03	2.99E-03	1.60E-04
143	GRID	544900	4164950	3.07E-03	1.61E-05	2.97E-05	1.31E-06	2.45E-04	4.52E-03	3.64E-03	0.00E+00
149	GRID	545200	4164950	3.14E-03	5.19E-05	1.51E-05	1.77E-06	2.52E-04	2.46E-03	3.69E-03	1.00E-05
524	GRID	545150	4164150	3.05E-03	2.55E-04	1.02E-05	2.28E-06	2.62E-04	1.81E-03	3.61E-03	3.00E-05
539	GRID	545200	4164200	3.00E-03	4.39E-04	1.14E-05	3.00E-06	2.72E-04	2.10E-03	3.55E-03	5.00E-05
88	GRID	544950	4163950	3.14E-03	5.30E-05	1.61E-05	1.16E-06	2.53E-04	2.51E-03	3.71E-03	1.00E-05
509	GRID	545100	4164100	3.12E-03	1.61E-04	8.33E-06	1.84E-06	2.58E-04	1.49E-03	3.67E-03	2.00E-05
138	GRID	545250	4164900	3.21E-03	7.33E-05	1.60E-05	1.60E-06	2.59E-04	2.58E-03	3.77E-03	1.00E-05
495	GRID	545050	4164050	3.18E-03	1.07E-04	1.14E-05	1.54E-06	2.60E-04	1.90E-03	3.75E-03	1.00E-05
552	GRID	545250	4164250	2.94E-03	8.91E-04	1.20E-05	5.11E-06	3.02E-04	2.50E-03	3.46E-03	9.00E-05
668	GRID	545250	4164900	3.21E-03	7.33E-05	1.60E-05	1.60E-06	2.59E-04	2.58E-03	3.77E-03	1.00E-05
481	GRID	545000	4164000	3.27E-03	7.35E-05	1.74E-05	1.32E-06	2.65E-04	2.74E-03	3.87E-03	1.00E-05
148	GRID	545150	4164950	3.36E-03	4.38E-05	1.54E-05	1.71E-06	2.69E-04	2.51E-03	3.96E-03	0.00E+00
632	GRID	544750	4164800	3.38E-03	2.34E-05	4.10E-05	1.25E-06	2.69E-04	6.16E-03	3.99E-03	0.00E+00
130	GRID	544850	4164900	3.47E-03	1.67E-05	3.67E-05	1.50E-06	2.75E-04	5.58E-03	4.09E-03	0.00E+00
607	GRID	544600	4164700	3.45E-03	3.20E-05	1.83E-05	1.51E-06	2.75E-04	2.89E-03	4.07E-03	0.00E+00
660	GRID	544850	4164900	3.47E-03	1.67E-05	3.67E-05	1.50E-06	2.75E-04	5.58E-03	4.09E-03	0.00E+00
144	GRID	544950	4164950	3.49E-03	1.93E-05	3.09E-05	1.24E-06	2.78E-04	4.70E-03	4.13E-03	0.00E+00
137	GRID	545200	4164900	3.54E-03	6.23E-05	1.64E-05	1.96E-06	2.85E-04	2.68E-03	4.18E-03	1.00E-05
147	GRID	545100	4164950	3.54E-03	3.68E-05	1.54E-05	1.29E-06	2.83E-04	2.44E-03	4.19E-03	0.00E+00
667	GRID	545200	4164900	3.54E-03	6.23E-05	1.64E-05	1.96E-06	2.85E-04	2.68E-03	4.18E-03	1.00E-05
646	GRID	544800	4164850	3.56E-03	1.90E-05	4.79E-05	1.23E-06	2.83E-04	7.19E-03	4.21E-03	0.00E+00
551	GRID	545200	4164250	3.43E-03	6.20E-04	1.29E-05	3.50E-06	3.21E-04	2.39E-03	4.06E-03	7.00E-05
538	GRID	545150	4164200	3.54E-03	3.44E-04	1.19E-05	2.54E-06	3.08E-04	2.10E-03	4.19E-03	4.00E-05
146	GRID	545050	4164950	3.67E-03	3.04E-05	2.28E-05	1.45E-06	2.92E-04	3.53E-03	4.33E-03	0.00E+00
145	GRID	545000	4164950	3.67E-03	2.43E-05	2.82E-05	1.26E-06	2.93E-04	4.30E-03	4.34E-03	0.00E+00
523	GRID	545100	4164150	3.65E-03	2.14E-04	1.05E-05	1.99E-06	3.05E-04	1.82E-03	4.30E-03	2.00E-05
563	GRID	545250	4164300	3.29E-03	1.38E-03	1.33E-05	6.13E-06	3.69E-04	2.85E-03	3.88E-03	1.50E-04
508	GRID	545050	4164100	3.76E-03	1.43E-04	1.00E-05	1.63E-06	3.09E-04	1.70E-03	4.45E-03	2.00E-05
136	GRID	545150	4164900	3.90E-03	5.19E-05	1.66E-05	1.82E-06	3.12E-04	2.69E-03	4.60E-03	1.00E-05
666	GRID	545150	4164900	3.90E-03	5.19E-05	1.66E-05	1.82E-06	3.12E-04	2.69E-03	4.60E-03	1.00E-05
126	GRID	545200	4164850	3.96E-03	7.62E-05	1.76E-05	2.19E-06	3.19E-04	2.88E-03	4.68E-03	1.00E-05
654	GRID	545200	4164850	3.96E-03	7.62E-05	1.76E-05	2.19E-06	3.19E-04	2.88E-03	4.68E-03	1.00E-05
494	GRID	545000	4164050	4.01E-03	9.97E-05	1.31E-05	1.38E-06	3.24E-04	2.12E-03	4.73E-03	1.00E-05
87	GRID	544900	4163950	4.07E-03	5.18E-05	1.91E-05	1.07E-06	3.25E-04	2.94E-03	4.80E-03	1.00E-05
562	GRID	545200	4164300	3.90E-03	8.91E-04	1.44E-05	4.41E-06	3.78E-04	2.74E-03	4.59E-03	9.00E-05
619	GRID	544700	4164750	4.16E-03	2.87E-05	3.61E-05	1.78E-06	3.31E-04	5.55E-03	4.92E-03	0.00E+00
135	GRID	545100	4164900	4.23E-03	4.29E-05	1.69E-05	1.55E-06	3.38E-04	2.70E-03	4.99E-03	0.00E+00
550	GRID	545150	4164250	4.07E-03	4.63E-04	1.36E-05	2.87E-06	3.59E-04	2.41E-03	4.82E-03	5.00E-05
665	GRID	545100	4164900	4.23E-03	4.29E-05	1.69E-05	1.55E-06	3.38E-04	2.70E-03	4.99E-03	0.00E+00
131	GRID	544900	4164900	4.30E-03	1.84E-05	3.51E-05	1.36E-06	3.41E-04	5.34E-03	5.06E-03	0.00E+00
661	GRID	544900	4164900	4.30E-03	1.84E-05	3.51E-05	1.36E-06	3.41E-04	5.34E-03	5.06E-03	0.00E+00
537	GRID	545100	4164200	4.25E-03	2.81E-04	1.24E-05	2.18E-06	3.58E-04	2.13E-03	5.01E-03	3.00E-05
480	GRID	544950	4164000	4.34E-03	7.09E-05	2.13E-05	1.21E-06	3.49E-04	3.29E-03	5.12E-03	1.00E-05
119	GRID	545200	4164800	4.38E-03	9.52E-05	1.85E-05	2.46E-06	3.54E-04	3.06E-03	5.17E-03	1.00E-05
641	GRID	545200	4164800	4.38E-03	9.52E-05	1.85E-05	2.46E-06	3.54E-04	3.06E-03	5.17E-03	1.00E-05
125	GRID	545150	4164850	4.47E-03	6.29E-05	1.82E-05	1.92E-06	3.58E-04	2.93E-03	5.28E-03	1.00E-05
522	GRID	545050	4164150	4.43E-03	1.84E-04	1.09E-05	1.77E-06	3.65E-04	1.85E-03	5.23E-03	2.00E-05
653	GRID	545150	4164850	4.47E-03	6.29E-05	1.82E-05	1.92E-06	3.58E-04	2.93E-03	5.28E-03	1.00E-05
134	GRID	545050	4164900	4.52E-03	3.47E-05	2.18E-05	1.54E-06	3.59E-04	3.41E-03	5.33E-03	0.00E+00
664	GRID	545050	4164900	4.52E-03	3.47E-05	2.18E-05	1.54E-06	3.59E-04	3.41E-03	5.33E-03	0.00E+00
132	GRID	544950	4164900	4.67E-03	2.17E-05	3.34E-05	1.49E-06	3.72E-04	5.09E-03	5.53E-03	0.00E+00
662	GRID	544950	4164900	4.67E-03	2.17E-05	3.34E-05	1.49E-06	3.72E-04	5.09E-03	5.53E-03	0.00E+00
133	GRID	545000	4164900	4.70E-03	2.72E-05	2.91E-05	1.22E-06	3.73E-04	4.42E-03	5.54E-03	0.00E+00
663	GRID	545000	4164900	4.70E-03	2.72E-05	2.91E-05	1.22E-06	3.73E-04	4.42E-03	5.54E-03	0.00E+00
608	GRID	544650	4164700	4.72E-03	3.38E-05	2.93E-05	1.86E-06	3.75E-04	4.55E-03	5.57E-03	0.00E+00
571	GRID	545200	4164350	4.32E-03	1.40E-03	1.68E-05	5.45E-06	4.53E-04	3.25E-03	5.11E-03	1.50E-04
112	GRID	545200	4164750	4.76E-03	1.23E-04	1.90E-05	2.79E-06	3.86E-04	3.19E-03	5.62E-03	1.00E-05
507	GRID	545000	4164100	4.76E-03	1.29E-04	1.13E-05	1.48E-06	3.86E-04	1.86E-03	5.61E-03	1.00E-05
628	GRID	545200	4164750	4.76E-03	1.23E-04	1.90E-05	2.79E-06	3.86E-04	3.19E-03	5.62E-03	1.00E-05
561	GRID	545150	4164300	4.67E-03	6.42E-04	1.56E-05	3.47E-06	4.19E-04	2.78E-03	5.50E-03	7.00E-05
600	GRID	544600	4164650	4.90E-03	3.92E-05	2.09E-05	1.05E-06	3.90E-04	3.21E-03	5.78E-03	0.00E+00
124	GRID	545100	4164850	5.01E-03	5.11E-05	1.87E-05	1.82E-06	4.00E-04	3.00E-03	5.91E-03	1.00E-05
652	GRID	545100	4164850	5.01E-03	5.11E-05	1.87E-05	1.82E-06	4.00E-04	3.00E-03	5.91E-03	1.00E-05
549	GRID	545100	4164250	4.92E-03	3.69E-04	1.45E-05	2.44E-06	4.19E-04	2.47E-03	5.81E-03	4.00E-05
118	GRID	545150	4164800	5.05E-03	7.80E-05	1.95E-05	2.00E-06	4.06E-04	3.14E-03	5.97E-03	1.00E-05

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3) DPM GLC from construction	Annual (µg/m3) DPM GLC from Haul truck	1-hr (ug/m3) Acrolein GLC from construction	1-hr (ug/m3) Acrolein GLC from Haul truck	Chronic Index Hic	Acute Index Hia	Annual (ug/m3) PM2.5 GLC from construction	Annual (ug/m3) PM2.5 GLC from Haul truck
640	GRID	545150	4164800	5.05E-03	7.80E-05	1.95E-05	2.00E-06	4.06E-04	3.14E-03	5.97E-03	1.00E-05
536	GRID	545050	4164200	5.16E-03	2.36E-04	1.32E-05	1.96E-06	4.27E-04	2.21E-03	6.10E-03	3.00E-05
647	GRID	544850	4164850	5.28E-03	1.98E-05	4.10E-05	1.54E-06	4.19E-04	6.20E-03	6.24E-03	0.00E+00
493	GRID	544950	4164050	5.43E-03	9.26E-05	1.54E-05	1.28E-06	4.37E-04	2.44E-03	6.41E-03	1.00E-05
123	GRID	545050	4164850	5.54E-03	4.01E-05	2.02E-05	1.64E-06	4.42E-04	3.19E-03	6.55E-03	0.00E+00
521	GRID	545000	4164150	5.50E-03	1.63E-04	1.21E-05	1.63E-06	4.48E-04	2.00E-03	6.50E-03	2.00E-05
651	GRID	545050	4164850	5.54E-03	4.01E-05	2.02E-05	1.64E-06	4.42E-04	3.19E-03	6.55E-03	0.00E+00
570	GRID	545150	4164350	5.28E-03	1.01E-03	1.85E-05	4.18E-06	4.97E-04	3.30E-03	6.23E-03	1.10E-04
633	GRID	544800	4164800	5.63E-03	2.35E-05	5.67E-05	1.40E-06	4.47E-04	8.50E-03	6.65E-03	0.00E+00
111	GRID	545150	4164750	5.63E-03	9.97E-05	2.06E-05	2.25E-06	4.53E-04	3.34E-03	6.65E-03	1.00E-05
627	GRID	545150	4164750	5.63E-03	9.97E-05	2.06E-05	2.25E-06	4.53E-04	3.34E-03	6.65E-03	1.00E-05
117	GRID	545100	4164800	5.85E-03	6.20E-05	2.05E-05	2.07E-06	4.67E-04	3.29E-03	6.90E-03	1.00E-05
560	GRID	545100	4164300	5.70E-03	4.99E-04	1.72E-05	3.16E-06	4.91E-04	2.97E-03	6.74E-03	5.00E-05
639	GRID	545100	4164800	5.85E-03	6.20E-05	2.05E-05	2.07E-06	4.67E-04	3.29E-03	6.90E-03	1.00E-05
122	GRID	545000	4164850	6.05E-03	3.10E-05	2.95E-05	1.63E-06	4.81E-04	4.54E-03	7.14E-03	0.00E+00
650	GRID	545000	4164850	6.05E-03	3.10E-05	2.95E-05	1.63E-06	4.81E-04	4.54E-03	7.14E-03	0.00E+00
548	GRID	545050	4164250	6.05E-03	3.02E-04	1.57E-05	2.32E-06	5.03E-04	2.63E-03	7.15E-03	3.00E-05
106	GRID	545150	4164700	6.14E-03	1.32E-04	2.14E-05	2.84E-06	4.97E-04	3.55E-03	7.26E-03	1.00E-05
616	GRID	545150	4164700	6.14E-03	1.32E-04	2.14E-05	2.84E-06	4.97E-04	3.55E-03	7.26E-03	1.00E-05
506	GRID	544950	4164100	6.32E-03	1.18E-04	1.61E-05	1.39E-06	5.08E-04	2.56E-03	7.45E-03	1.00E-05
120	GRID	544900	4164850	6.37E-03	2.17E-05	3.93E-05	1.71E-06	5.05E-04	6.00E-03	7.51E-03	0.00E+00
648	GRID	544900	4164850	6.37E-03	2.17E-05	3.93E-05	1.71E-06	5.05E-04	6.00E-03	7.51E-03	0.00E+00
121	GRID	544950	4164850	6.41E-03	2.51E-05	3.57E-05	1.62E-06	5.09E-04	5.44E-03	7.57E-03	0.00E+00
649	GRID	544950	4164850	6.41E-03	2.51E-05	3.57E-05	1.62E-06	5.09E-04	5.44E-03	7.57E-03	0.00E+00
535	GRID	545000	4164200	6.41E-03	2.04E-04	1.41E-05	1.79E-06	5.23E-04	2.33E-03	7.56E-03	2.00E-05
479	GRID	544900	4164000	6.52E-03	6.76E-05	2.70E-05	1.12E-06	5.20E-04	4.11E-03	7.69E-03	1.00E-05
594	GRID	544600	4164600	6.57E-03	4.95E-05	2.31E-05	1.23E-06	5.22E-04	3.56E-03	7.74E-03	1.00E-05
110	GRID	545100	4164750	6.72E-03	7.77E-05	2.20E-05	2.28E-06	5.37E-04	3.55E-03	7.92E-03	1.00E-05
626	GRID	545100	4164750	6.72E-03	7.77E-05	2.20E-05	2.28E-06	5.37E-04	3.55E-03	7.92E-03	1.00E-05
116	GRID	545050	4164800	6.74E-03	4.74E-05	2.15E-05	1.61E-06	5.37E-04	3.37E-03	7.96E-03	1.00E-05
620	GRID	544750	4164750	6.77E-03	2.92E-05	4.82E-05	1.58E-06	5.36E-04	7.28E-03	7.97E-03	0.00E+00
638	GRID	545050	4164800	6.74E-03	4.74E-05	2.15E-05	1.61E-06	5.37E-04	3.37E-03	7.96E-03	1.00E-05
569	GRID	545100	4164350	6.61E-03	8.19E-04	2.06E-05	5.35E-06	5.87E-04	3.78E-03	7.79E-03	9.00E-05
601	GRID	544650	4164650	6.94E-03	4.19E-05	3.11E-05	1.56E-06	5.53E-04	4.77E-03	8.21E-03	0.00E+00
580	GRID	545150	4164450	6.41E-03	1.95E-03	1.93E-05	9.37E-06	6.61E-04	4.20E-03	7.56E-03	2.10E-04
587	GRID	545150	4164500	6.77E-03	7.88E-04	1.76E-05	8.87E-06	5.98E-04	3.86E-03	8.00E-03	8.00E-05
520	GRID	544950	4164150	7.10E-03	1.47E-04	1.69E-05	1.50E-06	5.72E-04	2.69E-03	8.37E-03	2.00E-05
559	GRID	545050	4164300	7.17E-03	4.07E-04	1.93E-05	3.34E-06	5.99E-04	3.30E-03	8.46E-03	4.00E-05
609	GRID	544700	4164700	7.30E-03	3.55E-05	4.07E-05	2.07E-06	5.79E-04	6.23E-03	8.61E-03	0.00E+00
105	GRID	545100	4164700	7.55E-03	1.01E-04	2.33E-05	2.33E-06	6.04E-04	3.75E-03	8.89E-03	1.00E-05
615	GRID	545100	4164700	7.55E-03	1.01E-04	2.33E-05	2.33E-06	6.04E-04	3.75E-03	8.89E-03	1.00E-05
547	GRID	545000	4164250	7.61E-03	2.57E-04	1.78E-05	2.39E-06	6.23E-04	2.95E-03	8.99E-03	3.00E-05
115	GRID	545000	4164800	7.75E-03	3.68E-05	2.92E-05	1.96E-06	6.15E-04	4.55E-03	9.14E-03	0.00E+00
637	GRID	545000	4164800	7.75E-03	3.68E-05	2.92E-05	1.96E-06	6.15E-04	4.55E-03	9.14E-03	0.00E+00
109	GRID	545050	4164750	8.04E-03	5.83E-05	2.36E-05	2.27E-06	6.40E-04	3.78E-03	9.49E-03	1.00E-05
625	GRID	545050	4164750	8.04E-03	5.83E-05	2.36E-05	2.27E-06	6.40E-04	3.78E-03	9.49E-03	1.00E-05
534	GRID	544950	4164200	8.19E-03	1.82E-04	1.77E-05	1.88E-06	6.61E-04	2.86E-03	9.66E-03	2.00E-05
492	GRID	544900	4164050	8.28E-03	8.63E-05	1.90E-05	1.21E-06	6.61E-04	2.94E-03	9.77E-03	1.00E-05
588	GRID	544600	4164550	8.32E-03	6.21E-05	2.76E-05	1.88E-06	6.62E-04	4.30E-03	9.82E-03	1.00E-05
529	GRID	544600	4164200	8.61E-03	9.70E-05	3.07E-05	1.76E-06	6.88E-04	4.73E-03	1.02E-02	1.00E-05
568	GRID	545050	4164350	8.57E-03	7.27E-04	2.33E-05	6.29E-06	7.35E-04	4.32E-03	1.01E-02	8.00E-05
114	GRID	544950	4164800	8.86E-03	3.02E-05	3.80E-05	1.94E-06	7.03E-04	5.82E-03	1.05E-02	0.00E+00
636	GRID	544950	4164800	8.86E-03	3.02E-05	3.80E-05	1.94E-06	7.03E-04	5.82E-03	1.05E-02	0.00E+00
579	GRID	545100	4164450	8.32E-03	1.76E-03	2.22E-05	6.86E-06	7.97E-04	4.24E-03	9.82E-03	1.90E-04
505	GRID	544900	4164100	8.99E-03	1.08E-04	2.05E-05	1.31E-06	7.20E-04	3.19E-03	1.06E-02	1.00E-05
515	GRID	544600	4164150	9.06E-03	8.50E-05	3.17E-05	1.50E-06	7.22E-04	4.85E-03	1.07E-02	1.00E-05
586	GRID	545100	4164500	8.84E-03	7.35E-04	2.02E-05	5.77E-06	7.56E-04	3.79E-03	1.04E-02	8.00E-05
593	GRID	545100	4164550	8.95E-03	3.73E-04	2.14E-05	5.24E-06	7.37E-04	3.89E-03	1.06E-02	4.00E-05
542	GRID	544600	4164250	9.08E-03	1.09E-04	3.17E-05	1.73E-06	7.26E-04	4.88E-03	1.07E-02	1.00E-05
104	GRID	545050	4164700	9.35E-03	7.61E-05	2.55E-05	2.71E-06	7.45E-04	4.12E-03	1.10E-02	1.00E-05
614	GRID	545050	4164700	9.35E-03	7.61E-05	2.55E-05	2.71E-06	7.45E-04	4.12E-03	1.10E-02	1.00E-05
558	GRID	545000	4164300	9.33E-03	3.48E-04	2.21E-05	3.44E-06	7.65E-04	3.74E-03	1.10E-02	4.00E-05
519	GRID	544900	4164150	9.57E-03	1.32E-04	2.25E-05	1.56E-06	7.66E-04	3.51E-03	1.13E-02	1.00E-05
554	GRID	544600	4164300	9.62E-03	1.18E-04	3.17E-05	1.82E-06	7.69E-04	4.89E-03	1.13E-02	1.00E-05
595	GRID	544650	4164600	9.62E-03	5.33E-05	3.24E-05	1.24E-06	7.64E-04	4.91E-03	1.14E-02	1.00E-05
108	GRID	545000	4164750	9.70E-03	4.56E-05	2.80E-05	2.17E-06	7.71E-04	4.40E-03	1.15E-02	0.00E+00
624	GRID	545000	4164750	9.70E-03	4.56E-05	2.80E-05	2.17E-06	7.71E-04	4.40E-03	1.15E-02	0.00E+00
581	GRID	544600	4164500	9.77E-03	7.50E-05	3.04E-05	2.32E-06	7.78E-04	4.78E-03	1.15E-02	1.00E-05
634	GRID	544850	4164800	9.84E-03	2.43E-05	4.85E-05	1.41E-06	7.79E-04	7.28E-03	1.16E-02	0.00E+00
113	GRID	544900	4164800	9.97E-03	2.62E-05	4.36E-05	1.82E-06	7.90E-04	6.63E-03	1.18E-02	0.00E+00
635	GRID	544900	4164800	9.97E-03	2.62E-05	4.36E-05	1.82E-06	7.90E-04	6.63E-03	1.18E-02	0.00E+00
546	GRID	544950	4164250	9.95E-03	2.29E-04	2.07E-05	2.31E-06	8.04E-04	3.36E-03	1.17E-02	2.00E-05
564	GRID	544600	4164350	9.99E-03	1.17E-04	3.12E-05	2.30E-06	8.00E-04	4.89E-03	1.18E-02	1.00E-05
572	GRID	544600	4164400	1.02E-02	1.05E-04	3.08E-05	2.59E-06	8.15E-04	4.87E-03	1.21E-02	1.00E-05
574	GRID	544600	4164450	1.02E-02	8.82E-05	3.09E-05	2.79E-06	8.15E-04	4.92E-03	1.21E-02	1.00E-05
102	GRID	545050	4164650	1.06E-02	1.08E-04	2.71E-05	3.55E-06	8.44E-04	4.48E-03	1.25E-02	1.00E-05
606	GRID	545050	4164650	1.06E-02	1.08E-04	2.71E-05	3.55E-06	8.44E-04	4.48E-03	1.25E-02	1.00E-05
503	GRID	544600	4164100	1.09E-02	7.31E-05	3.28E-05	1.37E-06	8.69E-04	4.99E-03	1.29E-02	1.00E-05
533	GRID	544900	4164200	1.09E-02	1.62E-04	2.48E-05	1.81E-06	8.75E-04	3.89E-03	1.29E-02	2.00E-05
602	GRID	544700	4164650	1.14E-02	4.46E-05	4.59E-05	2.03E-06	9.04E-04	7.02E-03	1.35E-02	0.00E+00
101	GRID	545050	4164600	1.15E-02	1.70E-04	2.89E-05	3.47E-06	9.25E-04	4.73E-03	1.36E-02	2.00E-05
599	GRID	545050	4164600	1.15E-02	1.70E-04	2.89E-05	3.47E-06	9.25E-04	4.73E-03	1.36E-02	2.00E-05
103	GRID	545000	4164700	1.18E-02	5.98E-05	2.82E-05	2.77E-06	9.41E-04	4.53E-03	1.40E-02	1.00E-05
613	GRID	545000	4164700	1.18E-02	5.98E-05	2.82E-05	2.77E-06	9.41E-04	4.53E-03	1.40E-02	1.00E-05
567	GRID	545000	4164350	1.18E-02	6.27E-04	2.71E-05	6.03E-06	9.78E-04	4.83E-03	1.39E-02	7.00E-05
578	GRID	545050	4164450	1.14E-02	1.58E-03	2.60E-05	6.55E-06	1.03E-03	4.76E-03	1.35E-02	1.70E-04
107	GRID	544950	4164750	1.20E-02	3.76E-05	4.00E-05	2.22E-06	9.48E-04	6.15E-03	1.41E-02	0.00E+00
623	GRID	544950	4164750	1.20E-02	3.76E-05	4.00E-05	2.22E-06	9.48E-04	6.15E-03	1.41E-02	0.00E+00
592	GRID	545050	4164550	1.21E-02	3.02E-04	3.00E-05	3.63E-06	9.79E-04	4.91E-03	1.43E-02	3.00E-05
585	GRID	545050	4164500	1.21E-02	6.15E-04	2.54E-05	5.40E-06	1.01E-03	4.49E-03	1.43E-02	7.00E-05

Table B2. Chronic Index, Acute Index and PM2.5 Calculation from ISCST and HARP Output Files - Shap Park Wetland Restoration Project

Receptor	Type	UTME	UTMN	Annual (µg/m3)		1-hr (ug/m3)		Chronic	Acute	Annual (ug/m3)	
				DPM GLC	DPM GLC	Acrolein GLC	Acrolein GLC	Index	Index	PM2.5 GLC	PM2.5 GLC
				from construction	from Haul truck	from construction	from Haul truck	Hic	Hia	from construction	from Haul truck
589	GRID	544650	4164550	1.26E-02	6.90E-05	3.25E-05	1.86E-06	1.00E-03	5.02E-03	1.49E-02	1.00E-05
557	GRID	544950	4164300	1.29E-02	3.14E-04	2.60E-05	3.65E-06	1.04E-03	4.33E-03	1.52E-02	3.00E-05
530	GRID	544650	4164200	1.34E-02	1.07E-04	4.36E-05	1.77E-06	1.07E-03	6.64E-03	1.59E-02	1.00E-05
518	GRID	544850	4164150	1.36E-02	1.20E-04	2.72E-05	1.52E-06	1.08E-03	4.20E-03	1.60E-02	1.00E-05
610	GRID	544750	4164700	1.38E-02	3.67E-05	5.77E-05	2.13E-06	1.09E-03	8.75E-03	1.63E-02	0.00E+00
504	GRID	544850	4164100	1.38E-02	9.88E-05	2.42E-05	1.34E-06	1.10E-03	3.73E-03	1.63E-02	1.00E-05
543	GRID	544650	4164250	1.40E-02	1.23E-04	4.30E-05	2.10E-06	1.11E-03	6.56E-03	1.65E-02	1.00E-05
605	GRID	545000	4164650	1.40E-02	8.35E-05	3.06E-05	2.55E-06	1.11E-03	4.84E-03	1.65E-02	1.00E-05
490	GRID	544600	4164050	1.40E-02	6.22E-05	4.03E-05	1.16E-06	1.11E-03	6.08E-03	1.66E-02	1.00E-05
545	GRID	544900	4164250	1.41E-02	2.05E-04	2.78E-05	2.45E-06	1.13E-03	4.41E-03	1.66E-02	2.00E-05
491	GRID	544850	4164050	1.43E-02	8.02E-05	2.27E-05	1.16E-06	1.14E-03	3.49E-03	1.69E-02	1.00E-05
555	GRID	544650	4164300	1.46E-02	1.38E-04	4.16E-05	1.95E-06	1.17E-03	6.38E-03	1.73E-02	1.00E-05
565	GRID	544650	4164350	1.52E-02	1.42E-04	4.03E-05	2.46E-06	1.21E-03	6.26E-03	1.79E-02	2.00E-05
582	GRID	544650	4164500	1.52E-02	8.66E-05	3.64E-05	2.44E-06	1.21E-03	5.67E-03	1.80E-02	1.00E-05
622	GRID	544900	4164750	1.54E-02	3.28E-05	4.82E-05	1.65E-06	1.22E-03	7.27E-03	1.81E-02	0.00E+00
532	GRID	544850	4164200	1.54E-02	1.47E-04	3.38E-05	1.89E-06	1.23E-03	5.23E-03	1.81E-02	2.00E-05
573	GRID	544650	4164400	1.55E-02	1.27E-04	3.87E-05	3.08E-06	1.23E-03	6.08E-03	1.83E-02	1.00E-05
612	GRID	544950	4164700	1.55E-02	4.89E-05	4.13E-05	2.01E-06	1.23E-03	6.34E-03	1.83E-02	1.00E-05
575	GRID	544650	4164450	1.55E-02	1.05E-04	3.71E-05	3.31E-06	1.24E-03	5.89E-03	1.83E-02	1.00E-05
598	GRID	545000	4164600	1.58E-02	1.26E-04	3.27E-05	2.82E-06	1.26E-03	5.18E-03	1.87E-02	1.00E-05
516	GRID	544650	4164150	1.63E-02	9.08E-05	4.69E-05	1.60E-06	1.30E-03	7.10E-03	1.92E-02	1.00E-05
591	GRID	545000	4164550	1.72E-02	2.09E-04	3.51E-05	4.07E-06	1.38E-03	5.72E-03	2.03E-02	2.00E-05
596	GRID	544700	4164600	1.74E-02	5.78E-05	5.25E-05	1.57E-06	1.38E-03	7.87E-03	2.05E-02	1.00E-05
566	GRID	544950	4164350	1.76E-02	5.39E-04	3.20E-05	5.77E-06	1.43E-03	5.51E-03	2.08E-02	6.00E-05
577	GRID	545000	4164450	1.73E-02	1.25E-03	3.12E-05	5.45E-06	1.47E-03	5.36E-03	2.05E-02	1.30E-04
584	GRID	545000	4164500	1.79E-02	4.27E-04	3.77E-05	4.91E-06	1.45E-03	6.21E-03	2.11E-02	5.00E-05
604	GRID	544950	4164650	1.94E-02	6.68E-05	4.16E-05	2.28E-06	1.54E-03	6.42E-03	2.29E-02	1.00E-05
556	GRID	544900	4164300	2.04E-02	2.81E-04	3.12E-05	3.47E-06	1.64E-03	5.06E-03	2.41E-02	3.00E-05
517	GRID	544800	4164150	2.09E-02	1.11E-04	4.49E-05	1.53E-06	1.66E-03	6.79E-03	2.47E-02	1.00E-05
621	GRID	544850	4164750	2.12E-02	3.07E-05	5.51E-05	1.62E-06	1.68E-03	8.26E-03	2.51E-02	0.00E+00
611	GRID	544900	4164700	2.17E-02	4.28E-05	5.31E-05	1.90E-06	1.72E-03	8.01E-03	2.57E-02	0.00E+00
531	GRID	544800	4164200	2.29E-02	1.36E-04	5.38E-05	1.93E-06	1.83E-03	8.12E-03	2.71E-02	1.00E-05
597	GRID	544950	4164600	2.31E-02	9.52E-05	4.03E-05	2.95E-06	1.84E-03	6.34E-03	2.74E-02	1.00E-05
544	GRID	544850	4164250	2.45E-02	1.86E-04	4.43E-05	2.56E-06	1.94E-03	6.82E-03	2.88E-02	2.00E-05
590	GRID	544950	4164550	2.65E-02	1.43E-04	4.10E-05	3.91E-06	2.10E-03	6.56E-03	3.12E-02	2.00E-05
603	GRID	544900	4164650	2.89E-02	5.70E-05	5.77E-05	2.12E-06	2.29E-03	8.75E-03	3.41E-02	1.00E-05
583	GRID	544950	4164500	2.89E-02	2.47E-04	4.39E-05	4.31E-06	2.31E-03	7.07E-03	3.43E-02	3.00E-05
576	GRID	544950	4164450	3.09E-02	5.59E-04	4.79E-05	5.77E-06	2.48E-03	7.81E-03	3.64E-02	6.00E-05

APPENDIX B

DISPERSION MODELING AND HEALTH RISK ASSESSMENT RUNS INPUT FILES

8/27/2011 11:00:31 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: G:\Sharp Park\New\URBEMIS\Construction4.urb924

Project Name: Sharp Park - Construction - 6-month Duration

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 5/1/2012-5/14/2012 Active	5.21	18.32	**123.65**	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building 05/01/2012-05/14/2012	5.21	18.32	123.65	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building Off Road Diesel	1.42	11.80	4.44	0.00	0.00	0.08	0.08	0.00	0.08	0.08	1,370.68
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	3.79	6.52	119.21	0.12	0.60	0.31	0.91	0.22	0.25	0.47	12,320.61
Time Slice 5/15/2012-8/31/2012 Active	**14.53**	**153.21**	72.54	**0.13**	0.50	3.37	3.87	0.16	3.10	3.27	**21,777.38**
Mass Grading 05/15/2012-	14.53	153.21	72.54	0.13	0.50	3.37	3.87	0.16	3.10	3.27	21,777.38
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	9.34	75.64	44.36	0.00	0.00	0.58	0.58	0.00	0.54	0.54	7,635.08
Mass Grading On Road Diesel	5.10	77.42	25.47	0.13	0.49	2.78	3.27	0.16	2.56	2.72	13,861.70
Mass Grading Worker Trips	0.09	0.15	2.72	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.60
Time Slice 9/3/2012-9/14/2012 Active	5.76	59.80	26.77	0.05	90.20	1.35	91.55	18.86	1.24	20.10	9,091.81
Mass Grading 09/01/2012-	1.65	16.47	8.36	0.02	45.07	0.45	45.52	9.42	0.41	9.83	2,535.94
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	0.96	6.22	4.50	0.00	0.00	0.08	0.08	0.00	0.08	0.08	654.92
Mass Grading On Road Diesel	0.67	10.22	3.36	0.02	0.06	0.37	0.43	0.02	0.34	0.36	1,830.00
Mass Grading Worker Trips	0.02	0.03	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.02
Mass Grading 09/01/2012-	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	2.70	22.52	10.36	0.00	0.00	0.15	0.15	0.00	0.14	0.14	2,713.85
Mass Grading On Road Diesel	1.37	20.75	6.82	0.03	0.13	0.75	0.88	0.04	0.69	0.73	3,714.47
Mass Grading Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.54
Time Slice 9/17/2012-9/28/2012 Active	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading 09/01/2012-	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	2.70	22.52	10.36	0.00	0.00	0.15	0.15	0.00	0.14	0.14	2,713.85
Mass Grading On Road Diesel	1.37	20.75	6.82	0.03	0.13	0.75	0.88	0.04	0.69	0.73	3,714.47
Mass Grading Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.54

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Time Slice 10/1/2012-10/15/2012	5.21	18.32	**123.65**	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building 10/01/2012-10/15/2012	5.21	18.32	123.65	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building Off Road Diesel	1.42	11.80	4.44	0.00	0.00	0.08	0.08	0.00	0.08	0.08	1,370.68
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	3.79	6.52	119.21	0.12	0.60	0.31	0.91	0.22	0.25	0.47	12,320.61

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/15/2012 - 8/31/2012 - Excavation/Grading

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Off Highway Tractors, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/30/2012 - Riffle Range Regrade

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/15/2012 - Culvert Placement

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Building Construction 5/1/2012 - 5/14/2012 - Install Barriers, Signage, Dewatering Ponds

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For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
The following mitigation measures apply to Phase: Building Construction 10/1/2012 - 10/15/2012 - Revegetation
For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

Phase Assumptions

Phase: Mass Grading 5/15/2012 - 8/31/2012 - Excavation/Grading
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 0
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 3443.04
Off-Road Equipment:
3 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
3 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
3 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 9/1/2012 - 9/30/2012 - Riffle Range Regrade
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 5
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 922.62
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
3 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 9/1/2012 - 9/15/2012 - Culvert Placement
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 5
Fugitive Dust Level of Detail: Default

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20 lbs per acre-day
On Road Truck Travel (VMT): 454.55
Off-Road Equipment:
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 5/1/2012 - 5/14/2012 - Install Barriers, Signage, Dewatering Ponds
Off-Road Equipment:
1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day
2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 10/1/2012 - 10/15/2012 - Revegetation
Off-Road Equipment:
1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day
2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Detail Report for Winter Construction Mitigated Emissions (Pounds/Day)

File Name: G:\Sharp Park\New\URBEMIS\Construction4.urb924

Project Name: Sharp Park - Construction - 6-month Duration

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 5/1/2012-5/14/2012 Active	5.21	18.32	**123.65**	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building 05/01/2012-05/14/2012	5.21	18.32	123.65	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building Off Road Diesel	1.42	11.80	4.44	0.00	0.00	0.08	0.08	0.00	0.08	0.08	1,370.68
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	3.79	6.52	119.21	0.12	0.60	0.31	0.91	0.22	0.25	0.47	12,320.61
Time Slice 5/15/2012-8/31/2012 Active	**14.53**	**153.21**	72.54	**0.13**	0.50	3.37	3.87	0.16	3.10	3.27	**21,777.38**
Mass Grading 05/15/2012-	14.53	153.21	72.54	0.13	0.50	3.37	3.87	0.16	3.10	3.27	21,777.38
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	9.34	75.64	44.36	0.00	0.00	0.58	0.58	0.00	0.54	0.54	7,635.08
Mass Grading On Road Diesel	5.10	77.42	25.47	0.13	0.49	2.78	3.27	0.16	2.56	2.72	13,861.70
Mass Grading Worker Trips	0.09	0.15	2.72	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.60
Time Slice 9/3/2012-9/14/2012 Active	5.76	59.80	26.77	0.05	90.20	1.35	91.55	18.86	1.24	20.10	9,091.81
Mass Grading 09/01/2012-	1.65	16.47	8.36	0.02	45.07	0.45	45.52	9.42	0.41	9.83	2,535.94
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	0.96	6.22	4.50	0.00	0.00	0.08	0.08	0.00	0.08	0.08	654.92
Mass Grading On Road Diesel	0.67	10.22	3.36	0.02	0.06	0.37	0.43	0.02	0.34	0.36	1,830.00
Mass Grading Worker Trips	0.02	0.03	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.02
Mass Grading 09/01/2012-	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	2.70	22.52	10.36	0.00	0.00	0.15	0.15	0.00	0.14	0.14	2,713.85
Mass Grading On Road Diesel	1.37	20.75	6.82	0.03	0.13	0.75	0.88	0.04	0.69	0.73	3,714.47
Mass Grading Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.54
Time Slice 9/17/2012-9/28/2012 Active	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading 09/01/2012-	4.10	43.33	18.42	0.04	45.14	0.90	46.03	9.44	0.83	10.27	6,555.87
Mass Grading Dust	0.00	0.00	0.00	0.00	45.00	0.00	45.00	9.40	0.00	9.40	0.00
Mass Grading Off Road Diesel	2.70	22.52	10.36	0.00	0.00	0.15	0.15	0.00	0.14	0.14	2,713.85
Mass Grading On Road Diesel	1.37	20.75	6.82	0.03	0.13	0.75	0.88	0.04	0.69	0.73	3,714.47
Mass Grading Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.54
Time Slice 10/1/2012-10/15/2012	5.21	18.32	**123.65**	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29
Building 10/01/2012-10/15/2012	5.21	18.32	123.65	0.12	0.60	0.39	1.00	0.22	0.33	0.55	13,691.29

Building Off Road Diesel	1.42	11.80	4.44	0.00	0.00	0.08	0.08	0.00	0.08	0.08	1,370.68
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	3.79	6.52	119.21	0.12	0.60	0.31	0.91	0.22	0.25	0.47	12,320.61

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/15/2012 - 8/31/2012 - Excavation/Grading

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Off Highway Tractors, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/30/2012 - Riffle Range Regrade

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/15/2012 - Culvert Placement

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Building Construction 5/1/2012 - 5/14/2012 - Install Barriers, Signage, Dewatering Ponds

For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

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The following mitigation measures apply to Phase: Building Construction 10/1/2012 - 10/15/2012 - Revegetation
For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

Phase Assumptions

Phase: Mass Grading 5/15/2012 - 8/31/2012 - Excavation/Grading
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 0
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 3443.04
Off-Road Equipment:
3 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
3 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
3 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 9/1/2012 - 9/30/2012 - Riffle Range Regrade
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 5
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 922.62
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
3 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 9/1/2012 - 9/15/2012 - Culvert Placement
Total Acres Disturbed: 66
Maximum Daily Acreage Disturbed: 5
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 454.55
Off-Road Equipment:
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Phase: Building Construction 5/1/2012 - 5/14/2012 - Install Barriers, Signage, Dewatering Ponds
Off-Road Equipment:
1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day
2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 10/1/2012 - 10/15/2012 - Revegetation
Off-Road Equipment:
1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day
2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Sharp Park\New\URBEMIS\Construction4.urb924

Project Name: Sharp Park - Construction - 6-month Duration

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	0.68	6.76	4.39	0.01	1.53	0.29	1.82	0.32	0.27	0.59	1,082.20
2012 TOTALS (tons/year mitigated)	0.68	6.76	4.39	0.01	0.70	0.15	0.85	0.15	0.14	0.29	1,082.20
Percent Reduction	0.00	0.00	0.00	0.00	54.00	49.58	53.29	53.41	49.65	51.70	0.00

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	0.68	6.76	4.39	0.01	0.70	0.15	0.85	0.15	0.14	0.29	1,082.20
Building 05/01/2012-05/14/2012	0.03	0.09	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.46
Building Off Road Diesel	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.85
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.02	0.03	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.60
Mass Grading 05/15/2012-08/31/2012	0.57	6.05	2.87	0.01	0.02	0.13	0.15	0.01	0.12	0.13	860.21
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.37	2.99	1.75	0.00	0.00	0.02	0.02	0.00	0.02	0.02	301.59

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Mass Grading On Road Diesel	0.20	3.06	1.01	0.01	0.02	0.11	0.13	0.01	0.10	0.11	547.54
Mass Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.08
Mass Grading 09/01/2012-09/15/2012	0.01	0.08	0.04	0.00	0.23	0.00	0.23	0.05	0.00	0.05	12.68
Mass Grading Dust	0.00	0.00	0.00	0.00	0.23	0.00	0.23	0.05	0.00	0.05	0.00
Mass Grading Off Road Diesel	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27
Mass Grading On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.15
Mass Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Mass Grading 09/01/2012-09/30/2012	0.04	0.43	0.18	0.00	0.45	0.01	0.46	0.09	0.01	0.10	65.56
Mass Grading Dust	0.00	0.00	0.00	0.00	0.45	0.00	0.45	0.09	0.00	0.09	0.00
Mass Grading Off Road Diesel	0.03	0.23	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.14
Mass Grading On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.14
Mass Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Building 10/01/2012-10/15/2012	0.03	0.10	0.68	0.00	0.00	0.00	0.01	0.00	0.00	0.00	75.30
Building Off Road Diesel	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.54
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.02	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	67.76

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/15/2012 - 8/31/2012 - Excavation/Grading

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

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For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Off Highway Tractors, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/30/2012 - Riffle Range Regrade

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Excavators, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Mass Grading 9/1/2012 - 9/15/2012 - Culvert Placement

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Building Construction 5/1/2012 - 5/14/2012 - Install Barriers, Signage, Dewatering Ponds

For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Building Construction 10/1/2012 - 10/15/2012 - Revegetation

For Pumps, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%

SAN FRANCISCO
PLANNING DEPARTMENT

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Compliance Checklist
Greenhouse Gas Analysis

A. GENERAL PROJECT INFORMATION:

Instructions: Complete Sections A and B, below. Generally, only projects within the City and County of San Francisco can apply for a determination of consistency with the GHG Reduction Strategy.

Date: August 17, 2011

Project name: Significant Natural Resource Areas Management Plan **Case No**: 2005.1912E

Project address and block and lot: Various locations within San Francisco

MEA planner: Jessica Range

Brief Project description:

The San Francisco Recreation and Park Department (SFRPD) developed a Significant Natural Resource Areas Management Plan (SNRAMP), with the final draft plan published in February 2006. This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 of which are in San Francisco and one of which (Sharp Park) is in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years.

The proposed project, implementation of the SNRAMP, covers two categories of activity at Natural Areas in San Francisco: routine maintenance and programmatic projects, which are those projects that are not well defined at this time. The general actions under the SNRAMP that could affect emissions of greenhouse gases include operation of motorized equipment and the removal and replacement of invasive trees and other invasive vegetation with native trees and other native vegetation.

B. COMPLIANCE CHECKLIST TABLE

Complete and attach to this form the appropriate compliance table by determining project compliance with the identified regulations and providing project-level details in the discussion column. Please note that Table 1 applies to Private Development Projects, Table 2 applies to Municipal Projects, and Table 3 is for plan-level analysis. Projects that do not comply with an ordinance/regulation may be determined to be inconsistent with San Francisco's qualified GHG reduction strategy.

Compliance Checklist Table attached: ☐ Table 1. Private Development

☒ Table 2. Municipal Project

☐ Table 3. Area Plan for _____
(specify area)

C. DETERMINATION OF COMPLIANCE WITH CITY'S GHG REDUCTION STRATEGY

☒ Project Complies with San Francisco's *Strategies to Address Greenhouse Gas Emissions*

Project Notes:

The proposed project would emit GHGs primarily during construction of individual programmatic projects. Operational activities are not proposed to increase substantially and therefore any increase in GHGs from project operations (routine maintenance) would be minimal. Construction related GHG emissions would be short term and nominal given the anticipated level of construction activity required for programmatic projects. Although many of the GHG regulations are not applicable to the activities proposed by SFRPD because of the nature of the project (which includes primarily restoration, erosion control, trail development, and invasive vegetation removal), the SFRPD complies with existing regulations, such as the commuter benefit ordinance, emergency ride home program, and the mandatory recycling and composting ordinance. Further, the Natural Areas Management Plan would comply with all applicable City regulations identified as reducing greenhouse gas emissions, including the clean construction ordinance, which requires use of cleaner construction equipment and B20 biodiesel. Therefore, the proposed project would comply with San Francisco's GHG Reduction Strategy.

☐ Project Does Not Comply

If Project does not comply, provide discussion of non-compliant features:

_____

_____

_____

_____

_____

_____

Planner Name: Jessica Range **Date of Determination:** 8/24/11

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Compliance Checklist Table for Greenhouse Gas Analysis:
Table 2. Municipal Projects

A. GENERAL PROJECT INFORMATION:

Date: August 17, 2011

Project name: Significant Natural Resource Areas Management Plan

Case No: 2005.1912E

Project address and block and lot: Various locations within San Francisco

Compliance Checklist Prepared By: John Bock, Tetra Tech

Date: August 17, 2011

B. COMPLIANCE CHECKLIST TABLE

Instructions: Complete the following table by determining project compliance with the identified regulations and providing project-level details in the discussion column. Projects that do not comply with an ordinance/regulation may be determined to be inconsistent with San Francisco's qualified GHG reduction strategy.

Table 2. Regulations Applicable to Municipal Projects

	Requirement	Project Compliance	Discussion
Transportation sector			
Commuter Benefits Ordinance (Environment Code, Section 421)	All City employees are offered commuter benefits for transit and vanpool expenses. The City Hall bike room provides secure bicycle parking, showers and lockers for bicycle commuters. City employees are also eligible for telecommuting and alternative work schedules.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	All City employees including San Francisco Recreation and Park Department (SFRPD) Natural Areas Program (NAP) staff are provided commuter benefits in accordance with Environment Code Section 421.
Emergency Ride Home Program	All City employees are automatically eligible for the emergency ride home program.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	All City employees, including NAP staff are automatically enrolled in the emergency ride home program.
Healthy Air and	Requires all new purchases or	☒ Project	The SFRPD follows the vehicle

	Requirement	Project Compliance	Discussion
Smog Ordinance (Environment Code, Chapter 4)	leases of passenger vehicles and light-duty trucks to be the cleanest and most efficient vehicles available on the market. There are also requirements for medium and heavy duty vehicles and for phasing out highly polluting vehicles (diesel MUNI buses).	Complies ☐ Not Applicable ☐ Project Does Not Comply	requirements of this ordinance. This is addressed in Section 3b, Fleet – Fuel Use and Reduction Measures, of the *San Francisco Recreation and Park Department Climate Action Plan Fiscal Year 2009-10.*
Biodiesel for Municipal Fleets (Executive Directive 06-02)	Requires all diesel using City Departments to begin using biodiesel (B20). Sets goals for all diesel equipment to be run on biodiesel by 2007 and goals for increasing biodiesel blends to B100.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	For the locations under the Significant Natural Resource Areas Management Plan, the SFRPD is implementing the biodiesel requirements of this ordinance, as documented in Section 3b, Fleet – Fuel Use and Reduction Measures, of the *San Francisco Recreation and Park Department Climate Action Plan Fiscal Year 2009-10.*
Clean Construction Ordinance (Administrative Code, Section 6.25)	Effective March 2009, all contracts for large (20+ day) City projects are required to: • Fuel diesel vehicles with B20 biodiesel, and • Use construction equipment that meet USEPA Tier 2 standards or best available control technologies for equipment over 25 hp.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	For all applicable contracts issued for work under the Significant Natural Resource Areas Management Plan, the NAP will include these requirements in its contract specifications, as required by the ordinance.
Bicycle Parking in City-Owned and Leased Buildings (Planning Code, Section 155.1)	Class 1 and 2 Bicycle Parking Spaces Class 1 Requirements: (A) Provide two spaces in buildings with 1-20 employees. (B) Provide four spaces in buildings with 21 to 50 employees. (C) In buildings with 51 to 300 employees, provide bicycle parking equal to at least five percent of the number of employees at that building, but no fewer than five bicycle spaces. (D) In buildings with more than 300 employees, provide bicycle parking equal to at least three percent of the number of employees at that building, but no fewer than 16 bicycle spaces. In addition to the Class 1 bicycle parking spaces provide Class 2	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project would not construct or renovate City-owned and leased buildings. Therefore, Planning Code Section 155.1 is not applicable to the proposed project.

	Requirement	Project Compliance	Discussion
	bicycle parking. Class 2 Requirements: (A) In buildings with one to 40 employees, at least two bicycle parking spaces shall be provided. (B) In buildings with 41 to 50 employees, at least four bicycle parking spaces shall be provided. (C) In buildings with 51 to 100 employees, at least six bicycle parking spaces shall be provided. (D) In buildings with more than 100 employees, at least eight bicycle parking spaces shall be provided. Wherever a responsible City official is required to provide eight or more Class 2 bicycle parking spaces, at least 50 percent of those parking spaces shall be covered.		
Bicycle parking in parking garages (Planning Code, Section 155.2)	(A) Every garage will supply a minimum of six bicycle parking spaces. (B) Garages with between 120 and 500 automobile spaces shall provide one bicycle space for every 20 automobile spaces. (C) Garages with more than 500 automobile spaces shall provide 25 spaces plus one additional space for every 40 automobile spaces over 500 spaces, up to a maximum of 50 bicycle parking spaces.	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not involve parking garages. Therefore, Planning Code Section 155.2 is not applicable to the proposed project.
Transportation Management Programs (Planning Code, Section 163)	Requires new buildings or additions over a specified size (buildings >25,000 sf or 100,000 sf depending on the use and zoning district) within certain zoning districts (including downtown and mixed-use districts in the City's eastern neighborhoods and south of market) to implement a Transportation Management Program and provide on-site transportation management brokerage services for the life of the building.	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project would not construct new buildings and would therefore not generate any greenhouse gas emissions as a result of vehicle trips generated by new buildings. Therefore, Planning Code Section 163 is not applicable to the proposed project.
Energy Efficiency Sector			
Resource Efficiency and	The ordinance specifies requirements for all city buildings	☐ Project	The proposed project would not construct or demolish buildings.

	Requirement	Project Compliance	Discussion
Green Building Ordinance (Environment Code, Chapter 7)	as well as requirements for construction and demolition debris recycling, and requirement for new construction. All new construction must comply achieve at a minimum the LEED® Silver standard. These buildings are required to perform commissions to ensure achievement of design standards. All other buildings are required to meet the following minimum specifications related to energy efficiency: 1. Toilets must use no more than 1.6 gal/flush 2. Showerheads must use no more than 1.5 gal/ min. 3. All lighting and electrical fixtures must meet specified requirements. 4. All fluorescent lamps must be replaced	Complies ☒ Not Applicable ☐ Project Does Not Comply	Therefore, this ordinance is not applicable to the proposed project.
Waste Reduction Sector			
Resource Efficiency and Green Building Ordinance (Environment Code, Chapter 7)	The ordinance requires all demolition (& new construction) projects to prepare a Construction and Demolition Debris Management Plan designed to recycle construction and demolition materials to the maximum extent feasible, with a goal of 75% diversion. The ordinance specifies requires for all city buildings to provide adequate recycling space	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project would not construct or demolish buildings. Therefore, this ordinance is not applicable to the proposed project.
Resource Conservation Ordinance (Environment Code, Chapter 5)	This ordinance establishes a goal for each City department to (i) maximize purchases of recycled products and (ii) divert from disposal as much solid waste as possible so that the City can meet the state-mandated 50% division requirement. Each City department shall prepare a Waste Assessment. The ordinance also requires the Department of the Environment to prepare a Resource Conservation Plan that facilitates waste reduction and recycling. The ordinance requires janitorial contracts to consolidate recyclable materials for	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	All City Departments, including the SFRPD, meet these resource conservation requirements.

	Requirement	Project Compliance	Discussion
	pick up. Lastly, the ordinance specifies purchasing requirements for paper products.		
Mandatory Recycling and Composting Ordinance (Environment Code, Chapter 19)	The mandatory recycling and composting ordinance requires all persons in San Francisco to separate their refuse into recyclables, compostables and trash, and place each type of refuse in a separate container designated for disposal of that type of refuse.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	All City Departments, including the SFRPD, meet these recycling and composting requirements. Minor quantities of solid waste and recyclable material would be generated during the management of the Natural Areas. Unless it can be used to create wildlife habitat, all large woody debris generated by the NAP would be composted in Golden Gate Park. The wood chips may be used to suppress understory invasive vegetation or could be used as beneficial mulch on other revegetation projects in the Natural Areas. The proposed project does not include a residential component.
Construction Recycled Content Ordinance (Administrative Code, Section 6.4)	Ordinance requires the use of recycled content material in public works projects to the maximum extent feasible and gives preference to local manufacturers and industry.	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not involve public works projects that could incorporate recycled content materials. Therefore, this ordinance is not applicable to the proposed project.
Environment/Conservation Sector			
Street Tree Planting Requirements for New Construction (Planning Code Section 143)	Planning Code Section 143 requires new construction, significant alterations or relocation of buildings within many of San Francisco's zoning districts to plant on 24-inch box tree for every 20 feet along the property street frontage	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not involve constructing or altering buildings. Therefore, Planning Code Section 143 is not applicable to the proposed project. For management actions in San Francisco, the proposed project would remove invasive trees and replace them on a one-to-one basis with native trees.
Environmentally Preferable Purchasing Ordinance (Formerly Precautionary Purchasing Ordinance)	Requires City Departments to purchase products on the Approved Green Products List, maintained by the Department of the Environment. The items in the Approved Green Products List has been tested by San Francisco City Depts. and meet standards that are more rigorous than ecolabels in protecting our health and environment.	☒ Project Complies ☐ Not Applicable ☐ Project Does Not Comply	All City Departments, including the SFRPD, meet these purchasing requirements. The proposed project does not involve purchase of product types included on the Green Products List.

	Requirement	Project Compliance	Discussion
Tropical Hardwood and Virgin Redwood Ban (Environment Code, Chapter 8)	The ordinance prohibits City departments from procuring, or engaging in contracts that would use the ordinance-listed tropical hardwoods and virgin redwood.	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not involve constructing or renovating buildings. Therefore, this ban is not applicable to the proposed project.
Wood Burning Fireplace Ordinance (San Francisco Building Code, Chapter 31, Section 3102.8)	Bans the installation of wood burning fire places except for the following: • Pellet-fueled wood heater • EPA approved wood heater • Wood heater approved by the Northern Sonoma Air Pollution Control District	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not involve installation of fireplaces. Therefore, this ordinance is not applicable to the proposed project.
Regulation of Diesel Backup Generators (San Francisco Health Code, Article 30)	Requires: All diesel generators to be registered with the Department of Public Health All new diesel generators must be equipped with the best available air emissions control technology.	☐ Project Complies ☒ Not Applicable ☐ Project Does Not Comply	The proposed project does not include a diesel generator. Therefore, this regulation is not applicable to the proposed project.

Summary of Department Climate Action Plan: For municipal projects only, provide a summary for the respective Department's Climate Action Plan as a separate attachment.

Summary of Department Climate Action Plan: ☒ Included ☐ Not Included

In the San Francisco Recreation and Park Department's climate action plans, the SFRPD actions to reduce operational greenhouse gas emissions toward the City's goal of an 80 percent reduction by 2050 include the following:

- Energy Efficiency and Conservation: The SFRPD is working with the Energy Efficiency Services of the San Francisco Public Utilities Commission (SFPUC) to reduce energy use through the selection of operational equipment such as electrical fixtures and sprinkler heads, design standards enforcement, and use of the San Francisco Greening Checklist for exterior spaces.
- Renewable Energy Generation: The SFRPD is working with the SFPUC to assess its facilities' solar potential and identify potential co-generation sites.

- Information Technology (IT): IT energy conservation measures include power management tools for all personal computers and monitors. The SFRPD plan includes full compliance by the third quarter of fiscal year 2010 with the City's adopted policy of the Committee on Information Technology (COIT).
- Green Building: The SFRPD plan includes compliance with the City's Environmental Code to achieve Leadership in Energy and Environmental Design (LEED®) certification.
- Fleets and Fuel: The SFRPD has identified specific plans to retire older vehicles to achieve fuel savings, maintenance cost savings, and lower residual costs for older vehicles. Further, the SFRPD only purchases clean light-duty passenger cars and trucks.
- Employee Commute: The SFRPD plan includes measures to reduce vehicle trips traveled by promoting alternative transportation incentives to its employees.
- Zero Waste: The SFRPD is close to realizing its goal of 100 percent compliance with the City's recycling initiative.
- Green Product Purchasing: The SFRPD uses the City's Approved Catalog to purchase environmentally conscious products.
- Carbon Sequestration: The SFRPD promotes the City's urban forestry program through tree planting campaigns and supports other City departments in their participation in the urban forest program.
- Community Wide Emissions: The SFRPD actions include providing community support to reduce greenhouse gas emissions through programs related to recycling, biodiversity, bicycling, and community education. To encourage recycling, the SFRPD is currently posting signs at all facilities to educate users on the importance of recycling and directing them on where to place their recyclables. For biodiversity, the NAP and SFRPD volunteer programs maintain and enhance natural biodiversity at many of SFRPD's park sites. Related to bicycling, the SFRPD will promote bicycling to and within SFRPD facilities by installing bike parking racks and SF Bicycle Route maps at all facilities and by providing bicycle access and program information on the SFRPD website and other publications. The community education efforts include holding recycling education seminars at SFRPD recreation facilities.

APPENDIX

Laguna Salada Conceptual Restoration Plan

Sharp Park Conceptual Restoration Alternatives Report







November 2009

Prepared for:

San Francisco Recreation and Parks Department
McLaren Lodge Annex, 501 Stanyan Street
San Francisco, CA 94117

Prepared by:

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Nickels Golf Group
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Sharp Park Conceptual Restoration Plan
Executive Summary

BACKGROUND

Sharp Park is a 417-acre multiple use facility owned and maintained by the City of San Francisco, Recreation and Parks Department (SFRPD), and located in Pacifica, CA. One of the park's most prominent natural features is a wetland complex located at the west end of the park. The wetland complex consists of a lagoon (Laguna Salada), a pond (Horse Stable Pond), and a channel that connects the two bodies of water. The US Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) have identified the wetland complex at Sharp Park as important habitat for the endangered and fully protected San Francisco garter snake (SFGS) *(Thamnophis sirtalis tetrataenia)* and the California red-legged frog (CRLF) *(Rana draytonii)*. Habitat quality for the SFGS and CRLF in the wetland complex has been steadily diminishing for several reasons, including sedimentation, reduced open water habitat, overgrowth of emergent wetland plant communities, and lack of adjacent upland habitat.

PURPOSE

Both the USFWS and CDFG have recommended that SFRPD develop recovery actions to ensure the continued survival of populations of the SFGS and CRLF in Sharp Park. The purpose of preparing this conceptual plan is to develop and evaluate various alternatives for restoring SFGS and CRLF habitat within the wetland complex, the area surrounding the wetland complex, and the entire golf course area. The primary goal of each conceptual alternative was to propose an effective way of increasing upland habitat adjacent to existing or proposed wetland habitat, to restore the quality of existing wetland habitat, and to evaluate and respond to the changes such actions would require of the existing golf course design and operation.

METHODS

Studies were performed to assess the presence or absence of the SFGS and CRLF, and to evaluate the quality of their habitat within the wetland complex. These studies are reported in Appendix C of the conceptual planning report. Hydrologists prepared studies to assess the hydrological features of the wetland complex and to assist in making restoration recommendations (Appendix A). A golf course designer prepared various realignment options for the 18-hole and 9-hole alternatives and worked with the restoration planners to accommodate needed habitat expansion areas. A local engineering firm prepared topographic and bathymetric maps of the wetland complex and surrounding area.

The information in these studies was used to define the problem and develop measures to enhance the quality of habitat for the SFGS and CRLF, to reduce the potential that these species would be harmed by golf course practices or by other park users, and to assess the differences in habitat value between an 18-hole golf course, a 9-hole golf course, and golf course closure.

ALTERNATIVES

The common component of all alternatives is restoration of the wetland complex. Under all alternatives, similar features are proposed to restore wetland habitat and reduce the potential for recurrence of the problems that now occur, which include sedimentation, eutrophication due to dead and decaying vegetation, loss of open water habitat, and flooding of fairways. Implementing the restoration actions below would accomplish the main goal of the project, which is to enhance CRLF and SGFS habitat.

- **Dredging to remove sediment and decaying vegetation**. The areas that are currently open water within the lagoon would be deepened by up to 2 feet, and open water areas within the pond by up to 3 feet.
- **Recontouring the shoreline to create shallow water habitat**. The eastern edge of the lagoon, the edges of the connecting channel, and the north and south edges of the pond would be contoured to create shallow water habitat (1-3' deep) to allow for CRLF breeding habitat.
- **Creation of an upland peninsula.** A peninsula of approximately 2 acres will be created in the middle of the lagoon to create additional upland habitat for the SFGS and shallow water habitat for the CRLF.
- **Construction of upland mounds**. Upland mounds will be created on the east and south sides of the lagoon and in the dispersal corridor between the lagoon and the pond.
- **Pump Operations.** Altering the methods of operating pumps and other measures to control hydrological features is proposed under all alternatives.
- **Upland/Aquatic linkage and habitat segment.** A habitat linkage area between the lagoon and the pond would be constructed with native upland vegetation and mounds designed to allow SFGS movement and resting between the lagoon and the pond.
- **Completion of a Compliance Plan.** SFRPD has completed a compliance plan that is designed to avoid mortality and injury of SFGS and CRLFs resulting from maintenance and operations of the golf course (SFRPD 2009).
- **Closure of Hole 12.** Hole 12 would be closed under all alternatives to allow for creation of an upland habitat corridor between the lagoon and the pond/Mori Point area.
- **Catchment Basins**. To slow the rate of sedimentation from upstream sources, sediment catchment basins would be installed in two locations, one near the mouth of Sanchez Creek and the other on City of Pacifica property just outside the northern boundary of the Sharp Park.
- **Fencing**. All alternatives include installation of a post and rail fence along the seawall to the west of the lagoon, according to the Draft Compliance Plan. The wetland complex would also be fenced to discourage intrusion by humans or domestic animals, although the configuration of the fence may vary according to the alternative.
- **Revegetation**. Uplands, wetland, and shallow aquatic areas would be revegetated with an appropriate mix of native plant species.

DESCRIPTION OF ALTERNATIVES

Alternative A18

This alternative is intended to fulfill the recovery goals for the snake and frog while maintaining as much of the current golf course configuration as possible. In addition to the measures described above, Holes 10 and 13 would be slightly shortened and/or narrowed, and a new hole would be created near the rifle range/ archery course east of Highway 1. The area on the west side of the lagoon would be restored from its degraded condition to native upland habitat. Portions of the fairways in holes 10, 14 and 15 would be raised to 10.0' NAVD 88 from their current elevation of between 6.5' and 9.0', and hole 18 would be raised to allow a 2% slope relative to hole 14. In addition to the restoration of the entire wetland complex, this alternative would result in restoration or creation of 10.7 acres of California red-legged frog breeding / San Francisco garter snake primary foraging habitat and 23.4 acres of San Francisco garter snake upland basking / retreat habitat, all of which would be found either adjacent to the wetland complex or between the pond and the lagoon. Estimated construction costs for this alternative range from $5.9M (all excavated materials reused onsite) to $11.3M (all excavated materials hauled offsite).

Alternative A-9

This alternative is intended as a compromise between golf considerations and expanded upland areas east of the main body of the lagoon, and to increase opportunities for recreational pursuits other than golf. In addition to implementing the measures common to all alternatives, all holes bordering the wetland complex would be closed and restored to coastal scrub/shrub habitat. Three holes (1, 8, and 9) would remain west of Highway 1, along with a driving range and teaching area, and two new holes would be constructed at the rifle range. All existing holes east of Highway 1 would remain in their current location. In addition to the restoration of the entire wetland complex, this alternative would result in restoration or creation of 10.7 acres of California red-legged frog breeding / San Francisco garter snake primary foraging habitat and 44.3 acres of San Francisco garter snake upland basking / retreat habitat, much of which would be constructed at a greater distance from the wetland complex than the upland habitat restored under Alternative A18. Estimated costs for this alternative range from $7.8M (all excavated materials reused onsite) to $15.6M (all excavated materials hauled offsite).

No Golf Alternative (Alternative A-0)

This alternative was developed with the goal of maximizing the amount of available upland habitat for the snake and frog in the absence of golf operations. Because the lack of suitable upland habitat was identified as the limiting factor for the snake, the golf areas would be converted into uplands. Enhancements to wetland areas in lower Sanchez Creek and the wetland complex would be identical to those in Alternatives A18 and A9. Water from Sanchez Creek would be captured in two shallow ponds to provide additional breeding habitat for the CRLF. In addition to the restoration of the entire wetland complex, this alternative would result in restoration or creation of 11.3 acres of California red-legged frog breeding / San Francisco garter snake primary foraging habitat and 97.4 acres of San Francisco garter snake upland basking / retreat habitat, much of which would be constructed at a greater distance from the wetland complex than the upland habitat restored under Alternatives A18 or A9. Estimated costs for this alternative range from $9.0M (all excavated materials reused onsite) to $22.2M (all excavated materials hauled offsite).

FINDINGS AND CONCLUSIONS

Habitat requirements of the SFGS vary throughout the year, and include foraging habitat and nearby upland retreats located in underground burrows and soil crevices, typically located in a grassland-shrub community. Upland habitat for this species at Sharp Park is restricted to a small area south of Horse Stable Pond. The lack of suitable upland habitat is therefore a primary limiting factor in ensuring the persistence of the SFGS at Sharp Park. The SFGS population may have also been affected by wave overwash, collecting, predation, and golf course maintenance practices.

The CRLF usually occurs in or near quiet permanent water of streams, marshes, ponds, and lakes, in habitats characterized by dense, shrubby riparian vegetation. The primary limiting factor for the CRLF in the Sharp Park wetland complex is a vegetation structure that is not conducive to successful breeding and/or recruitment of larval stages into the adult population. The dense emergent vegetation found in the lagoon and pond combined with little remaining open water offers poor habitat for the survival of egg masses or tadpoles.

With no action, the future of SFGS at Sharp Park is, at best, uncertain. Although historically SFGS have existed at Sharp Park while it functioned as a golf course, conditions of the wetland and adjacent uplands are far less favorable than in the past. Though beneficial, increasing CRLF breeding habitat alone will not increase the distribution and carrying capacity of the SFGS, due to the limited availability of upland habitat in Sharp Park. Increasing SFGS use of the area north of Horse Stable Pond, the areas adjacent to Laguna Salada, and the connecting canal will require maintaining undisturbed upland habitat in and between these areas. These enhancements can be accomplished without significant changes to the golf course design or to the movement of golfers on the course.

All three alternatives will achieve the habitat goals. The main differences between the various alternatives are the degree of upland habitat that would be created east of the wetland complex, the costs to implement the respective alternatives, and the tradeoff between the amount of habitat and the degree to which golf opportunities are lost. Implementing Alternative A-18 would be the least costly alternative, would result in the least impact to golf, and would restore the least amount of upland habitat. Implementing Alternative A-9 would cost more and restore more upland habitat than Alternative A-18 but would cost less and restore less upland habitat than the No Golf Alternative. Implementing the No Golf Alternative would have the highest costs, would result in the greatest impact to golf, and would restore the greatest amount of upland habitat of the three alternatives. However, because the best upland habitat for the SFGS is that which is found near water bodies, much of the upland habitat located east of the wetland complex would be of lower value than that located immediately adjacent to the wetland complex. Therefore, from a habitat restoration standpoint, converting uplands immediately adjacent to the wetland areas would result in the greatest net benefit to the SFGS per acre of enhanced habitat. Focusing restoration efforts on these areas also would result in the least amount of lost golf opportunities since more distant habitat would remain available for golf.

Although the value of the habitat gained through the No Golf Alternative would diminish with increasing distance from the wetland complex, the cost of restoring this habitat would not. Considering that there are limited funds available for a myriad of restoration projects in the Bay Area, extra money that would be required to restore habitat further from the wetland complex may be better spent elsewhere. Furthermore, because of the close proximity of Sharp Park to urban features including housing, highways, major roads, and businesses and the intrinsic threats posed by them to the SFGS, more extensive upland restoration carries its own risks. Restoring uplands and locating

additional wetland further to the east of the wetland complex would potentially increase the chance of take of this species by drawing the SFGS away from the relatively protected existing wetland complex into areas that would likely be extensively used by hikers, mountain bikers, and dog walkers. Finally, in the event of a seawall breach or overtopping of the seawall by storm surge, it is the connection to upland habitat at Mori Point, rather than restored golf areas east of the lagoon, that will be of critical importance to the SFGS. This fundamental aspect is met by all alternatives.

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LIST OF ACRONYMS

California Department of Fish and Game	(CDFG)
California Red Legged Frog	(CRLF)
California Environmental Quality Act	(CEQA)
City of San Francisco, Recreation and Parks Department	(SFRPD)
Clean Water Act	(CWA)
Endangered Species Act	(ESA)
Environmental Impact Report	(EIR)
Golden Gate National Recreation Area	(GGNRA)
Kamman Hydrology and Engineering, Inc.	(KHE)
National Wetland Inventory	(NWI)
Nationwide Permit	(NWP)
Phil Williams and Associates et al.	(PWA)
Regional Water Quality Control Board	(RWQCB)
San Francisco Garter Snake	(SFGS)
San Francisco Recreation and Parks Department	(SFRPD)
Significant Natural Resource Areas Management Plan	(SNRAMP)
Significant Natural Resource Areas Program	(SNRAP)
Swaim Biological, Inc.	(SBI)
US Army Corps of Engineers	(USACE)
US Fish and Wildlife Service	(USFWS)

1. INTRODUCTION

Sharp Park is a 417-acre multiple use facility owned and maintained by the City of San Francisco, Recreation and Parks Department (SFRPD). Its main use is as an 18-hole golf course, of which 14 holes are on the west side of Highway 1, and 4 holes are east of Highway 1. Sharp Park also offers an archery course, opportunities for bird watching, and walking and cycling on the seawall that is found on the west side of the park. Sharp Park is located in San Mateo County near the City of Pacifica, California (Figure 1).

One of the most significant features of Sharp Park is a wetland complex at the west end of the park. The wetland complex consists of Laguna Salada, Horse Stable Pond, and a channel about 1,000 feet long that connects the two water bodies (Figure 2). Laguna Salada (the lagoon) is a large freshwater lagoon of approximately 27 acres which offers open water and marsh habitat for numerous wildlife species. Horse Stable Pond (the pond) is smaller than the lagoon but still offers viable wildlife habitat. Although the connecting channel is shallower than the lagoon and the pond and is overgrown with emergent vegetation, it still offers a viable aquatic corridor between the pond and lagoon under most conditions.

The US Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) have identified the wetland complex at Sharp Park as important habitat for the endangered and fully protected San Francisco garter snake (SFGS) *(Thamnophis sirtalis tetrataenia)* and the California red-legged frog (CRLF) *(Rana draytonii)*. Although historically these species have existed at Sharp Park while it functioned as a golf course, conditions of the wetlands and adjacent uplands are far less favorable in than in the past. Both agencies have recommended that SFRPD enhance habitat conditions in and around the wetland to ensure the viability of the population of the populations of these species that are found there, and take measures to reduce the possibility of harm to these species (referred to as "take").

This conceptual plan was originally conceived to serve as a template to restore the wetland complex and immediate upland area as part of a recovery action recommended by CDFG and USFWS. In response to later events, the scope of this plan was increased to encompass restoration alternatives throughout the park, focusing mainly on the wetland complex and on those areas used for golf. Ultimately, 3 restoration alternatives were developed, including an 18-hole alternative, a 9-hole alternative, and a No Golf Alternative, under which the entire golf course would be closed and restored to native habitat.

The primary goal of each conceptual alternative was to propose an effective way of increasing upland habitat adjacent to existing or future aquatic habitat, to restore the quality of the wetlands, and to evaluate and respond to the consequences of such a change to the existing golf course design and operation. The objectives of this conceptual restoration plan are to describe the existing resources, develop possible restoration alternatives, assess the extent to which each alternative could increase the value and extent of habitat for the SFGS and CRLF, to give an estimate of construction costs for each alternative, and to describe the process that would need to occur to partially or completely restore the wetland complex and golf areas. Changes in mowing, golf operations, and maintenance practices that are intended to reduce the chance of take of listed species were addressed as part of a separate compliance plan completed by SFRPD in 2009.

The wetland restoration components are similar across all alternatives, but the degree of upland restoration varies considerably for each alternative. The primary components of the restoration plan are as follows:

> **Dredging.** Much of the wetland complex would be dredged to remove accumulated sediments and biomass. Dredging various parts of the wetland and open water areas will inhibit the growth of the type of emergent vegetation that now fills in the wetland complex. Dredging plans will be designed to maximize foraging and breeding habitat for the SFGS and CRLF, while minimizing future maintenance requirements, resulting in lower costs to the City as well as reduced habitat disturbance in the future. Dredge spoils will be reused onsite to the degree possible.



Project Location

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 1

TETRA TECH

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Sharp Park General Features

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 2

TETRA TECH

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Habitat Conversion The main limiting factor in terms of habitat for the SFGS is lack of suitable upland habitat immediately adjacent to the lagoon. The SFGS needs basking and resting habitat, with escape cover (vegetation) and burrows for retreat from daily thermal extremes, at or near its main foraging habitat, which is found where frogs congregate. All alternatives call for converting some areas of the golf course and the existing wetlands to upland habitat needed by the SFGS for basking and resting, and allowance for development of rodent burrow complexes in appropriate locations. The main objective would be to establish a habitat linkage for SFGS between the lagoon and the pond and adjacent upland areas at Mori Point, located south of the wetlands complex. Wetlands that are converted to uplands during this process would be replaced onsite.

Public access to sensitive wetland and upland areas would be controlled by installation of a post and rail fence, but would also be enhanced under some alternatives by creation of a walking trail around all or part of the lagoon, a boardwalk over wetlands and uplands between the lagoon and the pond, and interpretive signs or kiosks at various vantage points. Restoring an upland peninsula in the center of the lagoon will increase valuable edge and shallow water habitat over current conditions.

As the public agency charged with providing and maintaining recreational facilities for the City of San Francisco, SFRPD balances resource management with recreational concerns. To help meet this goal, SFRPD created the Significant Natural Resource Areas Program (SNRAP). The SNRAP manages 31 natural areas, 30 of which are within the City of San Francisco and one (the wetland complex at Sharp Park) in Pacifica. The mission of this program is to preserve, restore, and enhance the Natural Areas and promote environmental stewardship of these areas.

Under this program, the wetland complex is being and will be managed and protected for the natural and human values it provides. Therefore, every effort has been made to develop a conceptual plan that would maintain and restore viable, high-value habitat for the SFGS and CRLF while retaining as many recreational features as possible. Management planning for the wetland complex and all other Natural Areas managed under this program is detailed in the Significant Natural Resource Areas Management Plan (SNARMP, SFRPD 2006). The plan is intended to guide natural resource protection, habitat restoration, trail and access improvements, and maintenance activities over the next 20 years.

SFRPD is in the process of preparing an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) to assess the potential effects of implementing the SNARMP. Assessing the environmental, cultural, recreational, and economic effects of implementing the recommended wetland restoration actions within the natural areas at Sharp Park will be an integral part of the EIR. Consideration of actions proposed outside of the natural areas would occur during separate CEQA documentation.

1.1 PREPARATION OF THE CONCEPTUAL PLAN

This conceptual plan was created as a collaborative effort between SFRPD, Swaim Biological, Nickels Golf, and Tetra Tech, Inc. Public agencies including California Department of Fish and Game and US Fish and Wildlife Service were involved from the earliest phases of the project, and assisted with setting the goals of the project. Staff from the Golden Gate National Recreation Area (GGNRA) and the City of Pacifica added local knowledge and planning assistance during the conceptual planning process.

Tetra Tech is an environmental consulting firm with staff that specialize in preparation of natural resource management plans and wetland restoration plans. For this project, Tetra Tech is assisting SFRPD with project management, restoration design, engineering and cost estimating, assessment of general biological resources, and regulatory compliance and permitting. Tetra Tech's team includes Swaim Biological, who surveyed the wetland complex area for the presence of SFGS and CRLF and their habitat, and assisted in

preparing recommendations for restoration of habitat; Kamman Hydrology, who assessed and reported the hydrological features of the park, and provided recommendations for various restoration alternatives; and Nickels Golf Group, who prepared the golf course realignment alternatives. A local engineering firm was hired to prepare a topographical map of the wetland complex.

As part of the preparation of this conceptual plan, studies were completed to document topographic and hydrologic conditions and to determine the extent to which the marsh complex and surrounding areas are used by the snake and the frog during their lifecycle. At the same time, a golf course designer prepared a number of alternative golf course alignments that could be implemented to adjust the amount of available habitat while maintaining an attractive and challenging golf environment. A wetland delineation was conducted to determine the extent to which wetlands or other waters of the US under the jurisdiction of the US Army Corps of Engineers are found in the project area.

The information in these studies was used to develop measures to increase or maintain the amount and quality of habitat for the SFGS and CRLF, to reduce the potential that these species would be harmed by golf course practices or by other park users, and to assess the differences in habitat value between an 18-hole golf course, a 9-hole golf course, and golf course closure. One 18-hole alternative (Alternative A18) and one 9-hole alternative (Alternative A9) were brought forward for assessment. A single alternative (the No Golf Alternative) was also developed to assess closing the golf course and converting the fairways to upland habitat. The alternatives are described in detail in Section 4.

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2. HISTORICAL CONDITIONS

Prior to the development of the Sharp Park Golf Course beginning in the 1920s, the Laguna Salada site was characterized by ranch lands, sand dunes, and a large lagoon (PWA 1992). Although it is likely that some freshwater wetlands existed behind the dunes, the common name of Laguna Salada (Salty Lagoon) suggests that the lagoon was formerly brackish to saline. In one of the early photographs of the region, a small channel that connected the lagoon with the Pacific Ocean can be seen, along with a shoreline of relatively low relief.

A direct hydrologic connection between the lagoon and the ocean was eliminated with the construction of the golf course and the seawall. To avoid flooding the golf course, tidal exchange was eliminated and runoff from the watershed has been pumped into the ocean from a location at the pond since 1941. The elimination of saline water allowed the establishment of saline-intolerant vegetation such as cypress, grasses, and shrubs for bank stabilization and landscaping purposes. However, salts in bottom sediments persist and make the lagoon and the pond slightly saline, a condition which increases as water levels decline throughout the drought period (Kamman 2009). An abandoned gravity flow outlet which was once used to convey overflow from the pond to the ocean is still in place, but the outboard end is covered by several feet of sand. It is possible that small amounts of seawater enter the pond through this pipe during very high tides.

Considerable shoreline erosion has occurred along the Laguna Salada shoreline since completion of the Sharp Park Golf Course in 1932. This unarmored earthen seawall was constructed between 1941 and 1952 to prevent waves from overtopping the shoreline and damaging the golf course (PWA 1992). This embankment was repeatedly breached by storm waves, allowing the former natural process of wave overwash to occur and damage fairway landscaping.

The most severe erosion occurred in 1983 when most of the embankment was eroded and wave overwash carried sand onto the golf course fairways and into the lagoon. It was estimated that nearly half of the 200-300 feet of shoreline lost between 1931 and 1984 occurred between 1978 and 1984, and largely due to the 1983 event (PWA 1992). The seawall was rebuilt after this event, and is being assessed by geotechnical experts under separate contract with SFRPD.

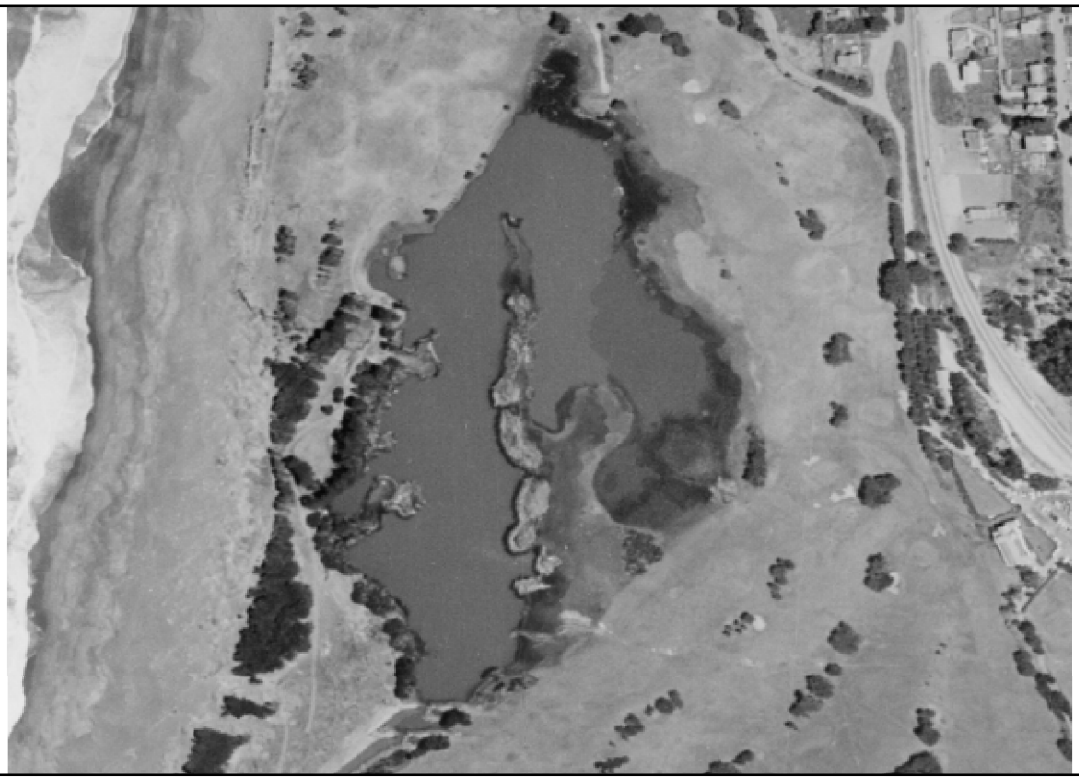
Flooding of the golf course has been a recurrent problem since the 1940s. In 1958, most of the golf course was submerged by a combination of wave overwash and storm inflows. In addition to damaging the golf course, increased salinity due to overwash may have been lethal to the CRLF and may have resulted in a near lack of SFGS prey during periods when the lagoon was too saline. A pump system was installed in 1941 to control the water level in the lagoon by pumping runoff to the ocean. Since the 1940s, the pump system has been augmented to pump up to 11,500 gallons per minute (GPM). Simulated storm models (Appendix A) show that this capacity is exceeded by rainfall events at or greater than 2-year recurrence intervals.

A defunct gravity flow drain is located at the pond, but currently does not function to remove stormwater. Reconstructing this drain would involve placing a new pipe through the seawall, over or through the beach on concrete footings placed on bedrock, and extending far enough into the surf to ensure that the outlet would not become buried in sand. Estimated costs for rebuilding this feature are between $400-800k. Rebuilding this structure would help to alleviate some of the flooding problems that are attributed to pump limitations.

The presence of the SFGS at Laguna Salada was documented as early as 1946 (Fox 1951). Although the CRLF was not considered rare at the time, their presence was also documented in 1946 as one was present in the stomach contents of an SFGS at the lagoon (Wade Fox, unpublished field notes). Comparing recent survey reports (Swaim, 2004 and 2008) to earlier reports (Fox 1951) indicates that the population of SFGS at Laguna Salada and likely at Horse Stable Pond has declined since early records of the presence and abundance of this species were recorded in 1946. This may be due to many factors including the sedimentation of the

lagoon, the conversion of upland habitat surrounding the exterior of the lagoon to golf fairways and greens, and illegal collecting of the species until listing in 1973. Barry (1978) suggested illegal collecting was one of the main factors in the decline of SFGS there, based on his interviews with reptile dealers. Field notes maintained by Wade Fox and obtained from the Museum of Vertebrate Zoology indicated that as early as 1946, the lack of upland habitat for SFGS was apparent. However, conditions were still such that Fox collected 44 specimens of SFGS at the lagoon over 1946 and 1947, over 15 years after the golf course was built and operating. In 1979, 37 SFGS were located in the wetland area adjacent to Horse Stable Pond and 46 in the Mori Point "bowl area" (Barry 1979). This indicates that at that time, the wetland complex, primarily Horse Stable Pond, was still supporting a relatively abundant population of SFGS. It was not until after the 1983 storms that a precipitous decline in SFGS in the Horse Stable Pond and Mori Point area was documented (McGinnis 1986; 1988, 1991, 1997).

Ongoing sedimentation of the lagoon has increased as sediment from the watershed is no longer flushed into the ocean during tidal surges or large storms. Sediment sources include erosion of dirt roads and parking areas, as well as natural input from erosion of Sanchez Creek and lightly vegetated hillsides. This has resulted in a higher bottom elevation of the wetland complex over time, allowing shallow emergent vegetation to spread at the expense of open water. Aerial photographs of the lagoon in 1956 and 2007 show the extent to which the open water part of the lagoon has converted to vegetated wetland (Figure 3).



1956



2005

Aerial Photos From 1956 And 2005

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 3

TETRA TECH

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3. EXISTING CONDITIONS

Assessment of historic aerial photographs of the Laguna Salada area indicates that prior to development of the Sharp Park Golf Course and the seawall located west of the wetland complex, environmental conditions at the project site were representative of a coastal lagoon system. Environmental changes during subsequent decades have modified the hydrologic characteristics of the system by isolating the lagoon and adjacent wetlands from the ocean.

The wetland complex at Sharp Park provides extensive habitat for the SFGS and the CRLF. SFGS habitat quality in the marsh complex is enhanced by its proximity to upland areas at Mori Point, located to the south of the lagoon and pond (Figure 2). The SFGS has been identified at Laguna Salada since at least 1940 (Fox 1951), but the importance of the population that occupies the area has gained more attention in recent years since the successful restoration of SFGS habitat at Mori Point and as other important habitat areas have been reduced in size or value.

Sharp Park's location near several open space areas makes it an important part of the overall distribution of SFGS and CRLF on the San Francisco Peninsula. The Golden Gate National Recreation Area (GGNRA) borders Sharp Park on the southwest and supports SFGS and CRLF. Habitat enhancement projects in 2004, 2005, and 2007 increased the amount of breeding habitat for CRLF and foraging habitat for SFGS at Mori Point. Trapping studies conducted in 2004, 2006, and 2008 have shown that the new ponds are being used by resident SFGS populations (Swaim Biological, Inc. 2008). Additional CRLF habitat is found at Sweeney Ridge, which lies to the east and southeast and provides habitat for the CRLF. SFGS were recently reconfirmed at the north end of San Andreas Reservoir, just east of Sweeney Ridge (SBI 2008 [unpublished]). To the north of Sharp Park, Milagra Ridge in the GGNRA supports CRLF and contains habitat suitable to support SFGS. To the south, beyond Mori Point, the Calera Creek watershed supports a large population of CRLF and also includes potential habitat for the SFGS. Individual SFGS and CRLFs probably move between some or all of these sites, and Sharp Park provides suitable habitat for dispersal and foraging for both species, as well as being a source population for CRLF.

3.1 WATERSHED CHARACTERISTICS

The natural watershed of Sanchez Creek includes 844 acres (1.3 square miles) (PWA 1992). The watershed consists of moderate to steep slopes in the upper watershed (Sweeney-Minchizo soil series) and flatter floodplain terraces (Tunites or Lockwood soil series) near the coast (PWA 1992). Most of the flatter terraces have been developed for residential, road, or golf course use, while most of the upper watershed remains undeveloped. The watershed is drained by Sanchez Creek, which extends approximately 1.7 miles between Horse Stable Pond and the watershed divide. Annual precipitation in the area ranges from about 29.5 inches annually at the coast to 30.5 inches annually at the watershed divide.

3.2 TOPOGRAPHY

Topographic information was reproduced on AutoCAD drawings that reflect the locations of thousands of vertical points taken by a roving, survey-grade GPS. Points were tied to five control points which were checked with a Total Station unit. Points in aquatic areas were taken by surveyors in a boat using a rod and level. In aquatic areas, bathymetry lines were produced at 0.5 foot contour intervals, and topographic lines outside of aquatic areas were produced at 1.0 foot contour intervals (Figure 4). Because the project originally only included the marsh complex and its immediate surroundings, topographic and bathymetric information at these contour intervals is not available beyond these areas. USGS topographic contour maps at 5 foot

contours have been used for other aspects of the conceptual plan, including development of alternative fairway alignments east of Highway 1.

The bathymetric survey determined the range of depths for all the aquatic features at the project site. The aquatic features including Laguna Salada and surrounding wetlands range from 0 to 7.5 feet (NAVD 88). The aquatic features including Horse Stable Pond and surrounding wetlands range from 3 to 9.5 feet (NAVD 88). The open water portion of the connecting channel ranges from 3 to 7 feet (NAVD 88). Cross sections and profile locations are shown in Figure 5, and topography/bathymetry at each cross section and along the profile is depicted in Figures 6-11.

3.3 HYDROLOGY

In combination with topography, the hydrology of the wetland complex creates the physical habitat which supports the vegetation and wildlife resources in this area. Water levels in the wetland complex, which is found in the lowest part of the park, are maintained primarily by groundwater, but are augmented in the rainy season by storm flows. The main components of the hydrologic system are described below.

Laguna Salada

Laguna Salada, the main component of the wetland complex, consists of an open water pond and adjacent emergent wetland occupying about 27 acres. The lagoon has a bottom elevation of between 0 and 2.5 feet, and is up to 7.5 feet deep under normal circumstances.

Horse Stable Pond

Horse Stable Pond, located at the south end of the wetland complex, consists of an open water pond and a freshwater wetland, which extends between the shoreline levee on the west and about 500 feet east to the housing subdivision. The pond is considerably smaller and shallower than the lagoon, with bottom elevations between 3 and 5 feet and typical water depths ranging from 1 to 3 ft.

Horse Stable Pond is fed by Sanchez Creek, which enters from the east, and Laguna Salada, which enters from the north via a connecting channel. Some surface water likely also enters from Mori Point, located to the south.

Connecting Channel

A meandering channel approximately 1,000 ft. long connects the lagoon with the pond and allows for bidirectional flow under all but the lowest water levels. Although the true bottom of this channel is at approximately 3' (NAVD 88), dead and decaying vegetation has raised the functional floor and provides a platform from which rooted emergent grows across most of the channel.

Sanchez Creek

Sanchez Creek is about 1.5 miles long and drains the 844 acre (1.3 sq. mile) watershed. The creek flows under Highway 1 just south of the Fairway Drive exit and is alternately culverted and daylighted across the golf course. Under original conditions, Sanchez Creek was approximately 5-7 feet wide and had a narrow riparian zone on either side.



Topography And Bathymetry

Topography displayed at 1.0' intervals
Bathymetry displayed at 0.5' intervals

Sharp Park Conceptual Restoration Plan

Pacifica, CA

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Figure 4

Legend

Contours

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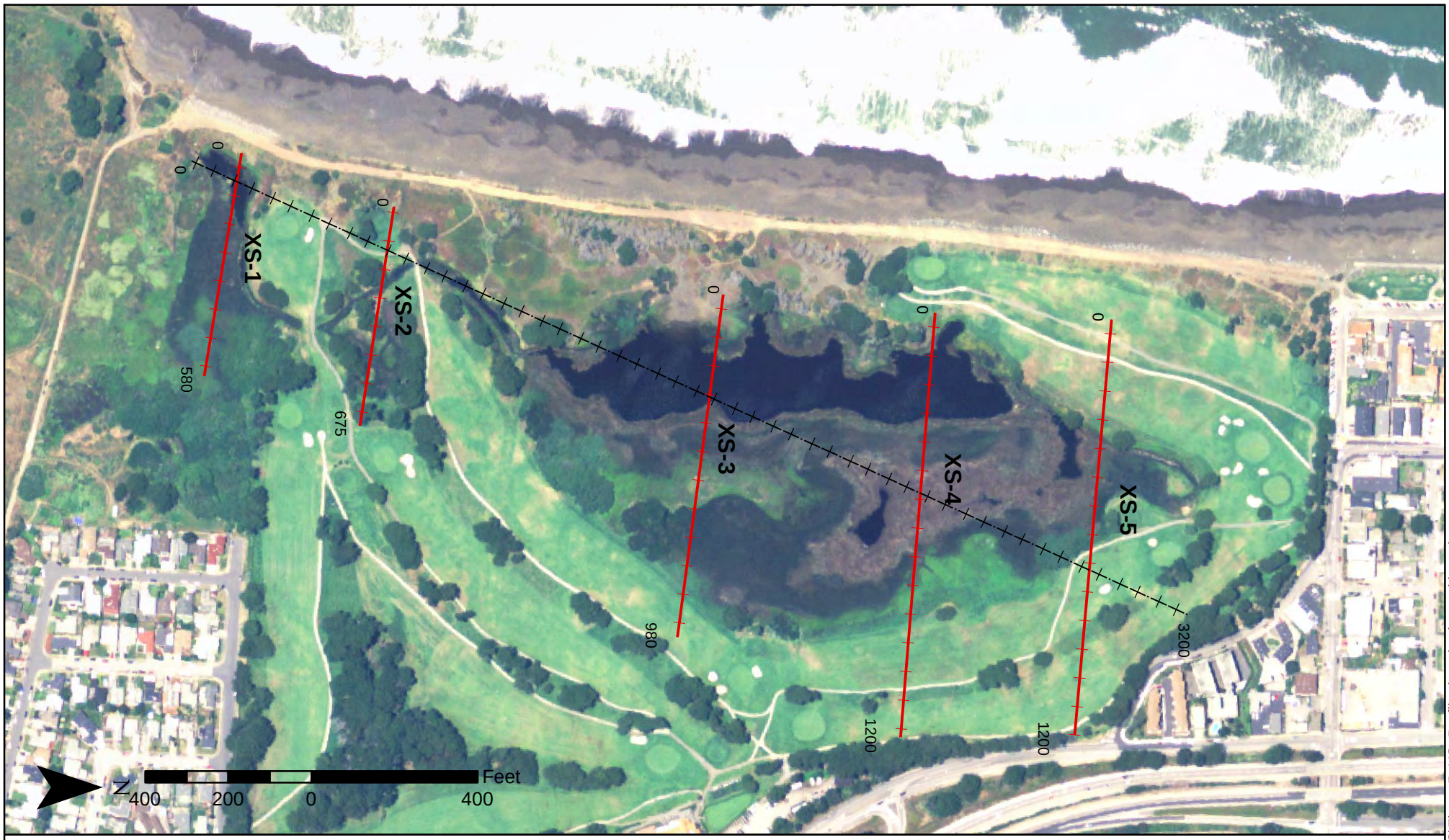

Cross Section And Profile Locations

Figure 5

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Profile
Cross Section

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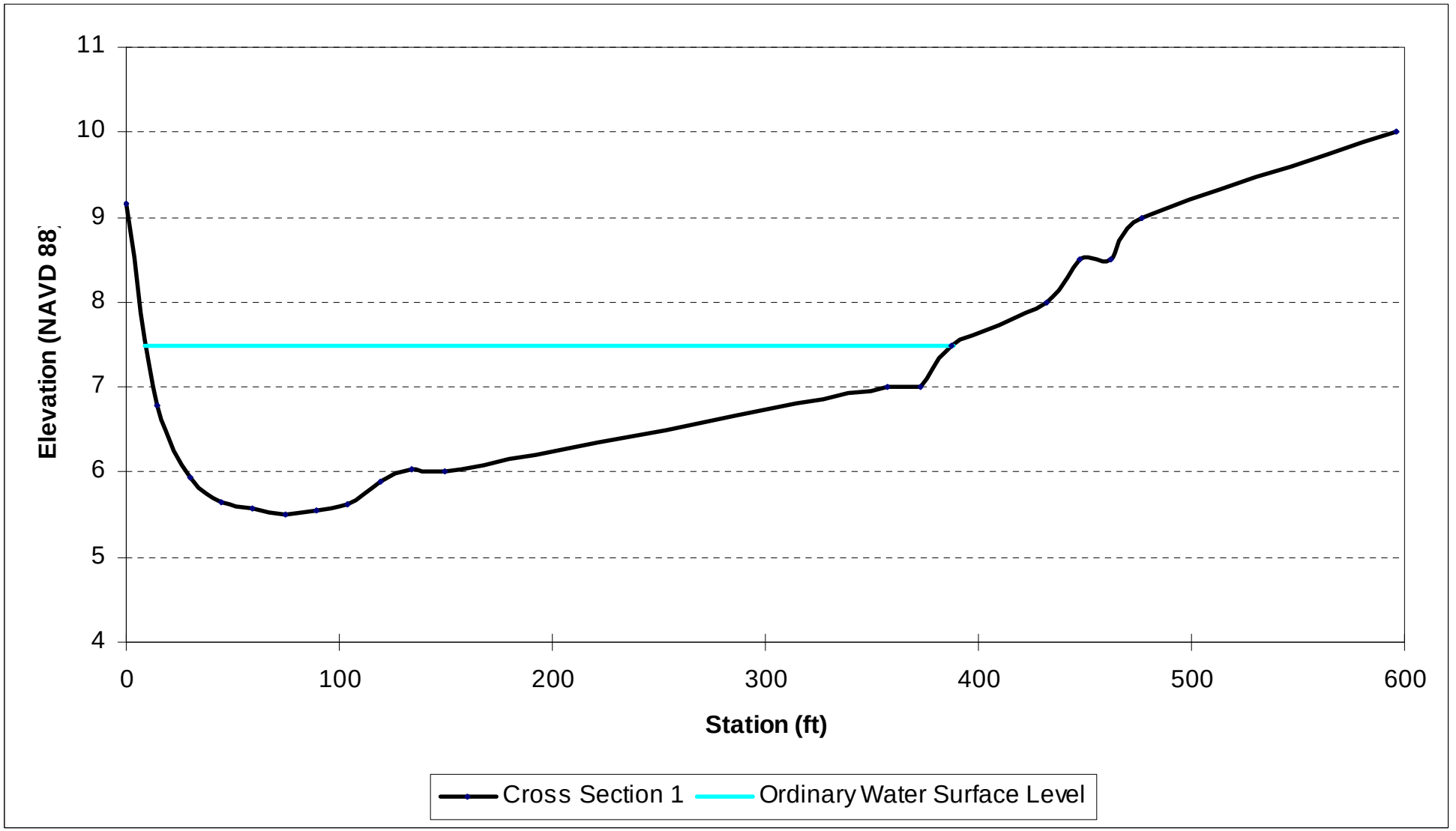

Cross Section 1
(Refer to Figure 5 for cross section locations)

Figure 6

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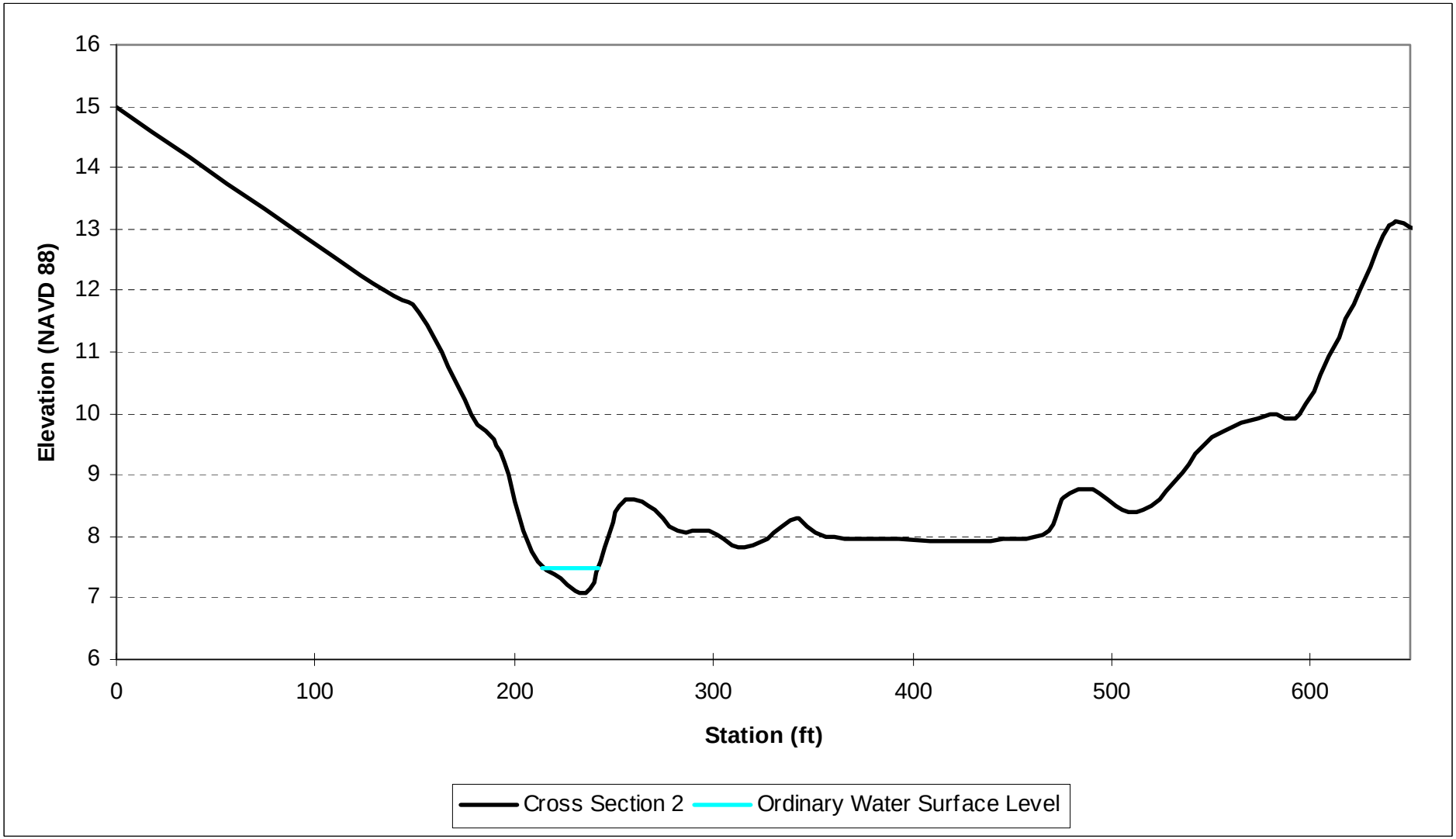

Cross Section 2
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Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 7

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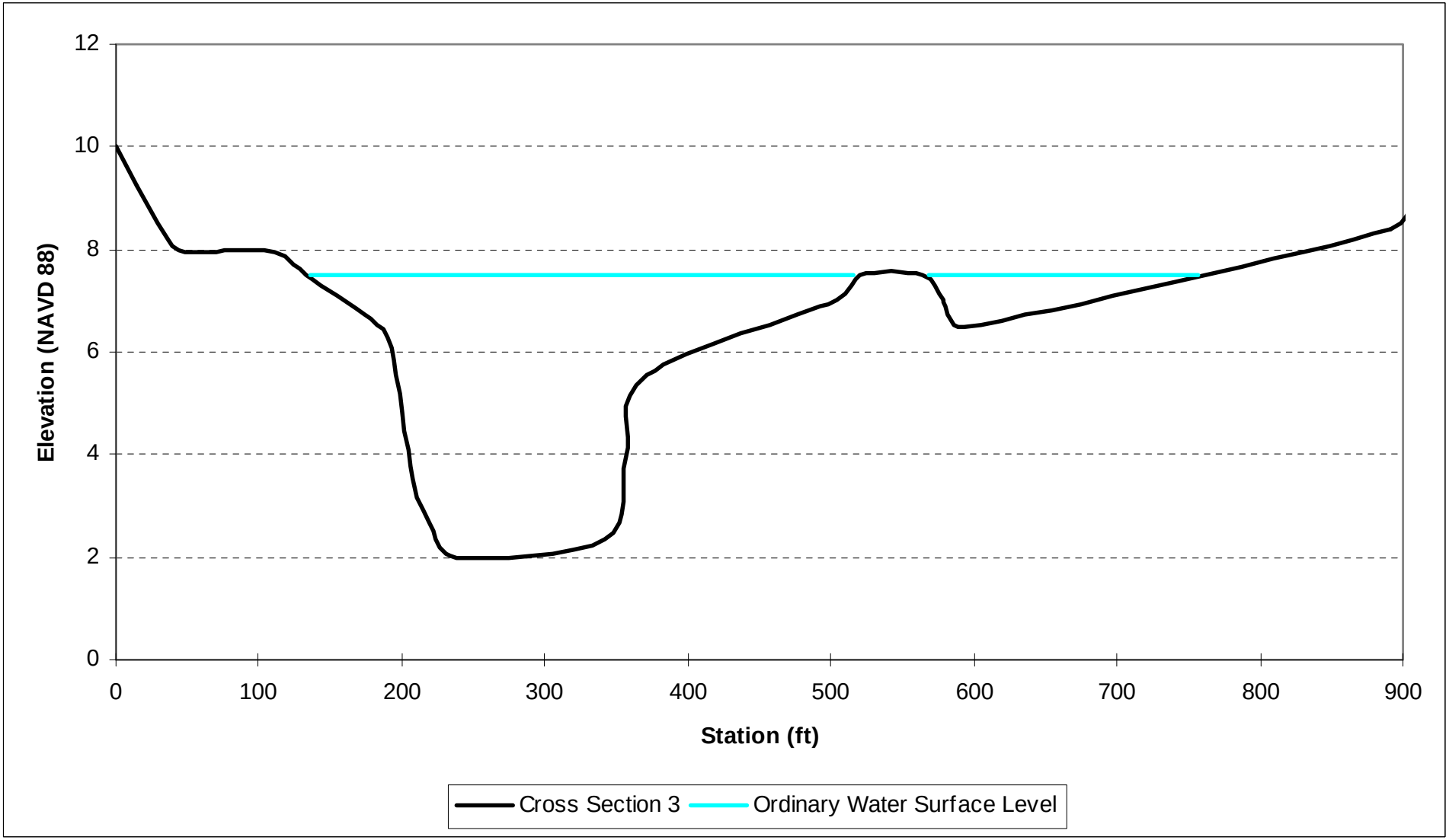

Cross Section 3
(Refer to Figure 5 for cross section locations)

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Figure 8

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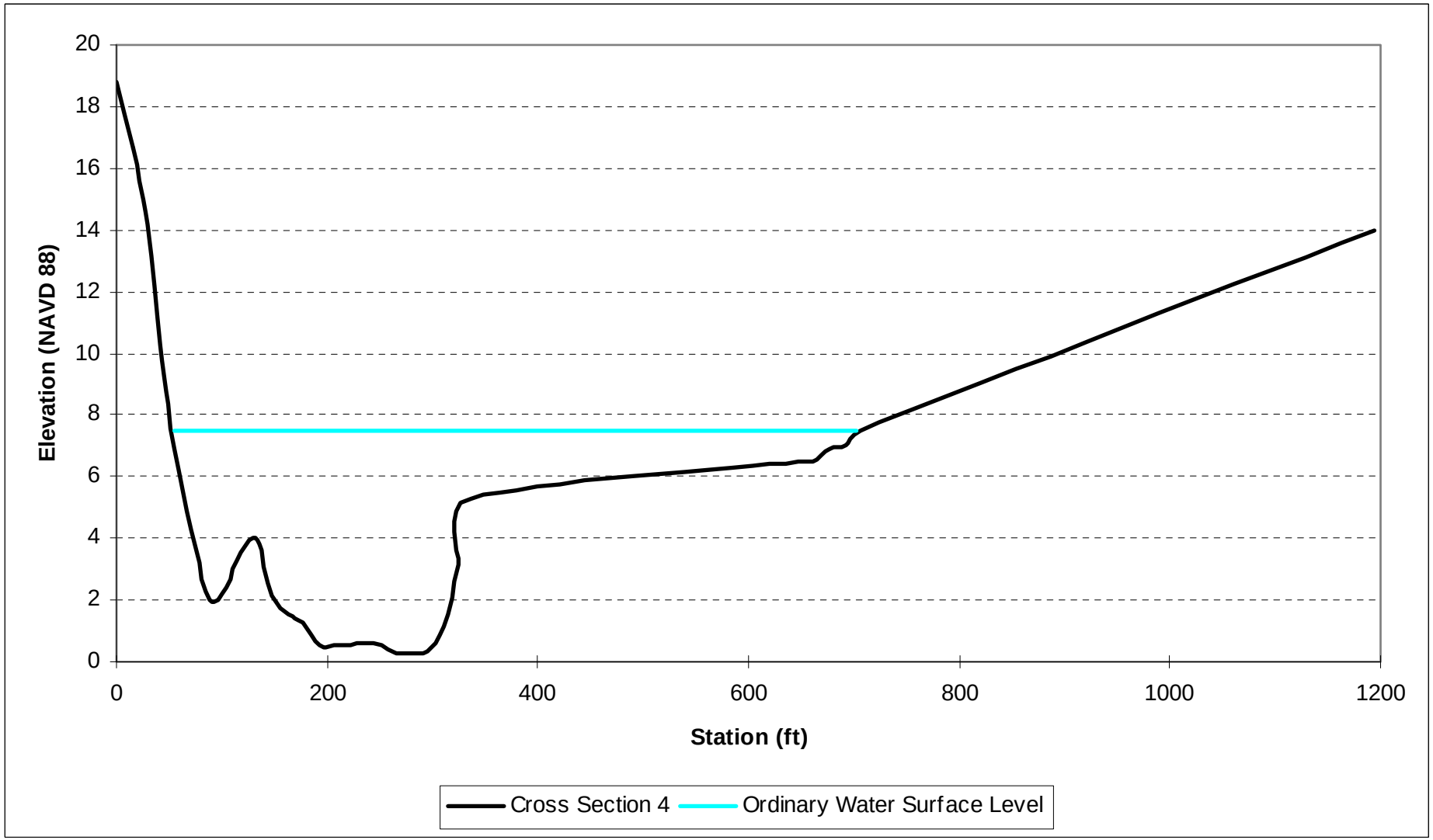

Cross Section 4
(Refer to Figure 5 for cross section locations)

Figure 9

Sharp Park Conceptual Restoration Plan

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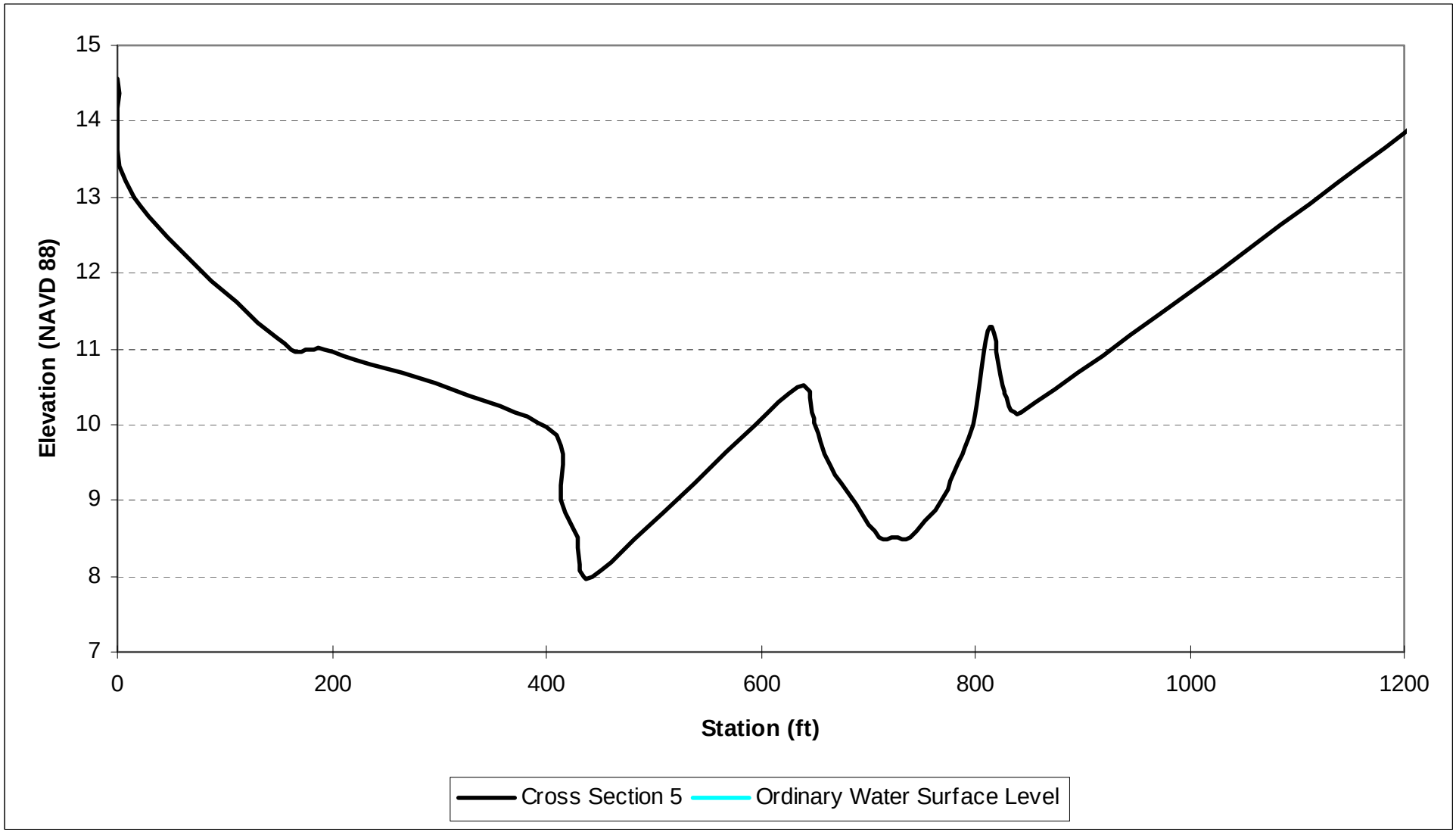

Cross Section 5
(Refer to Figure 5 for cross section locations)

Figure 10

Sharp Park Conceptual Restoration Plan

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TETRA TECH

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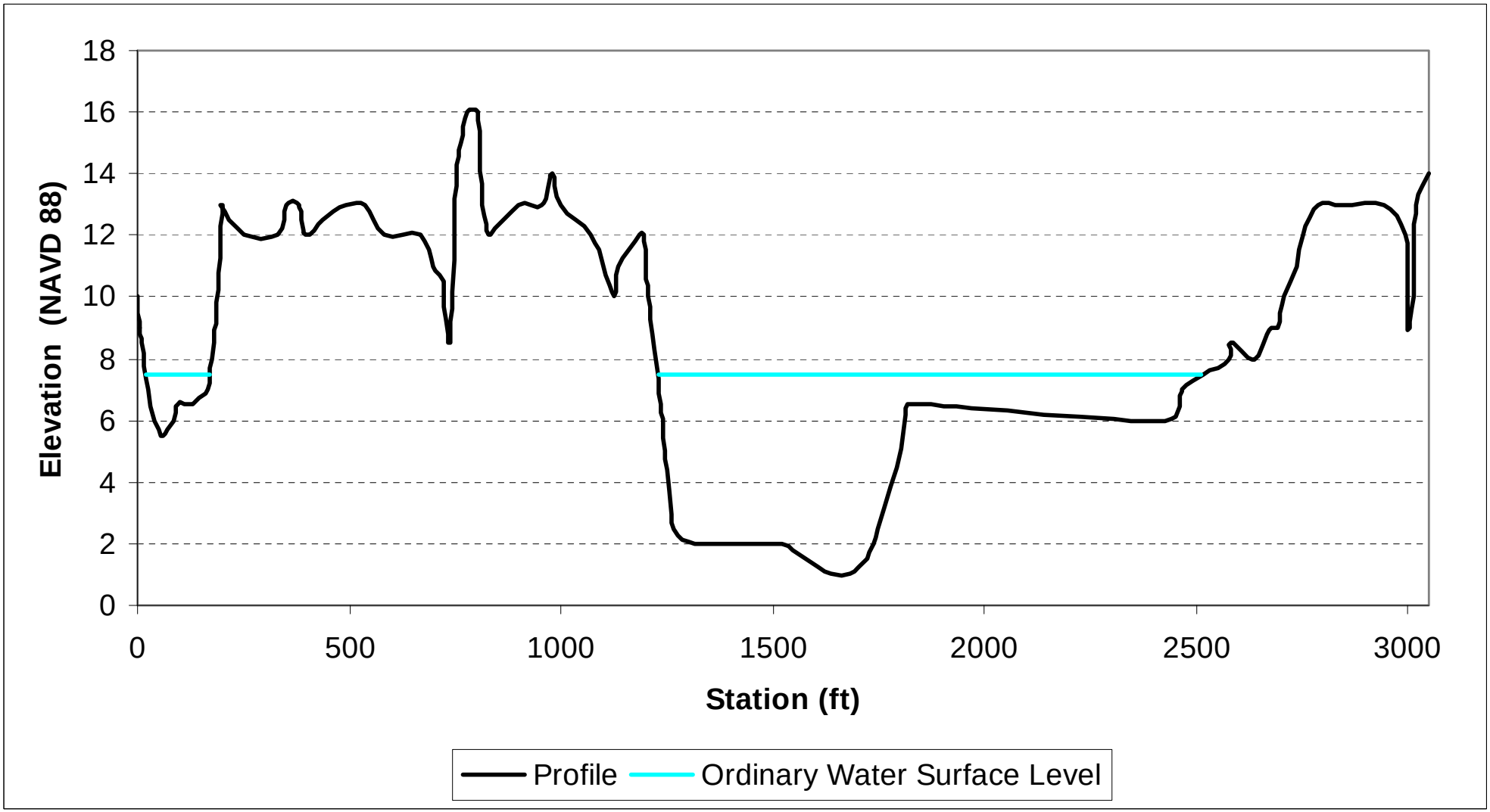

Profile of Wetlands Complex
(Refer to Figure 5 for cross section locations)

Figure 11

Sharp Park Conceptual Restoration Plan

Pacifica, CA

TETRA TECH

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Pacific Ocean/Seawall

Coastal sediment processes, including littoral sand transport, ocean wave transport (on- and off-shore), and wind blown sand create the beach and dunes along the west side of Laguna Salada (PWA 1992). A compacted earthen seawall was significantly reconstructed by the City of San Francisco in 1989 to reduce the damage from wave overtopping. The seawall performs its role of preventing tidal inundation and flooding of the study area under most conditions, but has been overtopped during very high storm surges, including events in 1956 and 1983.

For the purposes of this restoration plan, it is assumed that the seawall is stable and will continue to provide the wetland complex with a high level of protection from tidal inundation. The integrity of the seawall is being assessed by a geotechnical team under separate contract with SFRPD.

Water Quality

With the exception of salinity concentrations, water quality has not been identified as a limiting factor in the habitat value of the wetlands complex. Salinity concentrations were modeled under a variety of conditions, and were found to be below the threshold at which they would harm amphibians or other wildlife (Kamman 2009). Although water quality may be affected by nutrients carried by runoff from the golf course or by petroleum-based pollutants and heavy metals carried by runoff from Highway 1, water quality is being assessed under a separate contract and complete information is not yet available.

Sea Level Rise

Sea levels are projected to rise by up to 1.4 meters by 2100 (CA Natural Resources Agency 2009). Mean Higher High Water (MHHW) elevations under current conditions as well as those projected for the years 2030, 2040, and 2100 are illustrated in Figure 12. Although floods occurring under predicted sea levels at 2100 would not cover a significantly larger area of Sharp Park than would a flood occurring under current conditions, the seawall would be put under more stress and would likely be overtopped more frequently, placing wildlife in the wetlands complex at greater risk of harm due to greatly increased salinity levels.

Hydrologic Evaluation

Kamman Hydrology and Engineering, Inc. (KHE) performed a hydrological evaluation of the marsh complex and watershed during an entire hydrological cycle in 2008 and 2009. The purpose of the hydrological assessment was to improve understanding of the hydrologic processes which affect the distribution of ecological habitats in the wetland system and flooding of the adjacent golf course. Two of the main objectives behind the formulation of the hydrological study were to determine how to regulate water levels to avoid flooding parts of Holes 10, 12, 14, and 15 and to avoid stranding CRLF egg masses.

Much of what is currently known about the hydrology of the wetland complex was presented by Phil Williams and Associates et al. (PWA) in an earlier resource enhancement plan (PWA 1992). The PWA report includes a description of historical conditions at the site as well as results from a hydrologic monitoring study during the period 1990-1991. The KHE study aimed to expand on the findings of the earlier research to reflect current conditions at the site and to extend those findings into a suite of analytical models to be used in the planning and design for restoration alternatives.



Sea Level Rise Projections Over 100 Years

This figure shows the portions of Sharp Park that would be inundated if the seawall were breached or were not present. Inundated areas are estimated based on projected sea level rise scenarios.

TETRA TECH

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 12

MHHW_2000
MHHW_2040
MHHW_2030
MHHW_2100

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KHE maintained a hydrologic monitoring network at the site during the period April 2008 to April 2009. Field data collection focused on understanding the variability of water level and salinity in the wetland complex. Monitoring data were utilized to characterize current site conditions and to calibrate analytical models for additional investigation. Three specific analytical modeling tools were developed:

- A water budget model to investigate the seasonal variations of water supply and demand at the site.
- A salinity mass balance model to investigate the sources and relative impact on water quality.
- A hydraulic model to simulate the water level response in the wetland system to winter storm runoff.

Key findings of the report, in terms of relevance to SFGS and CRLF habitat and restoration design are as follows:

- The marsh system is not water limited, and water surface levels are maintained by groundwater even in very dry years. Increases in precipitation and runoff to the system only increase the amount of water that must be pumped out of the system. This is important in that it indicates that increasing the system's storage capacity through extensive dredging will not result in diminished water levels or compromised water quality.
- Although dense vegetation in the eastern part of the lagoon may slightly reduce the rate of drainage to the greater lagoon area and thus to the pumps in Horse Stable Pond, dense vegetation does not significantly contribute to water levels that encroach onto the golf fairways. Water surface elevations that result in standing water on the fairways result from inadequate pumping rates during periods of storm flows. Flooded fairways occur during dry months as well, possibly from poor drainage of golf course irrigation runoff or from input of runoff from the adjacent community, which would enter through a culvert at the north end of the lagoon. Poor drainage may be resulting from buildup of sediment in the main channel that separates the eastern half of the lagoon from the open water portion (west side) of the lagoon.
- Salinity varies according to the volume of water in the marsh complex at any given time. Salinity results from salts in the soils and water of the lagoon that are residual from the time that the lagoon was tidally inundated, and from salts deposited during subsequent overtopping of the seawall.
- Elevated salinity was found at a seep at the base of the seawall on the western edge of the pond (Wayne 2008). This saline water may have seeped through the seawall during sustained high tides, or may enter the pond through an abandoned culvert that once conveyed overflow from the pond to the ocean. Salinity from this seep is localized and is not of sufficient quantity to increase salinity levels in the rest of the pond (Kamman 2009). No other evidence of salt water intrusion through the seawall was found.

The complete hydrological report is found in Appendix A.

3.4 SEDIMENT

The wetland complex is at the hydrologic terminus of an 844-acre coastal watershed. The watershed includes one primary drainage, Sanchez Creek, and a smaller subbasin to the north that enters the main lagoon via a small, roadside swale and culvert. Neither of these waterways are gauged. Sanchez Creek drains to the pond, and the small swale drains to the main lagoon. Construction of the seawall has prevented sediment loads from exiting the watershed as they normally might have during storm events (high flows, tidal flushing, etc.).

As part of the engineering design for this project, a sediment yield analysis is being prepared. The primary objective of the sediment yield analysis is to better understand the rate at which sediment is transported to the wetland complex from the watershed. Annual sediment delivery rates, i.e., sediment yields, are estimated in

order to support design of sediment detention and removal facilities. The location and capacity of sedimentation basins will be designed to consider removal effectiveness and facility maintenance.

The approach to the sediment yield analysis includes a first-cut level of analysis based on the Revised Universal Soil Loss (RUSLE) methodology to estimate the long-term average annual soil loss from the tributary area. To the extent possible, existing information and studies and knowledge of the site will be used to guide estimation of parameters. Additionally, the Modified Universal Soil Loss Equation (MUSLE) is being used to predict soil erosion from the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. Results from RUSLE and MUSLE will be compared to local or regional sediment yield data to evaluate the level of certainty in the yield estimates for the wetland complex. Uncertainties in sediment yield estimates will be taken into consideration during design through factors of safety and use of other conservative design parameters.

Data sources include existing reports, hydrologic analysis of the watershed, field reconnaissance, vegetation maps, land use maps, soil maps, and precipitation records. Total suspended sediment estimates will use, in part, the results of water samples pulled at Sanchez Creek and the sub-basin channel during a storm in winter of 2008.

3.5 VEGETATION

The majority of the Sharp Park study area is planted with golf course grasses including Kentucky bluegrass *(Poa pratensis)*, ryegrass *(Lolium* sp.), and kikuyu *(Pennisetum clandestinum)*, separated by occasional stands of Monterey cypress *(Cupressus macrocarpa)*. Although none of these grasses are native to the study areas, kikuyu in particular is considered a highly invasive weed and is very difficult to manage (Randall 2002). Areas used for golf are constantly disturbed by visitors and maintenance staff, and also have very minimal vegetative diversity. Therefore, they generally provide low value habitat and are only used by generalist species such as robins and starlings, which are adapted to these conditions. Primary habitat areas are found at the lagoon, the pond, the connecting canal, Sanchez Creek, and the uplands on GGNRA property found south of the pond. These areas provide habitat for six special status species as recognized by the State of California and US Fish and Wildlife Service: San Francisco forktail damselfly *(Ischnura gemina)*, California red-legged frog, western pond turtle *(Clemmys marmorata)*, San Francisco garter snake, salt marsh common yellowthroat *(Geothlypus tricha)s* and dusky-footed woodrat *(Neotoma fuscipes)*.

The construction of the Sharp Park Golf Course replaced native coastal scrub and grasslands, as well as artichoke farms (Sweeney 2008). Sanchez Creek, which runs through the golf course, has been culverted west of Highway 1. The stream remains daylighted east of Highway 1 except in the rifle range area, where it is also culverted. Some riparian scrub vegetation is found along the edges of Sanchez Creek east of the highway, and the stream is largely shaded in this area by large Monterey cypress trees. Freshwater marsh is found at the edges of the pond, the lagoon, and in the canal. Coastal scrub, dead Monterey cypress, and weedy, non-native plant species including iceplant are found to the west of the lagoon and wet meadow to the south and east. Most of the golf course is east of the lagoon; however, two holes are present in the area located northwest of the lagoon.

South of the pond are formerly grazed uplands which now consist of ruderal vegetation such as invasive weeds. To the west of the lagoon is a sparsely vegetated ~8 meter (~25 foot) high levee. Sand dunes interspersed with sections of golf course and marsh plants lie along the base of the levee on the landward side (PWA 1992).

In September 2008, a wetland delineation was performed to identify the wetland resources and other "Waters of the United States" that would fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE) at the wetland complex. Wetlands in the study area were identified using NWI maps, soil survey information, and site observations. Potential wetlands were delineated in the field using the Interim Regional Supplement

to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Environmental Laboratory 2008). Tetra Tech staff also prepared informal field maps of vegetation community types during several reconnaissance level field surveys.

Plant Community Descriptions

Several types of wetland plant communities were identified in the marsh complex, and upland and ruderal communities were identified around the marsh complex. Wetland habitat types include freshwater marsh, willow scrub, and wet meadow. Other habitat types include foredune, ruderal, and riparian. These habitat types are described below. Other plant communities including mixed conifer forest, Monterey cypress forest, eucalyptus forest, and coastal scrub/grassland were identified at the far eastern part of the project area and at nearby Mori Point. All habitat types are displayed at the community level in Figure 13.

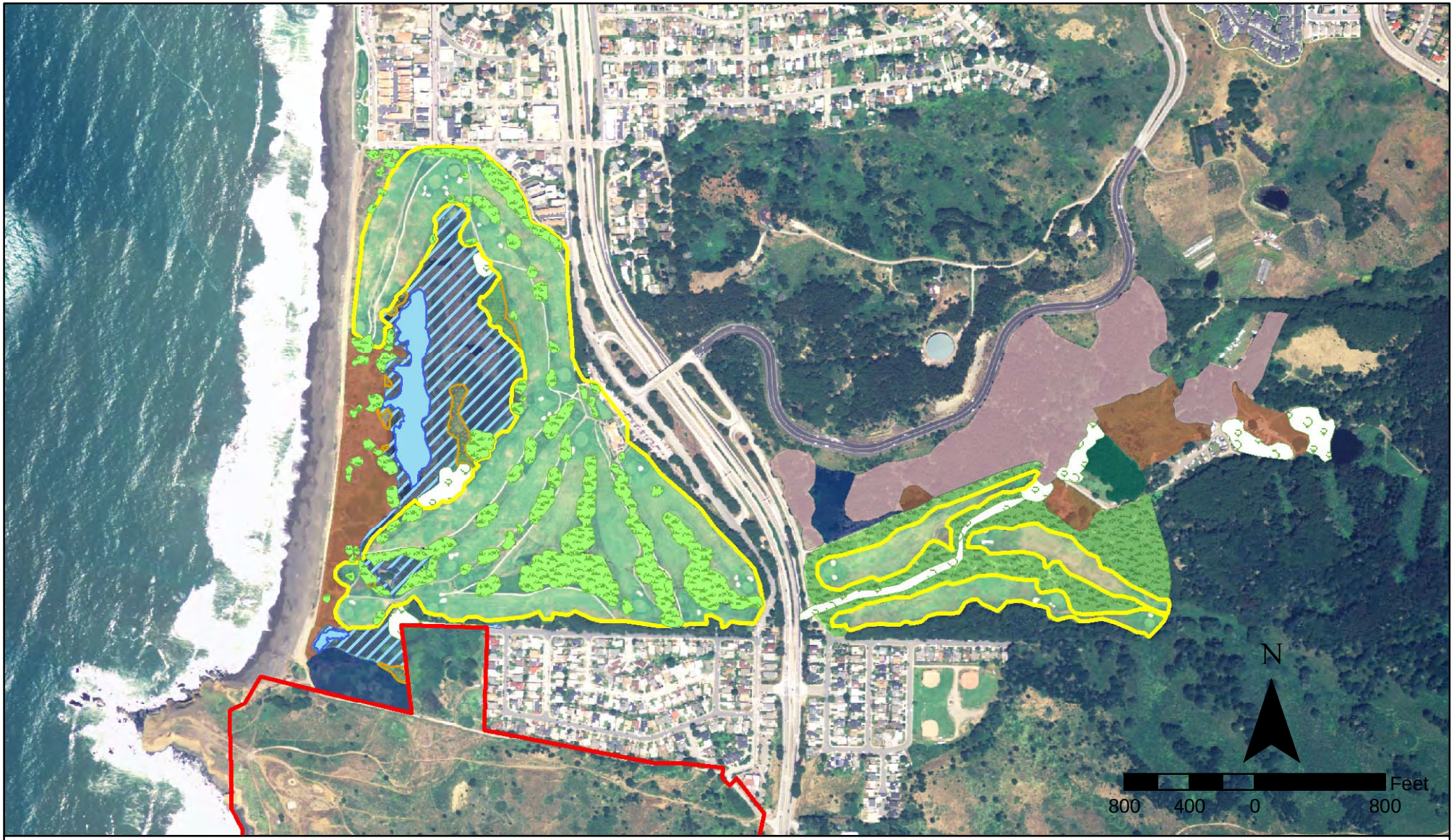
Freshwater Marsh

Freshwater marsh within the study area includes vegetated areas within and adjacent to Laguna Salada and Horse Stable Pond and the connecting channel (Tetra Tech 2008). Dominant vegetation within the freshwater marsh areas include bulrush *(Scirpus s*p.), cattail *(Typha angustifolia),* and coastal cinquefoil *(Potentilla anserina),* all of which are obligate wetland species. Cattails and bulrush have steadily encroached on much of what was formerly open water habitat in the eastern portion of Laguna Salada and in the connecting channel between the lagoon and the pond (Tetra Tech 2008). A small pond containing emergent vegetation was observed within the willow scrub area south of the golf course on GGNRA lands. GGNRA staff enhanced this pond by deepening an existing wetland to provide suitable breeding habitat for California red-legged frogs (Tetra Tech 2008).

Regular golf course maintenance appears to be controlling the growth of wetland habitat in some areas adjacent to the lagoon, as remnants of some hydrophytic plant communities were observed in lower elevation mowed areas (Tetra Tech 2008). Wetland vegetation has been encroaching onto the golf areas as poor drainage on the north and northwest parts of the lagoon has allowed for a larger flooded area.

Willow Scrub

Willow scrub within the study area was located south of the Sharp Park golf course, to the east of Horse Stable Pond, and near the archery range (Tetra Tech 2008). Small areas of this habitat type are also found on the northeast and southeast sides of Laguna Salada and along Sanchez Creek, east of Highway 1. The willow scrub communities are characterized by a dense overstory of arroyo willow *(Salix lasiolepis)* and sitka willow *(S. sitchensis),* which are both facultative wetland species, with an understory composed of obligate hydrophytes, such as panicled bulrush *(Scirpus microcarpus)* and coastal cinquefoil *(Potentilla anserina)* (Tetra Tech 2008).



General Habitat Types

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Pacifica, CA

Figure 13

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- Willow Scrub
- Wet Meadow
- Freshwater Marsh
- Unvegetated Pond/Open Water
- Coastal Scrub/Grassland
- Eucalyptus Forest
- Mixed Conifer/Laurel
- Monterey Cypress
- Ruderal
- GGNRA
- Golf Area

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Wet Meadow

Wet meadow occurs on the east side of Laguna Salada where the fairways flatten out at the edges of Holes 14 and 15, and also where a swale forms a meadow directly east of and adjacent to Horse Stable Pond. Dominant plants in this area include Baltic rush *(Juncus balticus)*, spreading rush *(J. patens),* bulrush *(Scirpus americanus)*, curly dock *(Rumex crispus)*, and coastal cinquefoil. Coyote bush *(Baccharis pilularis)* occurs on the hummocks amid the wetlands, which may be evidence that uplands were once present near the lagoon. Wet meadow vegetation grades to riparian willows (*Salix* spp.) and cattails (*Typha* spp.) near Sanchez Creek.

Wet meadow also occurs along the east side of the lagoon as well as on a peninsula of higher ground in the middle of the lagoon. Salt concentrations in the soils in these areas, residual to the time when the lagoon was open to tidal action, are probably responsible for the occurrence of some salt marsh plants including saltgrass *(Distichlis spicata)*, fleshy jaumea *(Jaumea carnosa)*, and Virginia pickleweed *(Salicornia virginica)*. Salt tolerant plant species are also found at the edge of the pond.

Ruderal Vegetation

Ruderal vegetation is found in the areas around the parking lot, in the upland habitat south of the pond and west of the lagoon, at the site of the closed rifle range, and at the archery range (Tetra Tech 2008). The vegetation in these areas includes primarily invasive forbs such as wild radish *(Raphanus sativus),* curly dock *(Rumex crispus),* and wild oats *(Avena barbosa)* (Tetra Tech 2008).

The hills on Mori Point are covered with non-native annual grasses mixed with invasive forbs including wild radish, bristly ox tongue *(Picris echioides)*, and sweet fennel *(Foeniculum vulgare)* with a few Monterey cypress (PWA 1992, Tetra Tech 2008).

In addition to maintained tees, greens, fairways, and sand traps, the golf course roughs include many non-native plants. Where the fairways border the lagoon, wet meadow and marsh plants function as hazards for the golf course. Between the holes (in the rough) are various non-native grasses.

Foredune

The western portion of the lagoon has undergone considerable disturbance, both from periodic high tides and storms and from development of the golf holes that were once there. The 25-foot high seawall supports only sparse ruderal vegetation. At its base, sands support foredune species and, closer to the lagoon, salt marsh species. Areas of bare sand are interspersed with patches of foredune plants. Residual soil salts are probably responsible for the occurrence of these species, since the lagoon itself supports freshwater marsh species. Species observed include coastal sand verbena *(Abronia latifolia)*, silver bur ragweed *(Ambrosia chamissonis),* ice plant (*Mesembryanthemum* sp.), and New Zealand spinach *(Tetragonia expansa)*.

Riparian

West of Highway 1, Sanchez Creek has been channelized and runs through a corridor southeast of the lagoon, parallel to Fairway Drive. In open areas the banks are partially vegetated with plantain (*Plantago* sp.), panicled bulrush *(Scirpus microcarpus)*, knotweed *(Polygonum* sp.), and broom (*Cytisus* sp.) (PWA 1992). A dense overstory of Monterey pine *(Pinus radiata)* and Monterey cypress cover much of its course in this area and as a result, there is little riparian vegetation. Near the end of Fairway Drive, the creek is culverted under the golf course. When it emerges from the culvert it flows under a thicket of willows. The stream then flows west through a dense stand of cattails and enters the pond (PWA 1992).

Wetlands

Wetlands in the study area were identified using National Wetland Inventory (NWI) maps, soil survey information, and site observations. Potential wetlands were delineated in the field using the routine on-site method (level 2), as outlined in Section D of the Wetlands Delineation Manual (Environmental Laboratory 1987). This method is referred to as the three-parameter approach because it uses three criteria—presence of hydrophytic (water adapted) vegetation, hydric soils, and wetland hydrology. The three-parameter approach determines whether an area is a jurisdictional wetland under normal conditions. Jurisdictional wetlands are regulated by the USACE under Section 404 of the Clean Water Act (CWA) and by the Regional Water Quality Control Board under Section 401 of the CWA.

A total of 27.42 of acres of Waters of the US were delineated within the study area (Appendix B, Figure 3). Jurisdictional areas were classified into four habitat types: freshwater marsh, willow scrub, wet meadow, and unvegetated pond (open water). The amount of each jurisdictional habitat type within the study area is shown in Table 1, below.

Table 1. Wetlands and Other Waters in the Wetlands Complex

Habitat Type	Jurisdictional Determination	Area (Acres)
Freshwater marsh	Wetlands	19.56
Willow scrub	Wetlands	0.93
Wet meadow	Wetlands	2.44
Unvegetated pond	Other Waters of the US	4.49
Total wetlands/waters		27.42

3.6 SENSITIVE WILDLIFE RESOURCES

Swaim Biological conducted surveys for the SFGS and CRLF at or near the wetland complex as part of this project in 2008, and in 2004, 2006, and 2008 as part of another project. Visual survey locations included the following aquatic habitats and associated uplands: Horse Stable Pond, Laguna Salada, the canal connecting Horse Stable Pond and Laguna Salada, Sanchez Creek west of Highway 1, and Arrowhead Lake east of Highway 1 and the archery range. Aside from determining the presence or absence of these species, one of the main objectives of the surveys was to identify limiting factors for the SFGS and CRLF and their prey species. The complete survey report is found in Appendix C.

California Red-legged Frog

Habitat Requirements

This species usually occurs in or near quiet permanent water of streams, marshes, ponds, and lakes (Stebbins 2003, NatureServe 2009) typically ~0.7 meter (2.3 foot) deep, in habitats characterized by dense, shrubby riparian vegetation (Hayes and Jennings 1988). During the dry summer months, California red-legged frogs estivate in small mammal burrows, leaf litter, or in other moist sites in or near riparian areas (~30 meters; 100 feet) (USFWS 1996). Individuals may range far from water along riparian corridors and in damp thickets and forests. The California red-legged frog is generally found near water but often disperses to upland habitat after rains (Stebbins 2003). Although frogs at most locations remain at the breeding site year-round, long-

distance movements of up to 2.2 miles to and from non-breeding sites have been observed (Bulger et al. 2003). Lack of a dispersal corridor leading to other viable habitat means that frogs found in the wetland complex at Sharp Park are unlikely to migrate.

Breeding occurs in permanent or seasonal water of ponds, marshes, or quiet stream pools, and sometimes in lakes (Fellers, in Jones et al. 2005). Eggs are often attached to emergent vegetation where they float at the surface (Hayes and Miyamoto 1984). CRLF typically breeds during or shortly after large rainfall events in late winter or early spring (Hayes and Miyamoto 1984, USFWS 1996). The breeding period lasts about 1 to 2 weeks and eggs hatch in 6 to 14 days. Larvae metamorphose in 3.5 to 7 months after hatching but occasionally overwinter (Fellers et al. 2001). Larval mortality tends to be very high within this species. Sexual maturity is reached in 3 to 4 years and individuals may live 8 to 10 years.

Diet for the California red-legged frog includes various terrestrial and aquatic invertebrates, mainly invertebrates of shoreline or water surface. Diet of large adults also includes small vertebrates. Larvae eat algae, organic debris, plant tissue, and other minute organisms (NatureServe 2009).

Local Occurrence

A total of 85 CRLF egg masses were located in or near the study area (SBI 2008). The highest concentration was in Horse Stable Pond, with 57 masses being located. Twenty egg masses were found in portions of Laguna Salada and four were found in the canal. East of Highway 1, four egg masses were found in Arrowhead Lake (SBI 2008). No egg masses were found in Sanchez Creek or in areas of extremely dense emergent vegetation that lacked open water (SBI 2008).

Areas that are suitable for foraging and basking but where no sign of breeding was observed include Sanchez Creek and portions of Laguna Salada, notably the north end. Juvenile and adult CRLFs were concentrated in and around the pond, the canal, and lower Sanchez Creek (SBI 2008). In these areas, CRLFs have been observed basking or sitting under vegetation next to the water. However, they were not observed in extremely dense cattails or bulrushes (SBI 2008).

The primary limiting factor for the CRLF in the wetlands complex is a vegetation structure that is inappropriate and not optimal for successful breeding and/or recruitment of larval stages into the adult population. The dense emergent vegetation combined with little remaining open water offers poor habitat for the survival of egg masses or tadpoles. Tadpoles hatched from eggs deposited on flooded areas of the golf course have been stranded in these areas due to their inability to penetrate the dense vegetation at the edge of the lagoon (Wayne 2008).

Locally, high salinity in the study area would lead to severely compromised habitat. One-hundred percent of CRLF egg masses die at salinity levels of 4.5 parts per thousand (ppt) (Jennings and Hayes 1990), and larvae cannot survive in concentrations higher than 7.0 ppt (USFWS 2002). The presence of egg masses in Laguna Salada, the canal, and Horse Stable Pond suggest salinity levels of less than 4.5 ppt are present during the breeding season. Although loss of CRLFs or their eggs due to salinity increases has not been documented at Laguna Salada in the past, the potential for this occurrence has led to the recommendation that any frog ponds created at Sharp Park be situated above the 100-year storm surge elevation that is predicted under current conditions and under projected conditions 30, 40, and 100 years in the future.

San Francisco Garter Snake

Habitat Requirements

The habitat requirements of the SFGS vary throughout the year, and multiple habitat types are used on a seasonal and often daily basis. From spring through early fall SFGS are found in wetland areas where they forage for frogs, tadpoles, and small fish. During these months they makes daily movements between foraging habitat and nearby upland retreats located in underground burrows and soil crevices, typically located in a grassland-shrub community. Grassy hillsides, floating algae, and rush mats also are used at this time for basking and mating. Beginning in mid- to late fall they may move to more distant uplands and winter underground retreats. Here they remain relatively inactive during the winter months versus the rest of the year. SFGS have been seen in all months of the year during warm weather, including individuals foraging in ponds during February. In some populations where uplands immediately adjacent to the aquatic habitat are suitable for winter retreats, SFGS will take advantage of these closer burrows (Larsen 1994).

Local Occurrence

Under current conditions, high quality upland habitat for the SFGS at Sharp Park is restricted to a small area south of Horse Stable Pond. Laguna Salada and the connecting channel contain functionally little or no adjacent SFGS upland habitat that is secure from daily human disturbance and exposure to predators (SBI 2009). This lack of suitable upland habitat with disturbance by golf activity during the day minimizes the connectivity between the aquatic habitats in Horse Stable Pond and Laguna Salada and deters occupancy by the snake in all but the southernmost portion of the park. The edges of Laguna Salada currently are the most likely routes for SFGS to follow, and movement through these areas could expose snakes to mortality from predation, mowing, and being crushed by golf carts and people. The lack of suitable upland habitat that would be used on a regular basis is therefore a limiting factor in ensuring the persistence of the SFGS at Sharp Park. Upland habitat that would be suitable for winter retreats is also limited as any that exists immediately adjacent to the lagoon would be subject to the flooding that occurs each winter.

For SFGS that travel to the lagoon from uplands near the pond or Mori Point, the extremely dense structure of the aquatic vegetation combined with little open water/emergent vegetation edge habitat at the lagoon provides extremely poor foraging habitat (SBI 2009). The deterioration of breeding habitat due to inappropriately dense vegetation also limits CRLF productivity at Laguna Salada.

Arrowhead Lake supports a breeding population of California red-legged frogs and Pacific chorus frogs, and is bounded by dense riparian vegetation, providing suitable foraging habitat for the San Francisco garter snake. Although no San Francisco garter snakes were observed there during these surveys, Arrowhead Lake and the surrounding uplands may be used as habitat. There is a historical record of SFGS on the parcel north of and adjacent to Sharp Park with no barriers between. San Francisco garter snakes are also known to occupy the SFPUC watershed land to the east around San Andreas Reservoir below Sweeney Ridge.

Survey Results

SBI conducted visual surveys in 2008 specifically for SFGS in March, April, and May of 2008. No SFGS were observed during visual surveys, which included the areas around lower Sanchez Creek, the lagoon, the canal, and the pond. However, the abundance of prey items in these areas, their proximity to recent observations of the snake at Mori Point and the pond (SBI 2006), and historical occurrence suggest that they are likely to be used by SFGS for foraging and movement. Five SFGS were trapped at a nearby wetlands at Mori Point in 2008 (SBI unpubl. data) and in wetland habitats south of the golf course and east of Horse Stable Pond. On July 9th, 2008, Golden Gate National Recreation Area biologists reported seeing a SFGS in the 'north pond', a few hundred feet east of Horse Stable Pond (S. Bennett in litt 2008).

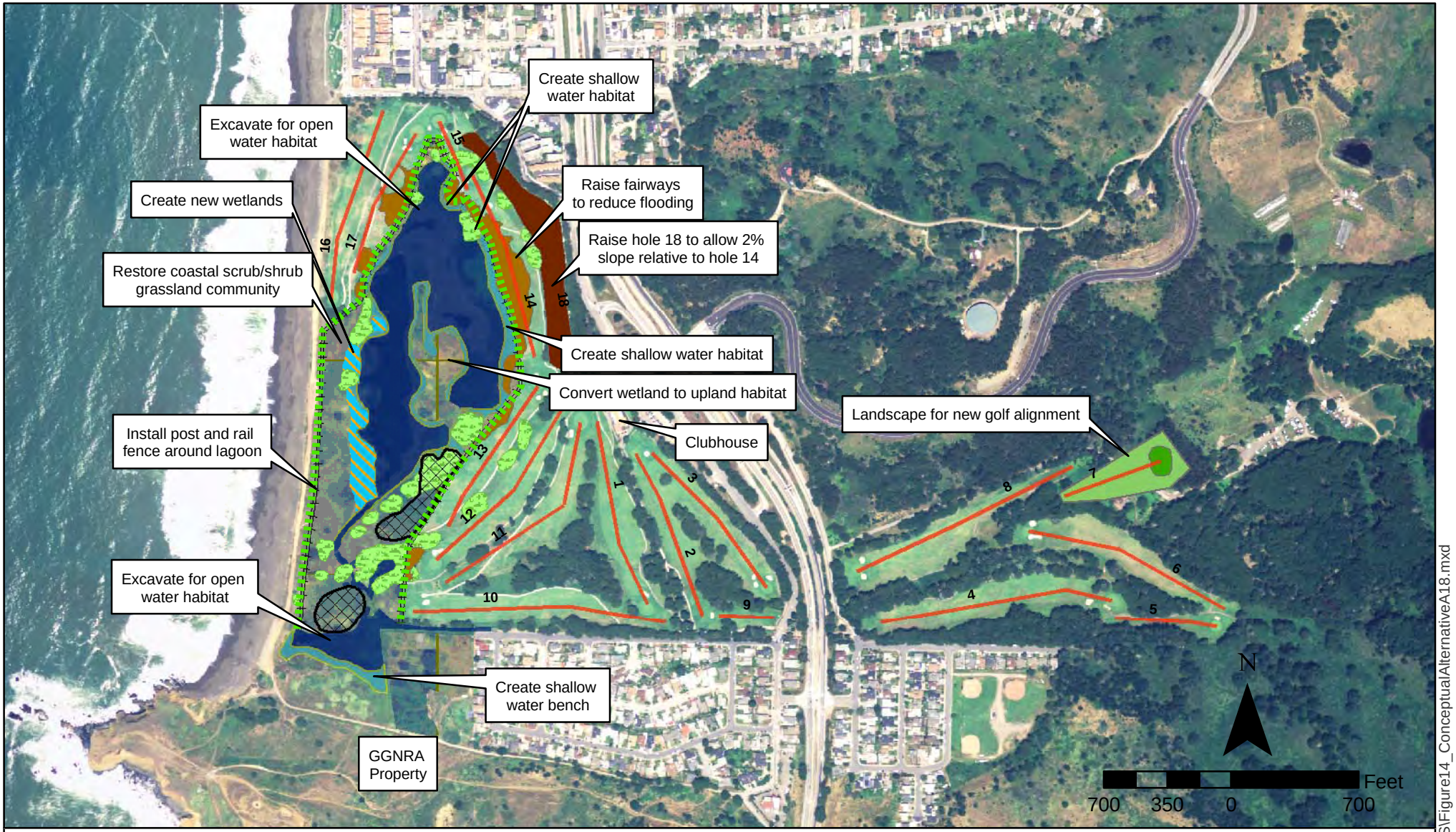
4. CONCEPTUAL PLANNING

During planning for the recovery effort, several broad goals were identified by SFRPD and through agency input. Those are as follows:

- Maintain and restore habitat for listed species, particularly the SFGS and CRLF;
- Meet the recommendations of the SFGS Recovery Plan (USFWS 1985);
- Restore functional wetland and upland habitat that is high-value and low maintenance;
- Comply with the requirements of state and federal regulations, including ESAs and the Clean Water Act; and,
- Preserve and enhance recreational opportunities that correspond to the listed species goals.

A series of conceptual alternatives have been created to detail proposed conditions that are predicted to occur under various alternatives and to assess whether each alternative would meet the recovery goals (Figures 14-16). A habitat assessment model was completed for existing conditions and for conditions that are projected to develop under each conceptual plan. Figure 17 shows habitat quality under existing conditions, and Figures 18-20 show projected habitat quality for the SFGS and CRLF under Alternatives A18, A9, and No Golf, respectively. Table 3 compares the amount of habitat for each species under the various alternatives compared to the projected costs. A detailed cost estimate is provided in Appendix D, and the process of determining costs is explained in Section 4.9.

Each alternative differs in the extent of upland habitat that would be restored as well as the alignment and location of golf holes. A gradient of measures is proposed under various alternatives, ranging from an alternative that would restore the wetlands and minimal surrounding upland habitat to a more comprehensive alternative that would also restore the wetlands but would also include a much greater amount of upland restoration as well as excavation of frog ponds and daylighting of Sanchez Creek. Alternatives include maintaining an 18-hole golf course, closing 9 holes and creating a 9-hole course with a driving range, and closing the park to golf while still allowing other recreational opportunities on the site. All alternatives share the same goal, which is to enhance habitat for the SFGS and CRLF, and share the same restoration features in and around the wetlands complex: creation of upland basking and retreat habitat adjacent to the wetlands, excavation of excess sediment and decaying vegetation from the wetlands complex, creation of an upland corridor between the pond and the lagoon, and recontouring the shoreline to create shallow water habitat.



Conceptual Alternative A18

Figure 14

Sharp Park Conceptual Restoration Plan
Pacifica, CA

TETRA TECH

- Fairways
- Fence
- Habitat Boundary
- Raise to 10' Contour
- Upland Mounds for SFGS Habitat
- Remove Non-Native Trees
- Coastal Shrub/Grassland
- New Wetlands
- Shallow Water Habitat
- Open Water
- Convert to Golf Holes

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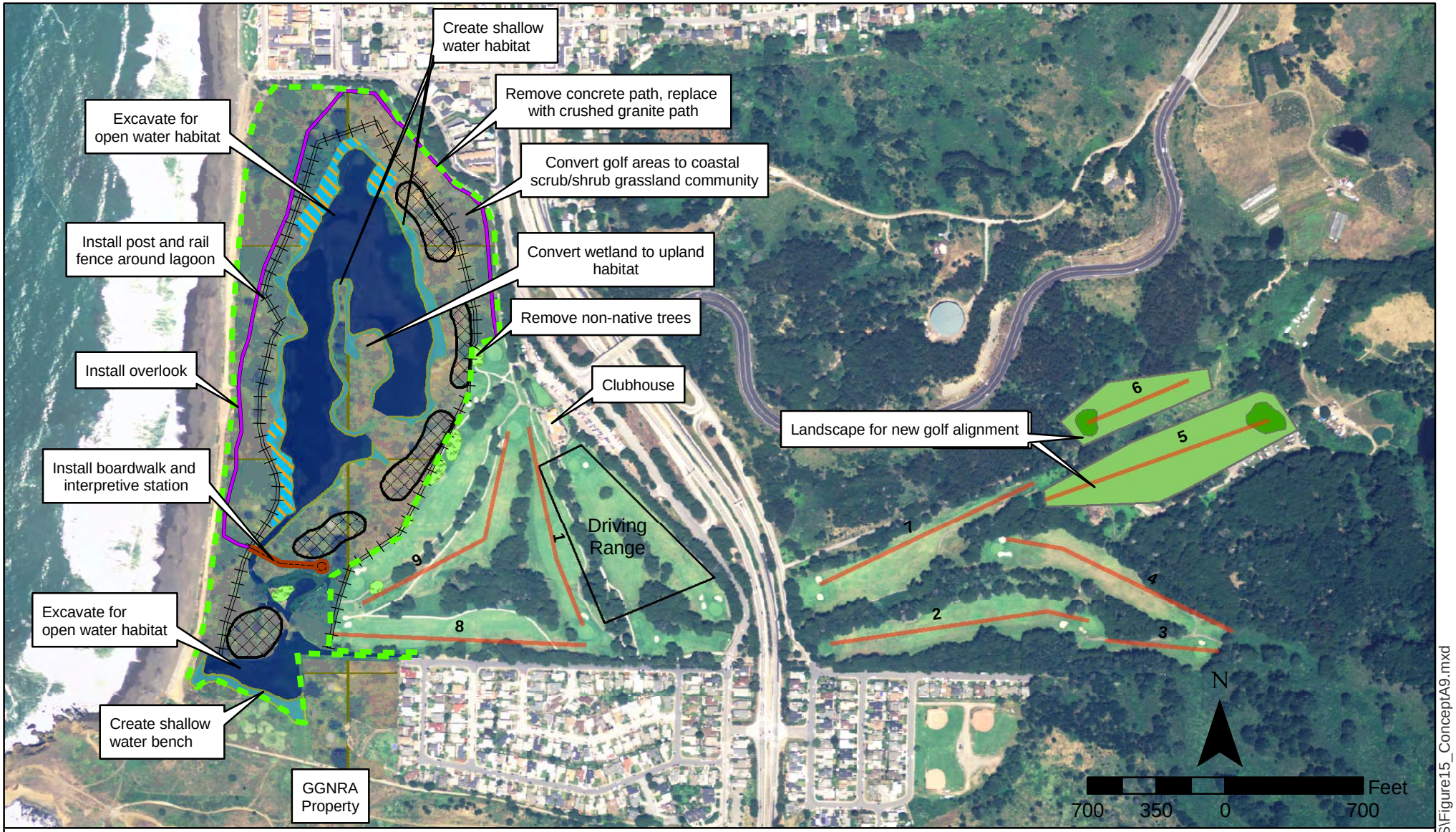

Conceptual Alternative A9

Sharp Park Conceptual Restoration Plan
Pacifica, CA

Figure 15

TETRA TECH

Boardwalk
Fence
Fairways
Habitat Boundary
New Wetlands
Upland Mounds for SFGS Habitat
Coastal Shrub/Grassland
Shallow Water Habitat
Open Water
Remove Non-Native Trees
Convert to Golf Holes

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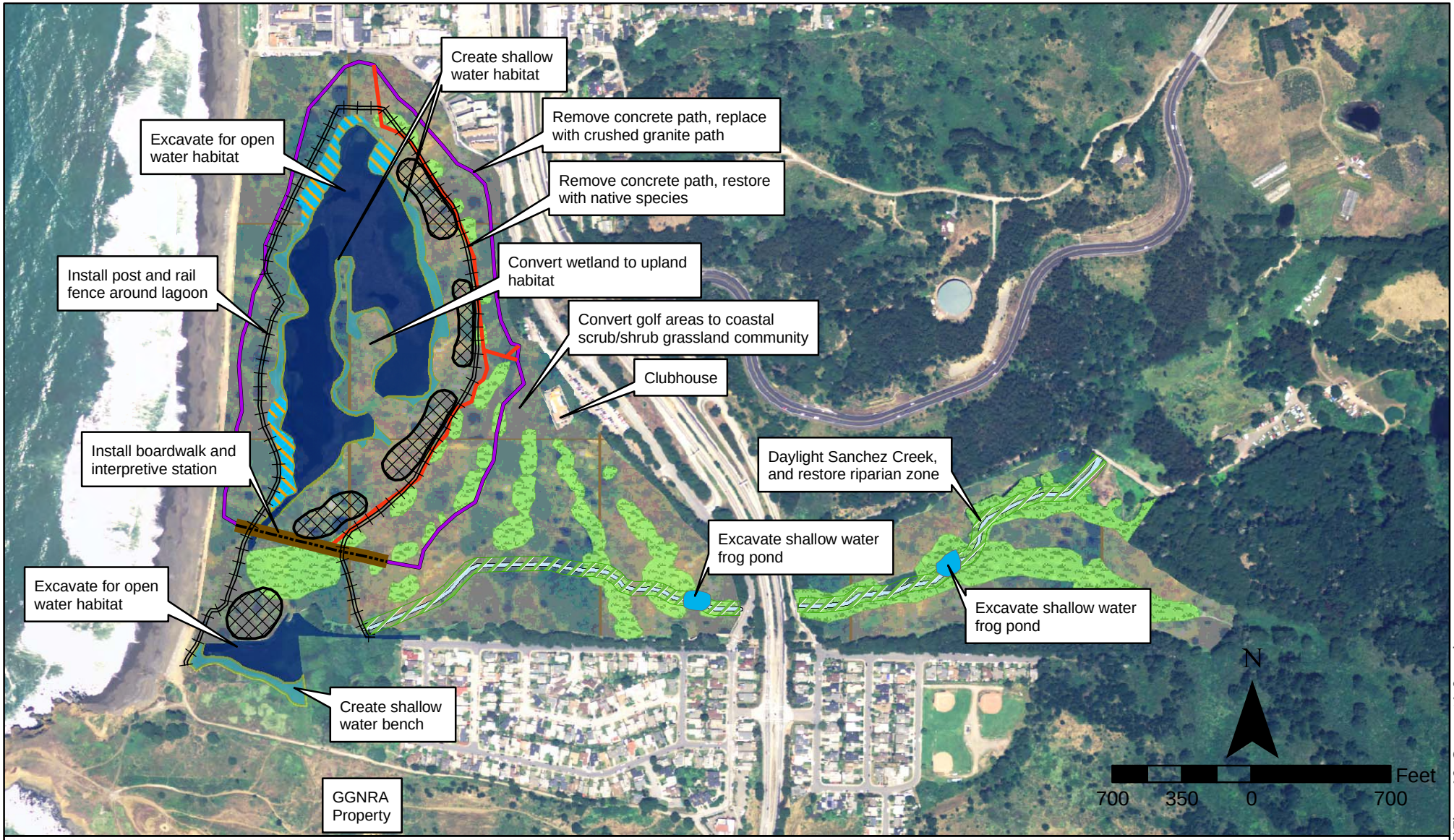

No Golf Alternative

Figure 16

Sharp Park Conceptual Restoration Plan

Pacifica, CA

TETRA TECH

Boardwalk
Daylight Sanchez Creek
Fence
Frog pond
Riparian Habitat
Upland Mounds for SFGS Habitat
New Wetlands
Remove Non-Native Trees
Coastal Shrub/Grassland
Shallow Water Habitat
Open water

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Habitat Quality Under Existing Conditions

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Habitat Quality for the California Red-legged Frog and the San Francisco Garter Snake at Sharp Park

Figure 17

TETRA TECH

CRLF breeding / SFGS primary foraging habitat
- Highly Suitable
- Moderately Suitable

CRLF non-breeding / SFGS movement and secondary foraging habitat
- Highly Suitable
- Moderately Suitable

SFGS upland (retreat and basking) habitat
- Highly Suitable
- Moderately Suitable

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Habitat Quality Projection, Alternative A18

Sharp Park Conceptual Restoration Plan
Pacifica, CA

Habitat Quality Projection for the California Red-legged Frog and the San Francisco Garter Snake at Sharp Park

Figure 18

CRLF breeding / SFGS primary foraging habitat
- Highly Suitable
- Moderately Suitable

SFGS upland (retreat and basking) habitat
- Highly Suitable
- Moderately Suitable

CRLF non-breeding / SFGS movement and secondary foraging habitat
- Highly Suitable
- Moderately Suitable

TETRA TECH

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Habitat Quality Projection, Alternative A9

Sharp Park Conceptual Restoration Plan
Pacifica, CA

Habitat Quality Projection for the California Red-legged Frog and the San Francisco Garter Snake at Sharp Park

Figure 19

CRLF breeding / SFGS primary foraging habitat
- Highly Suitable
- Moderately Suitable

SFGS upland (basking and retreat) habitat
- Highly Suitable
- Moderately Suitable

CRLF non-breeding / SFGS secondary foraging habitat
- Highly Suitable
- Moderately Suitable

TETRA TECH

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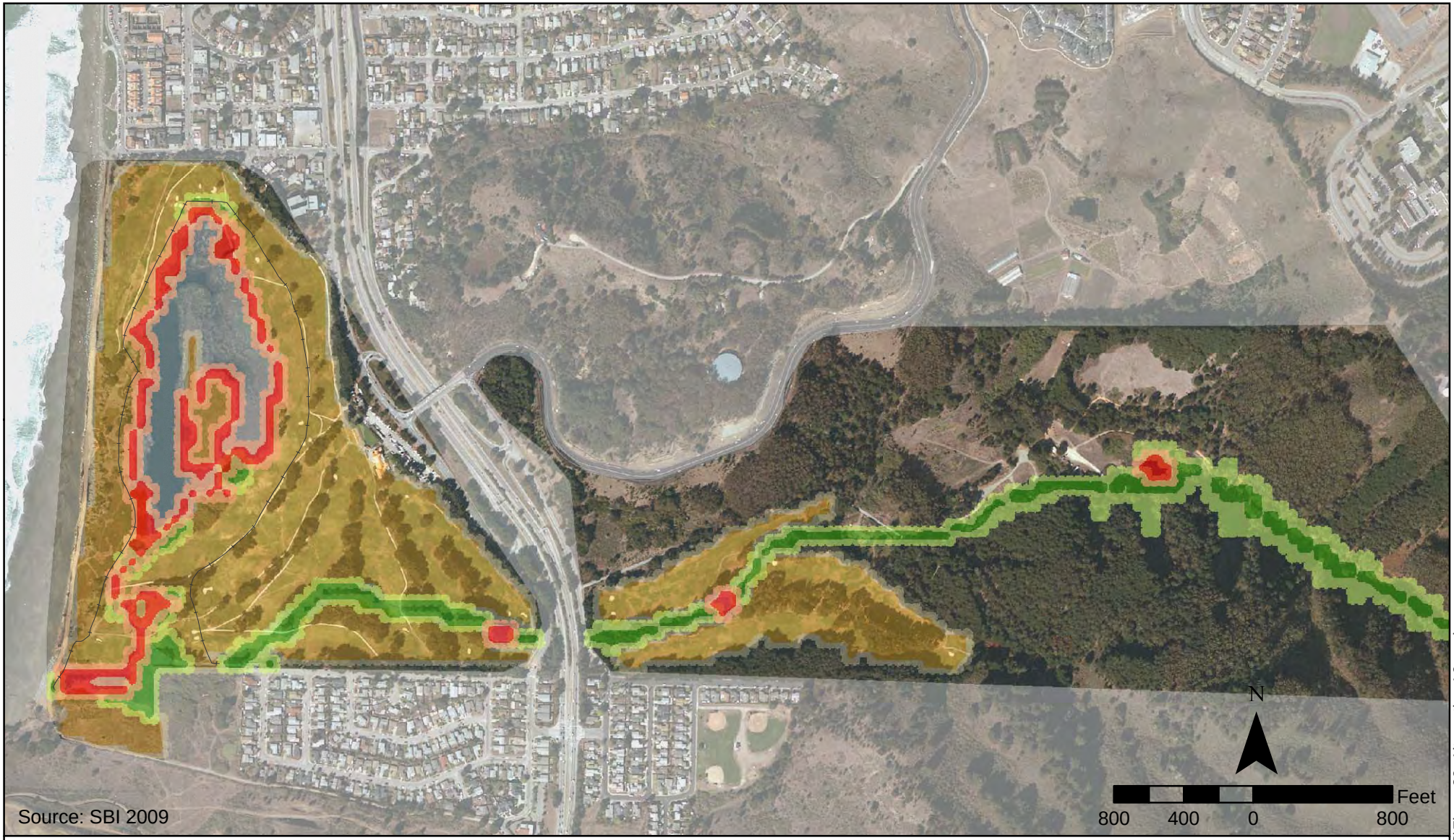

Habitat Quality Projection, No Golf Alternative

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Habitat Quality Projection for the California Red-legged Frog and the San Francisco Garter Snake at Sharp Park

Figure 20

CRLF breeding / SFGS primary foraging habitat
- Highly Suitable
- Moderately Suitable

CRLF non-breeding / SFGS secondary foraging habitat
- Highly Suitable
- Moderately Suitable

SFGS upland (basking and retreat) habitat
- Highly Suitable
- Moderately Suitable

TETRA TECH

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4.1 Project Constraints

A number of physical, recreational, and biological factors influenced the design of this conceptual plan and in some cases limited or defined the extent of the proposed restoration. These included, but were not limited to, the following:

- *CRLF breeding habitat requirements* SFRPD closely monitors and regulates pumping from Horse Stable Pond into the ocean to avoid stranding CRLF egg masses at that breeding site. This occurs during the entire breeding period for the CRLF (generally December through March). This practice, in part, has resulted in water backing up onto the course flooding large portions of Holes 10, 14, and 15, and cutting off Hole 12 with a large pool of water around the culverted section of the connecting channel. The results of this are three-fold: 1) It eliminates all or portions of these holes from play, sometimes for extended periods 2) CRLFs sometimes lay their eggs during wet periods in the shallow pools that form in the flooded fairways. When the water levels drop, these egg masses can be stranded on dry ground and desiccate. Even if water persists long enough for eggs to hatch in these areas, most tadpoles would have limited mobility in the dense vegetation in the marsh area and may be stranded well before metamorphosis, and 3) Any potential SFGS upland available in areas not in play on the course is also flooded.

- *Presence of the seawall* A seawall separates the western edge of Sharp Park from the ocean and beach. Although members of the public suggested that a restoration option may include breaching the seawall to allow Sanchez Creek to run freely into the ocean, this option was considered infeasible for several reasons. The seawall plays a significant role in maintaining public safety by alleviating flooding during storm surges, and also keeps seawater out of the marsh complex, where saline water could harm resident reptiles and amphibians.

- *Sharp Park Clubhouse* The clubhouse is a historic feature, and its removal as a restoration feature was not considered as an option. Therefore, restoration plans were created assuming that the clubhouse and associated parking area would remain in place.

- *Archery Range* An archery range is located east of Highway 1 near the defunct rifle range. All plans were created to limit effects to the archery range or its access points.

- *Re-use of dredge spoils* It is assumed that some of the spoils removed during dredging of parts of the marsh complex would be used to restore fairways to upland habitat or to serve as the substrate for creation of new golf holes under some of the alternatives. However, spoils with greater than 50% organic material are deemed unsuitable for golf course substrate due to the potential for uneven settling, therefore organic sediments would only be spread where upland habitat is proposed.

- *Highway 1* Highway 1 provides a barrier to migration of the SFGS from the upper part of the park to the marsh complex and vice versa. Although a tunnel under the highway allows travel between the eastern and western parts of the park, the tunnel is not considered to be a viable corridor for migration of the snake. CRLF may have a low but significant flow of genetic exchange through culverts under Highway 1 and potentially overland.

- *Golf course history and alignment requirements* The golf course is a well known example of the design of Alistair McKenzie, a well known golf course architect who designed courses in the 1920s and 1930s. Although the prevailing goal in creating these conceptual plans was to enhance habitat value and diminish potential for harm to snakes and CRLF s, every effort was made to preserve the vision of Dr. MacKenzie and to minimize the need to substantially reconfigure the golf alignment. Furthermore, golf courses are generally constructed to follow a standard sequence of difficulty (par) from hole to hole, a factor that was considered in the various designs.

- *Mitigation for impacts to wetlands* Under all alternatives, an upland pensinsula will be created in the middle of the lagoon. Because this will result in fill of up to 2 acres of wetlands, 2 acres of wetlands must be created from the upland edges of the lagoon, which in some cases may encroach on existing fairways. By mitigating for impacts to wetlands and complying with other permit conditions required by the US Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB), SFRPD maintains compliance with Sections 404 and 401 of the Clean Water Act.

4.2 HABITAT CONSIDERATIONS

Historically, SFGS habitat at Sharp Park was concentrated in and around Laguna Salada and Horse Stable Pond. Habitat in these areas has become degraded over time as a result of sedimentation and excessive plant growth, flooding by seawater, and a variety of human impacts.

Both the SFGS and CRLF would benefit from the restoration of productive breeding and foraging habitat in each of these aquatic features. This could be accomplished by creating open water habitats adjacent to emergent vegetation in Laguna Salada, the canal, lower Sanchez Creek, and Horse Stable Pond. Because of their historic occupancy and the presence of features that currently support the SFGS, the conceptual plans were developed with the primary goal of restoring and enhancing habitat in these areas. Although CRLF are known to breed in Arrowhead Lake east of Highway 1, enhancements to the eastern portion of the park were not prioritized because there is no current evidence of occupation by the SFGS at Arrowhead Lake, nor is there a connection to the SFGS population at Mori Point. Each conceptual plan includes enhancements to wetland areas of the pond, the canal, and the lagoon in order to increase CRLF breeding and SFGS foraging habitat.

In order to address the shortage of suitable upland habitat for the SFGS, however, changes to the use of land adjacent to the wetland complex are required. The primary goal of each conceptual alternative was to propose an effective way of increasing upland habitat adjacent to existing or future aquatic habitat, and to evaluate the consequences of such a change to the existing golf course design and operation.

Restoration Options

Under all alternatives, creating new uplands west of Highway 1 would require the conversion of Hole 12 to wildlife habitat that includes both enhanced wetland and upland features. The two former golf holes west of Laguna Salada taken out of play after saltwater flooding in the 1980s currently contain non-native plants and bare, sandy ground that provide little habitat value for the snake and frog. These areas could be converted into upland habitat for the SFGS if CRLF breeding habitat that is free from predatory fish and which contains shallow water and emergent vegetation is also created in adjacent parts of Laguna Salada. Upland habitat created in these areas however would be susceptible to pedestrian trespassing, off-leash dog activity, potential saltwater spray, and may be prone to future flooding. Locating newly-created upland habitat on Laguna Salada's southeast and northeast sides instead would reduce some of the risks of impact by pedestrians, pets and ocean water, but would require one or more golf holes to be modified or relocated, and could increase impacts by golf course maintenance activities such as mowing. Creating SFGS upland habitat on the east side of the lagoon rather than the west side would allow for creation of new wetlands on the west side of the lagoon to mitigate for wetlands that are filled during planned restoration activities.

Creating upland habitat on the east side of Highway 1 would not benefit snakes and frogs in the areas where they primarily occur. Success criteria would be expected to require that SFGS either colonize the area by crossing the highway, an event that probably occurs rarely and presents substantial hazards to snakes that attempt it or by moving into the area from the Crystal Springs watershed. Connectivity to the Crystal Springs watershed to the east is limited by the unsuitable nature of the dense stands of eucalyptus and mixed evergreen forest and lack of distinct hydrologic connection with optimal foraging opportunities for promoting longer movements of SFGS. The exception to this could benefit CRLF and would occur under

the No Golf Alternative, in which frog ponds would be created along Sanchez Creek, one of which would be constructed east of Highway 1. Sufficient CRLF populations in the immediate area are present and would be very likely to colonize new ponds on Sanchez Creek.

4.3 GOLF COURSE PLANNING CONSIDERATIONS

Developing viable design solutions for a reconfigured Sharp Park Golf Course involves tying together golf course playability, endangered species habitat requirements, the original vision of Dr. Alister MacKenzie, and the unique physical and natural components of site.

Redesigning the layout and design of the golf course included understanding the evolution of the original layout dating back to 1931. Since the course was constructed it has changed due to storms off the Pacific Ocean and construction of roads. The result is that four of the oceanfront holes were relocated to the east side of the park and a sea wall protects the golf course from the ocean.

Presently there are 11 holes that are in the original location plus a shortened par three with an original green complex. Over most of the past 80 years the typical MacKenzie characteristics have almost disappeared but can still be seen.

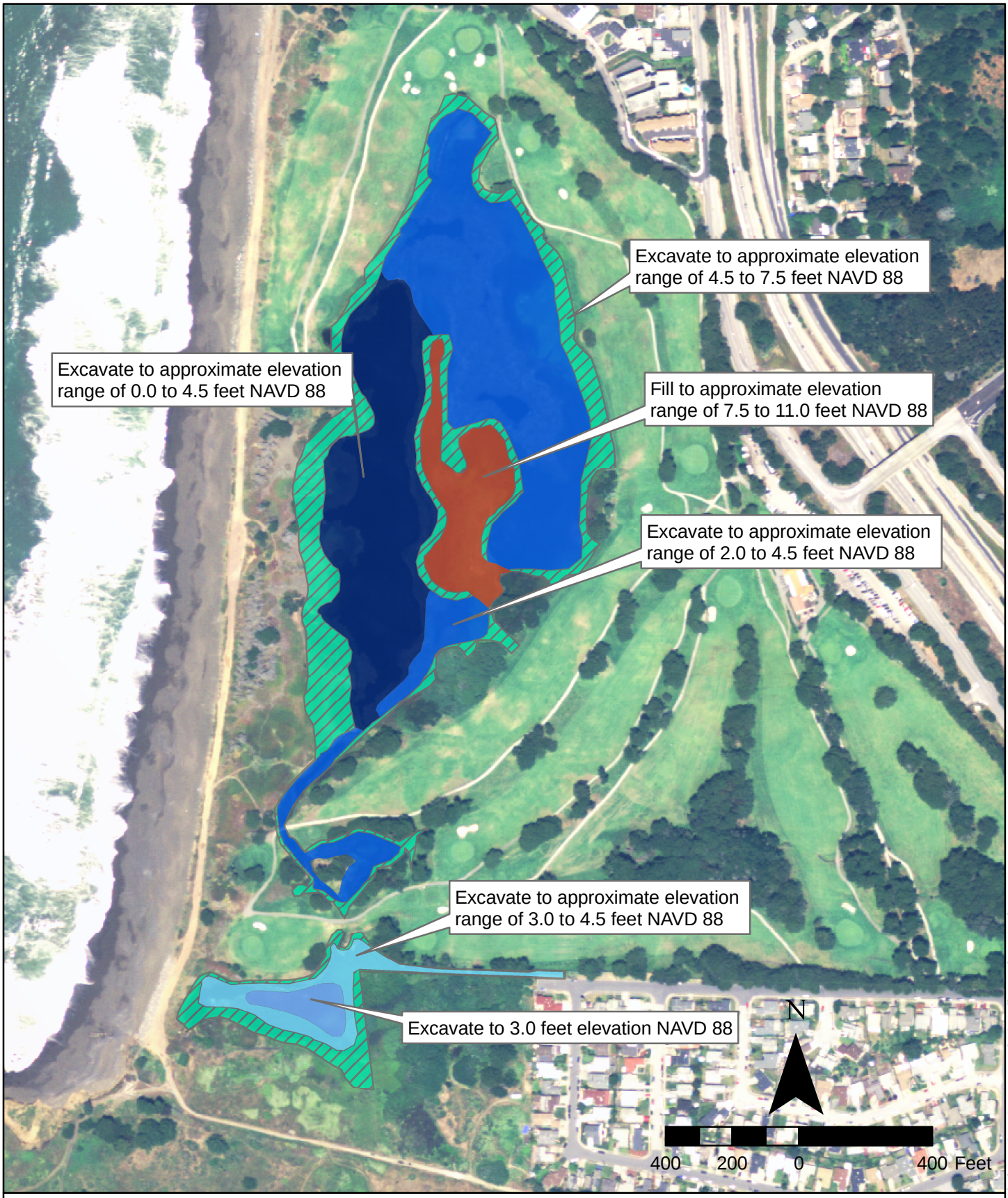
Alternative A18 keeps almost all of the original holes and would accomplish the goal of creating viable upland SFGS adjacent to the wetlands. To maintain an 18-hole regulation course on this property, it is important to keep the existing 18th hole in place because the course needs to return to the clubhouse. A scorecard showing the final lengths and pars of each hole under Alternative A18 is shown as Appendix E.

The proposed 9-hole alternative would eliminate golf around the lagoon by eliminating two golf holes and replacing the two holes at the rifle range. The 9-hole alternative would also add a driving range and practice hole.

4.4 FEATURES COMMON TO ALL ALTERNATIVES

The common component of all alternatives is restoration of the wetlands complex. Under all alternatives, the same features are proposed to restore wetland habitat and reduce the potential for recurrence of the problems that now occur, which include sedimentation, eutrophication due to dead and decaying vegetation, loss of open water habitat, and flooding of fairways. Implementing the restoration actions below would accomplish the main goal of the project, which is to enhance CRLF and SGFS habitat. The main components of the wetland restoration are as follows:

- **Dredging to remove sediment and decaying vegetation**. The areas that are currently open water within the lagoon would be deepened by up to 2 feet, and open water areas within the pond by up to 3 feet (Figure 21). Dredging to this extent would bring bottom elevations in the lagoon to 0' NAVD 88 at the deepest part of the lagoon, and down to +2' NAVD 88 in the pond. The eastern portions of the lagoon and pond as well as the connecting channel would be excavated up to 6 feet in the centers to restore open water habitat and to ensure that ample edge habitat consisting of open water/emergent vegetation interface and wetland/upland interface would persist for the foreseeable future. Deepening these areas will ensure persistence of open water habitat by discouraging the growth of dense stands of bulrush and cattails that are overgrowing the wetlands and diminishing habitat quality for the SFGS and CRLF.
- **Recontouring the shoreline to create shallow water habitat**. The eastern edge of the lagoon, the edges of the connecting channel, and the north and south edges of the pond would be contoured to create shallow water habitat (1-3' deep) to allow for CRLF breeding habitat. Shallower water (<1') will allow for growth of vegetation upon which frogs can attach egg masses, while deeper water (1-3') will allow for areas of open water or areas floating emergent vegetation.



Wetland Grading Plan

Sharp Park Conceptual Restoration Plan

Pacifica, CA

Figure 21

TETRA TECH

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- **Creation of an upland peninsula.** A peninsula of approximately 2 acres will be created in the middle of the lagoon and shallow water habitat for the CRLF. The peninsula is intended to address the shortage of upland SFGS habitat, and offer additional shallow water habitat at its edges for CRLF breeding. The peninsula will be constructed to be high enough above ordinary high water and the water table that it will develop an upland plant community and allow squirrels and other rodents to establish burrows which would later be used by the SFGS.

- **Construction of upland mounds**. Upland mounds will be created on the east and south sides of the lagoon and in the dispersal corridor between the lagoon and the pond.

- **Pump Operations.** Altering the methods of operating pumps and other measures to control hydrological features is proposed under all alternatives. The main purpose of altering pump operations is to be able to better control water levels without stranding CRLF egg masses, and thereby reduce the extent of golf course flooding. The main feature of this action is to cycle the pumps more frequently so that they turn on when the water is at a lower level than they currently do. The main disadvantage of cycling the pumps more frequently is that they will likely wear out more quickly than they would under current conditions. The need to operate the pumps more frequently could be reduced by raising the level of fairways that flood, as proposed under Alternative A18.

- **Upland/Aquatic linkage and habitat segment.** A habitat linkage area between the lagoon and the pond would be constructed with native upland vegetation and mounds designed to attract the SFGS. Construction of this corridor will require closing Hole 12 and revegetating the area with native upland species. The corridor would be bisected by the connecting channel, which will provide CRLF breeding habitat and SFGS foraging habitat. The habitat linkage will allow the SFGS population to inhabit a contiguous habitat segment area with features that will provide suitable habitat for SFSG on a year round basis between the lagoon and Mori Point without disturbance from humans or mowing equipment.

- **Completion of a Compliance Plan.** SFRPD has completed a compliance plan that is designed to avoid mortality and injury of SFGS and CRLFs resulting from maintenance and operations of the golf course (SFRPD 2009). Features of the compliance plan include increase monitoring to determine the earliest incidence of CRLF egg deposition, restrictions on mowing, gopher trapping, or repairs in sensitive areas, restrictions on use of particular types of herbicides, and increased stewardship training. Compliance planning is occurring under a separate process than the restoration planning described in this report.

- **Closure of Hole 12.** Due to its position directly between the lagoon and the pond, Hole 12 would be closed under all alternatives. Closing this hole would allow for creation of an uninterrupted habitat corridor between the lagoon and the pond and would also reduce the amount of human intrusion into areas that might be transited by SFGS. Hole 12 would be replaced under each alternative, although the exact alignments vary.

- **Catchment Basins**. To slow the rate of sedimentation from upstream sources, sediment catchment basins would be installed in two locations, one near the mouth of Sanchez Creek and the other on City of Pacifica property just outside the northern boundary of the Sharp Park.

- **Fencing**. A post and rail fence would also be installed to discourage human and pet intrusion into the restored habitat area, although the alignment of the fence in areas away from the seawall may vary according to the different alternatives. All alternatives include fencing along the seawall to the west of the lagoon, according to the Draft Compliance Plan.

- **Revegetation**. Uplands, wetlands, and shallow aquatic areas would be revegetated. The proposed plant palette includes aquatic, wetland, transitional and upland plant species known to occur in areas adjacent to Laguna Salada or similar habitat types. These plants occupy different strata to maximize habitat for a variety of species, particularly the SFGS and the CRLF, for cover, basking, and foraging. More specifically, emergent and floating-leaved species were selected to minimize the growth of non-native *Typha angustifolia* that currently provides poor CRLF habitat. Increased emergent and floating-leaved vegetation should also provide increased habitat for the San Francisco forktail damselfly. Sources of information include the recovery plans for the SFGS (USFWS 1985) and the CRLF (USFWS 2002). Table 2 lists plant species that are recommended for revegetation of all areas.

Table 2. Native Plant Species Recommended for Revegetation

Type	Scientific Name	Common Name
Transitional	*Juncus patens*	Spreading Rush
Transitional	*Rubus ursinus*	CA Blackberry
Transitional	*Scrophularia californica*	Beeplant
Transitional/Wetland	*Rumex salicifolius*	Willow Dock
Transitional/Wetland	*Salix lasiolepis*	Arroyo Willow
Transitional/Wetland	*S. sitchensis*	Sitka willow
Upland	*Achillea millefolium*	Yarrow
Upland	*Anaphalis margaritacea*	Pearly everlasting
Upland	*Argentina anserina*	Silverweed cinquefoil
Upland	*Artemisia californica*	CA Sagebrush
Upland	*Baccharis pilularis*	Coyote Bush
Upland	*Bromus carinatus var. maritimus*	CA Brome
Upland	*Castilleja wightii*	Indian Paintbrush
Upland	*Clarkia rubicunda*	Farewell to Spring
Upland	*Danthonia californica*	Oatgrass
Upland	*Diplacus aurantiacus*	Orange Bush Monkeyflower
Upland	*Dudleya farinosa*	Liveforever
Upland	*Festuca rubra*	Red Fescue
Upland	*Leymus triticoides*	Creeping Rye/Beardless Rye
Upland	*Mimulus aurantiacus*	Sticky Monkey Flower
Upland	*Nassella pulchra*	Purple Needle Grass
Upland	*Rhamnus californica*	Coffeeberry
Upland	*Sidalcea malviflora*	Checkerbloom
Wetland	*Eleocharis macrostachya*	Common Spikerush
Wetland	*J. effusus*	Rush
Wetland	*Sagittaria latifolia*	Broad-leaved Arrowhead
Wetland	*Scirpus microcarpus*	Small-fruited Bullrush
Wetland/Aquatic	*Potamogeton diversifolius*	Waterthread Pondweed
Wetland/Aquatic	*Potamogeton nodosus*	Long-leaved Pondweed
Wetland/Aquatic	*Sparganium angustifolium*	Narrowleaf Burreed
Wetland/Aquatic	*S. eurycarpum*	Broad-fruit Burreed
Wetland/Aquatic	*Typha latifolia*	Cattail
Wetland/Aquatic	*Zizania palustris*	Wildrice

Habitat features in restored upland areas would be the same under all alternatives, with the main difference being the extent of restored area. Ruderal areas and areas currently used for golf would all be restored as native coastal scrub/grasslands, although some of the uplands would be restored specifically for SFGS basking habitat.

- **Maintenance and Monitoring**. Assuming that the alternatives are designed and implemented correctly, success of any of the restoration alternatives will depend on the degree of maintenance and monitoring that occurs. Monitoring is recommended on a yearly basis, and maintenance needs will be determined by the results of the monitoring efforts. Monitoring for the following should occur on a yearly basis:

    - **Use by Listed Species** Since this is a recovery action for the SFGS, monitoring for use of restored areas by SFGS and the CRLF should be the major monitoring priority. As wetland and upland communities develop after restoration, habitats for SFGS and CRLF are anticipated to gradually develop as well. Surveys should begin prior to construction, and should continue after construction to document the extent of viable habitat and the population health of these species. Surveys should be coordinated with USFWS and CDFG to ensure compliance with endangered species laws and regulations.

    - **Invasive Plant Species** Since most of the habitat surrounding Sharp Park has been altered by the presence of non-native species, some of which are noxious invasive species, it is likely that restored areas will also be colonized by these species. Due to the relatively large area of restoration and the high labor needs associated with controlling invasive species, it is recommended that resources be applied to controlling the most noxious invasive species, including perennial pepperweed *(Lepidium latifolium),* gorse *(Ulex europaeus)*, reed canary grass *(Phalaris arundinaceae)*, and various types of thistle.

    - **Vegetation Cover** Percent vegetation cover in restored upland areas should be monitored at 6 month intervals for the first three years, and on a yearly basis thereafter. Wetland areas should be monitored to ensure that the target plant communities are developing and to ensure that areas do not become overgrown. Native species should be replanted yearly or as needed to provide a competitive edge over non-native species.

    - **Non-native Wildlife and Feral Species** Habitat restoration can be successful only if predation from non-native or feral species such as cats, bullfrogs, red foxes, and predatory fish can be minimized. Although predatory fish will be eliminated when the wetland complex is drained for construction, it is possible that new specimens will be deposited there later. Red foxes and feral cats have been seen at the site, and should be trapped and removed if they are identified as being threats to the SFGS or CRLF. Bullfrogs, which prey on CRLFs and juvenile SFGS in other areas, have not been identified in significant numbers at Sharp Park, but should be monitored for.

    - **Impacts from Human Use** Changing the use of lands immediately adjacent to the wetlands complex from primarily golf to other forms of recreation will affect the patterns of human use. Human incursion into restored uplands may affect SFGS in these areas, particularly by people on mountain bikes or those who allow dogs into the area, and should be monitored closely.

    - **Sediment** Although some sediment input into the wetlands system is desirable, controlling excessive sedimentation is one of the keys to ensuring that the current problem of overgrowth of emergent species in wetland areas does not occur in the foreseeable future. Sediment basins proposed for the north end of the park and on Sanchez Creek should be monitored for effectiveness on a yearly basis, and will likely need to be cleaned out at least

once every five years. Cross sections of the aquatic areas should be taken at established locations every five years to measure sediment accretion.

- **Water Quality** Water quality parameters to be monitored should include salinity, presence of heavy metals, dissolved oxygen, and input of fertilizers or herbicides from runoff or use of recycled water. Measurements should be taken at primary input locations and in the connecting channel. If water quality deficiencies are persistent and affect habitat quality for the SFGS and CRLF, remedial actions will be implemented as needed.
- **Construction Monitoring** A qualified biologist would be onsite during construction to monitor for sensitive species that may enter the construction area. The construction area should be surveyed for listed species prior to construction, and any specimens found in the construction footprint should be trapped and relocated. The biological monitor must be given authority to shut down construction in the event that listed species are found in the construction area.

4.5 ALTERNATIVES

The following alternatives have been considered in this report:

18-Hole Alternative (Alternative A18)

Alternative A18 is the conceptual plan that was under design for recovery of the SFGS and the CRLF prior to consideration of restoring greater Sharp Park (Figure 14). This alternative is intended to fulfill the recovery goals for the snake and frog while maintaining as much of the current golf course configuration as possible.

Under this alternative, Hole 12 would be closed and restored as coastal scrub/grassland habitat. Holes 10 and 13 would be shortened, and a new hole would be created near the rifle range/ archery course east of Highway 1. No new holes would be restored on the west side of the lagoon; instead, this area would be restored from its degraded condition to native upland habitat. Portions of the fairways in holes 10, 14, and 15 would be raised to 10.0' NAVD 88 from their current elevation of between 6.5' and 9.0' to prevent flooding on the fairways and also to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded. The fairway, green and tee areas of hole 18 would be raised to allow a consistent 2% slope from the east side of hole 18 to the west side of hole 14. No boardwalk would be created under this alternative, as there would be no need to cross the restored habitat area between the lagoon and pond. Several Monterey cypress trees would be removed from fairways east and north of the lagoon, as well as from the ruderal habitat west of the lagoon.

SFRPD would develop a new 165 yard, par three hole (Hole 7) after the existing 6th hole and in the location of the current organic waste site and rifle range. This hole would replace the existing 12th hole which would be removed to allow habitat creation between the lagoon and the pond. The new hole will be 165 yards from the back tee and play slightly uphill. The bunkering and sculptured contouring would be characteristic of design strategy and aesthesis of Dr. Alister MacKenzie.

The length of the hole is approximate and would become the second longest par three on the course. This length helps provide a variety of distances of par threes which is desirable for a regulation golf course.

9-Hole Alternative (Alternative A9)

This alternative is intended as a compromise between golf considerations and expanded upland areas east of the main body of the lagoon, and to increase opportunities for recreational pursuits other than golf. Under this alternative, all holes bordering the wetland complex would be closed and restored to coastal scrub/shrub habitat (Figure 15). Three holes (1, 8, and 9) would remain west of Highway 1, along with a driving range and

teaching area, and two new holes would be constructed at the rifle range. All existing holes east of Highway 1 would remain in their current location. Excess spoils from excavation of the lagoon would be deposited on the rifle range after remediation. Numerous Monterey cypress trees would be removed under this alternative. A concrete golf cart path would be removed and replaced with a crushed granite path that would start near the clubhouse, proceed around the north end of the lagoon, and end at an observation point and interpretive center located on a boardwalk that would extend into the marsh.

This alternative creates a driving range where existing holes #2 and #3 are located. To accommodate this range, and remove all golf around the lagoon, two new holes would be built at the east end of the golf course. The new holes would start after the existing 6th hole and be built on the site of the organic waste dump and the defunct rifle range.

> Hole 4 – Par 4, 400 yards. This would be an uphill hole playing longer than the 400 yards and has the potential to be a challenging par 4.
>
> Hole 5 – Par 3, 175 yards. This mid to long length par three would play slightly downhill. The setting would be very appealing with a natural area on the left and hills on the right.

No Golf Alternative

A single no golf alternative was developed (Figure 16). This alternative was developed with the goal of maximizing the amount of available upland habitat for the snake and frog in the absence of golf operations. Because the lack of suitable upland habitat was identified as the limiting factor for the snake, the golf areas would be converted into uplands. Enhancements to wetland areas in lower Sanchez Creek, Horse Stable Pond, and Laguna Salada would be identical to those outlined in the other concept plans. Water from Sanchez Creek would be captured in two shallow ponds to provide additional breeding habitat for the CRLF.

Under this alternative, all golf holes would be closed and the fairways would be restored to native coastal scrub/shrub habitat. Sanchez Creek would be daylighted as far east as the defunct rifle range and riparian habitat would be restored along the stream. Two shallow ponds would be constructed on Sanchez Creek to enhance CRLF habitat away from the marsh complex. These ponds would be constructed above the 100-year flood elevation that would occur under projected sea-level rise scenarios. A crushed granite walking path would replace concrete golf cart paths and would be extended to encompass the entire lagoon. No bicycles would be allowed on these paths. Visitors would cross the marsh and upland dispersal zone on a boardwalk that would span the entire habitat zone between the lagoon and the pond.

Maintenance of the restored area would still need to occur, and the pumps would need to be operated in the same manner that they currently operate during the winter.

4.6 POTENTIAL IMPACTS OF RESTORATION

If implemented, these plans could cause a number of temporary and permanent effects to natural resources and recreational opportunities at the park. The full range of potential effects will be assessed during preparation of CEQA documentation and will be addressed directly during the permitting phase of the project. The following have been identified as potentially occurring:

- *Take of listed species*. Although this project is considered a recovery action for listed species, accomplishing this goal will require a great deal of earthmoving and alteration of existing resources. Extensive human presence during construction, use of heavy excavating and earth-moving equipment, and noise can all harm wildlife species by interrupting their foraging or breeding habits or by resulting in direct harm to individuals.

- One of the first tasks that would occur during construction would be to drain the lagoon and the pond, which would discourage SFGS and CRLFs from remaining in the project area, reducing the potential for harmful effects to these species. However, although every effort would be made to capture and relocate sensitive wildlife resources prior to construction, the possibility of harm to listed species remains. Impacts to listed species would be addressed extensively during the Section 7 consultation process with USFWS and during similar consultation with CDFG, and standard and specific practices to minimize the potential for take will be developed at that time. Furthermore, impacts to listed species during construction will be offset in the long term by increasing the quantity and quality of their habitat in the marsh complex area.

- Under the 9-hole alternative, a walking path would encircle most of the lagoon area, enhancing opportunities for exercise and wildlife viewing. Under the No Golf alternative, the walking path would encircle the entire lagoon. The absence of golf operations would remove potential threats to wildlife posed by mowing and potential harm and harassment by players, but management for other threats would be required. Under both alternatives, the walking path would be located in the restored upland area, giving humans and dogs relatively unrestricted access to the area that is being restored for SFGS upland habitat. Although signs would be installed asking visitors to remain on the path, incursions into habitat areas would likely occur. Increased casual use of this area could increase disturbance of the SFGS, particularly by dogs and feral cats, which would be unlikely to use this area if it remained a golf course. Mountain biking would pose a threat to snakes basking on or attempting to cross trails.

- *Impacts on Recreation*. Although some recreational pursuits, such as bird watching, would likely be enhanced by the proposed restoration, other recreational aspects of the marsh area could be temporarily or permanently diminished. Dog walking would continue to be an unauthorized activity, and due to the greater presence of sensitive resources and higher potential for damage to egg masses after restoration, enforcement of this restriction, including issuance of tickets, will be increased.

- The most extensive impacts upon recreational resources would occur as a result of converting the golf course to a 9-hole course or by closing the golf course completely. A 9-hole course would be much less attractive to golfers than an 18-hole course, and a No Golf alternative would force golfers to find another course altogether.

- *Impacts to Visual Resources*. Extensive excavation and regrading of the marsh complex would occur and may have short term negative effects on local scenery. However, the marsh complex would be allowed to fill with water immediately upon completion of construction, and the visual impacts would subside at that time. Long-term effects from restoration of the wetlands complex would likely be positive as there would be a larger expanse of visually appealing open water. Some impacts to the viewshed would likely occur with the installation of a driving range, which would require construction of a chain link fence barrier at the south end of the course to keep golf balls from entering the residential area located south of the park.

- *Impacts to Wetlands*. Impacts to wetlands would occur during construction and as a result of creating an upland island in the middle of the lagoon. It is estimated that up to 1.5 acres will be filled during construction, an amount that would subsequently be recreated on the west and south sides of the marsh complex. Ultimately, there would be no net loss in amount or function of wetlands, and the end result would be restored wetland that provides better functions in terms of water quality benefits and wildlife habitat. Impacts to wetlands will be addressed during the Section 404 and 401 permitting processes and during preparation of a Lake and Streambed Alteration Agreement.

4.7 RESTORATION BENEFIT ASSESSMENT

To aid in evaluating the relative benefits of each alternative, SBI developed a habitat scoring system combined with a GIS model to determine the extent and quality of habitat that would be available to the SFGS and CRLF under each alternative. The scoring system was developed to characterize optimal habitat based on habitat correlates of the CRLF and SFGS from published literature, recorded observations of the species at the site during past surveys, and experience with these species at other sites in the region.

An aerial photograph of the site was divided into equal-sized cells, each 15 X 15 meters or about 1/20th acre, and a standardized scoring system was applied to each cell. Each cell was ranked least suitable (0), moderately suitable (1), or highly suitable (2) based on the presence of the 11 habitat characteristics included in the scoring system. Next, a raster surface consisting of cells, each with a habitat type and score associated with it was created over the photograph. Cells that were scored as containing high-quality habitat were summed in order to calculate the number of total acres of each habitat type in the photograph, and accuracy was verified with field visits to the site. This process was repeated using a concept drawing for each alternative to estimate the amount of habitat that would be created or lost under each alternative. Habitat quality under existing conditions is shown in Figure 17. Habitat quality projections for proposed alternatives are shown in Figures 18 through 20. Table 3 summarizes the results of the habitat quality assessment.

The following categories of habitat types were used in the analysis:

CRLF breeding and SFGS primary foraging habitat. Optimal habitat of this type contains water that persists long enough to facilitate CRLF tadpole development. It also would contain a mix of open water and emergent plant growth, as well as areas of shallow water extending at least one meter from shore. Wetlands in Horse Stable Pond and the connecting channel are examples of this habitat type.

SFGS upland retreat and basking habitat. Optimal upland habitat would consist of grassland or similar vegetation contacting CRLF breeding / SFGS foraging habitat with bushes providing some cover. Rodent burrows or large soil crevices would be present in soil that remains unsaturated throughout winter to provide upland retreats. Under existing conditions, this type of habitat is limited to an area south of Horse Stable Pond.

CRLF non-breeding and SFGS movement and secondary foraging habitat. Habitat containing year-round water or moisture but that is unsuitable for CRLF breeding was considered optimal non-breeding habitat so long as it also contained sufficient cover from predators, and was not separated from breeding habitat by a significant barrier or distance. Examples of this habitat type include dense shrubs located a short distance from water and riparian corridors. SFGS use this habitat type for movement and may forage here, though less frequently than in wetlands where CRLF breeding takes place.

Table 3. Habitat Quality Assessment and Projection Summary

Alternative	Available High-Quality Habitat (Acres) /(Increase over existing conditions)			Advantages for Habitat Quality	Disadvantages for Habitat Quality
	B/F	Up	N/F		
Existing conditions	3.9 (*)	3.8 (*)	13.9 (*)		Virtually no suitable SFGS upland habitat Little upland connectivity between HSP and LS
All Restoration Alternatives				Significant increase in uplands over existing conditions within LS and adjacent areas Increased CRLF breeding / SFGS foraging habitat in LS Adequate connectivity between HSP and LS Elimination of predatory fish Reduction of impacts of park visitors through fencing, signs	Golf operations would pose an ongoing potential threat to individual snakes, except under the No Golf Alternative
A18	10.7 (+6.8)	23.4 (+19.6)	10.0 (-3.9)	See above	SFGS foraging habitat on west and north sides of LS are adjacent to golf course
A9	10.7 (+6.8)	44.3 (+40.5)	10.1 (-3.8)	See above	Footpath through upland areas could result in pedestrian / pet impacts in habitat areas
No Golf	11.3 (+7.4)	97.4 (+93.6)	12.9 (-1.0)	See above, and Increased CRLF breeding / SFGS foraging habitat in LS, additional breeding ponds to mitigate potential future sea level rise Increased SFGS habitat east of Highway 1 Increased habitat by daylighting portions of Sanchez Creek	Footpath through upland areas could result in pedestrian / pet impacts in habitat areas

B/F = California red-legged frog breeding / San Francisco garter snake primary foraging habitat

Up = San Francisco garter snake upland basking / retreat habitat

N/F = California red-legged frog non-breeding / San Francisco garter snake secondary foraging habitat

Of the three habitat types mentioned above, CRLF non-breeding and SFGS movement and secondary foraging habitat is considered the least valuable in this location. This is because the moisture and cover that characterize high quality non-breeding habitat also would be available year-round at Laguna Salada, Horse Stable Pond, and the canal. For this and many other frog populations the shallow water and emergent vegetation which characterize high quality breeding habitat effectively function as non-breeding habitat outside of the breeding season. Furthermore, while some frogs at the site are likely to move relatively long distances from their breeding habitat, most probably stay or make only short movements from the water bodies. At one breeding site in Santa Cruz County as many as 80-90% of CRLF were found to remain there year-round (Bulger et al. 2003) although this number is probably very site-specific. While maintaining non-breeding and movement habitat also is important to ensure the survival of local CRLF populations by protecting individuals prone to long distance dispersal (Fellers and Kleeman 2007) addressing the lack of core breeding habitat should be the first priority for CRLF habitat enhancement at Sharp Park. Therefore habitat creation at this site emphasizes providing breeding habitat where moisture and cover persist year-round, and replacing non-breeding habitat with habitat of this type is considered to be a positive tradeoff.

Likewise, while the SFGS may occasionally use typical CRLF non-breeding habitats including riparian forest (SBI 2008), its primary upland habitat consists of grassland or similar areas with some shrubs and underground retreats. Therefore, replacement of CRLF non-breeding and SFGS movement and secondary foraging habitat with upland basking and retreat habitat is considered to be a positive tradeoff for the SFGS as well.

It is also important to note that while the No Golf Alternative offers by far the greatest amount of SFGS upland basking and retreat habitat, much of the newly created upland habitat is located relatively far from the marsh complex. These areas are unlikely to be used as frequently as similar upland areas closer to water, and evidence from another site suggests that extensive upland areas would not be required to maintain a stable population of SFGS. As an example of this, the West-of-Bayshore parcel located in Millbrae, California supports a large population of SFGS despite upland habitat at that site being limited to a relatively narrow area directly adjacent to the canals and marshes. The average total width of the 180-acre parcel is only about 750 feet, and a significant proportion of the area (more than 44%) is covered by wetlands. Consequently, few upland areas at the site extend farther than 350 feet from the wetlands, and most upland areas are considerably closer. Despite the relatively small amount of available upland habitat at that site (about 100 acres of upland vs. 80 acres of wetlands), the SFGS population was estimated to consist of several hundred individuals, and appears to be similar to when it was first estimated in 1994 (SBI 2009).

Under the No-Golf Alternative upland habitats would be created up to 800 feet from the main wetland complex. Upland habitat restored under the No-Golf Alternative east of Highway 1 would be located even farther from the existing wetlands in an area where there have been several studies with a negative finding for SFGS, and barriers to dispersal mean that colonization by SFGS is not guaranteed. While SFGS may eventually use these areas, distant uplands are less likely to be used extensively by the SFGS when suitable habitat exists nearby highly productive wetlands. Therefore, alternatives that concentrate upland basking and retreat habitat near the marsh complex may offer a comparable amount of highly utilized upland habitat in critical areas as does the No Golf Alternative.

Each alternative, including those that retain golf at the park, would provide a several-fold increase in high quality upland habitat over the 3.8 acres currently available, and each would be sufficient to allow the SFGS to persist at the site (Table 3). Alternative A18 would result in 23.4-acres of upland habitat located mainly south and west of the lagoon. Under Alternative A9, 44.3 acres of upland habitat would be distributed mainly around the perimeter of the lagoon. Each of these also would provide uninterrupted areas for SFGS to make seasonal movements to and from high quality winter uplands that will be created between Horse Stable Pond and the lagoon and to the slopes at Mori Point to the south.

4.8 Construction Sequence and Timeline for Implementation

A phased approach to construction was assessed. Under a phased approach, the most pressing tasks would be completed first, with other tasks to follow as funding allowed. The most pressing tasks in this plan are to dredge or excavate to improve water flow and to complete the restoration of the wetland complex and uplands on the east side of the lagoon and between the lagoon and the pond. Restoration of upland areas beyond the areas immediately adjacent to the lagoon or in the dispersal corridor south of the lagoon are considered to be of less importance, and could be constructed at a later time.

A phased approach would likely present a significant increase in the overall budget for the project. There are at least three reasons for this. The first is that the cost of mobilizing and demobilizing equipment, construction crews, traffic control staff, and other staff and equipment is a significant part of the estimated project cost. This cost would only be incurred a single time if the entire project were constructed at once, whereas it would be incurred multiple times under a phased approach. Furthermore, the least cost construction scenario would include re-use of much of the excavated material, which would be of such quantity that it would be impossible to stockpile it for later use. Therefore, it would need to be reused at the same time that it was excavated. A phased approach would make this impossible, necessitating offsite disposal of all excavated materials. Finally, the estimated construction costs for the various alternatives are based on 2009 prices and prevailing wages, which will increase each year after 2009. Therefore, the estimated cost for the same project will be higher in 2010 than the price estimated for 2009.

Under a single phase approach, the wetland complex would be restored first. Numerous steps need to occur before this can happen. Once a preferred alternative has been selected from the conceptual plan, the alternative will go through 30%, 60%, 90% and final design. Each of these levels of design can take several months. Permit applications will likely be prepared at the 30% design level and submitted shortly thereafter. The process of acquiring Section 7, Section 404, and Section 401 permits can take up to a year. Once designs are completed and permits have been secured, a bid package will be sent to prospective contractors, who will submit bids, and the winning contractor will contract with SFRPD and any other project sponsors to construct the project. It is recommended that the project be constructed during the dry period and after the CRLF and SFGS breeding seasons are over. Assuming that the project is designed during the winter and spring of 2010 and permit applications are being reviewed during the spring and summer of 2010, it is likely that the earliest possible opportunity to construct the project would be in summer of 2011.

4.9 Cost Considerations and Estimated Project Budget

Restoration Cost Considerations

Preliminary cost estimates were developed for each Sharp Park restoration alternative using a unit cost-based approach. The unit cost values were based on recent cost quotations, standards for restoration projects, and recent, and/or location-specific bid sheets or unit cost analysis information. Unit cost values represent equipment, labor, materials, and contractor overhead and profit. These cost estimates are at a preliminary level (approximately a 10 percent design) and are intended to allow comparisons between alternatives. The costs do not account for phased construction (multiple mobilizations), and costs are in 2009 dollars. Summary cost estimates for each alternative appear in Tables 4 and 5.

Quantities were estimated from areas shown on the GIS figures, topographic/bathymetric data generated in and around the wetlands complex, and assumed averaged dimensions (e.g., depths of excavation or fill). Site preparation is represented as a percentage of direct constructions costs. It includes mobilization and demobilization, dewatering and/or diversion, erosion control and BMPs, traffic control, utilities, and general demolition of minor obstructions not accounted for in the major cost item costs. The total site preparation percentage was 17%, as shown on the unit cost breakdown table.

General markups are estimated as a percentage of direct construction cost plus site preparation costs. General markups include a contingency to account for uncertainties in design, topography and other site conditions. Markups also include costs of the design phase of the project and construction management. These markups total 50% as shown in the unit cost table. Real estate acquisition costs are assumed to be zero since all restoration activities occur on existing golf course property.

Operation and maintenance costs are represented as a net present value (NPV) over a 50-year assumed project life. These costs include maintenance of vegetation during the first five years, invasive species maintenance every year for the first five years and as needed after five years, pump maintenance at the Horse Stable Pond pumphouse every other year, wetlands maintenance at years 25 and 50, sedimentation basin maintenance every five years, and culvert maintenance at years 25 and 50. These costs are detailed in the operations and maintenance summary table.

An important cost component of each alternative is the cost to dispose of excess excavation or fill that cannot be reused onsite. For this estimate it was assumed that excavation for haul-away would be disposed in Half Moon Bay, California, at the Ox Mountain Landfill Facility. There is a transfer station located in Pacifica; however, the unit cost to dispose at this location is much higher because it requires rehandling before final disposal at a landfill. The total unit cost of $35 per cubic yard for this line item assumes the following:

- nominal cost of $4 per cubic yard for excavation and loading into 26 cubic yard semi end-dumps,
- semi end-dump haul rate of $130 per hour,
- total one-way distance of 20 miles (combined highway and surface street) between Sharp Park Golf Course and Ox Mountain Landfill,
- disposal fee of $23 per cubic yard including escalation and contractor mark-up per July 2009 quotation from Ox Mountain (operated by Republic Services, Inc.).

In general, alternative project costs are driven by earthwork line items such as excavation and grading. Removing, on average, the top 1.5 feet of sod and topsoil off the fairways to ensure that kikuyu is eradicated is one of the most expensive features of this plan, and dredging/placing organic and mineral sediments from the wetland complex is the other most expensive feature. With variations depending on the type and location of excavation, generally the costs are based on the amount of surface area moved. Because the No Golf Alternative proposes to have the greatest area of fairway excavated, it would have the greatest volume excavated (approximately 303,000 cy) whereas Alternative A18 has the least amount of fairway excavated and therefore the least volume of excavated materials (approximately 126,000 cy).

Materials deemed suitable for reuse as golf course substrate are those with low organic content and high sand/silt content. It was assumed that approximately 50% of excavated material was suitable for reuse as golf course substrate onsite. Under the off-site disposal scenario, the remaining fill requires haul-away and landfill disposal. Under this assumption the cost of hauling and disposing off-site of unsuitable fill is ~$10.0M for the No Golf Alternative and between ~$3.8M and $5.5M for Alternatives A18 and A9. If all excavated fill is reused onsite the cost of this task is reduced for each alternative by up to 56%. Further design stages should

verify assumptions made in estimating cut and fill quantities and lagoon water surface elevations, as well as the estimated excavation and grading unit costs.

Another element that differentiates the alternatives is the amount of planned riparian and coastal scrub/shrub restoration. The No Golf Alternative requires the greatest amount of riparian and coastal scrub/shrub restoration due to the removal of the golf greens, totaling 94 acres, which is over double the amount of the other three alternatives. Additionally, the No Golf Alternative requires importing nearly three times as much topsoil fill than the other alternatives.

Revegetation costs include mulch/topsoil as needed. Earthwork costs assume no contaminated material. If contaminated materials are encountered, additional costs will be incurred for treatment and/or transport to an appropriate disposal facility.

A final element that differs among alternative designs is the demolition and reconstruction of the golf cart path. Under the No Golf Alternative the entire cart path would be demolished and reconstructed for recreational use. Under Alternative A9, only 20% of the cart path would be demolished and reconstructed. Alternative A18 does not require any work on the cart path and therefore does not incur a cost for this action.

Under all action alternatives, some of the construction, revegetation, monitoring, and maintenance tasks could be performed by SFRPD staff, volunteers, interns, and students. SFRPD staff operate medium-duty equipment such as backhoes and dump trucks, and could perform tasks such as daylighting Sanchez Creek, excavating and maintaining sediment basins, and maintaining the connecting channel. SFRPD also has biological and natural resources management staff that can prepare and implement revegetation and invasive species control plans, monitor egg masses, CRLF populations, and vegetative conditions, and organize interns or volunteers to control invasive species or perform revegetation or other maintenance tasks. The Natural Areas Program also maintains close ties with area colleges, and can likely enlist the assistance of graduate students who could perform thesis work by monitoring vegetative succession, wildlife populations, sedimentation, or other aspects of the post-restoration process that need to be observed, recorded, and assessed in order to determine the success of the project and apply adaptive management as needed.

GOLF COURSE REALIGNMENT COST CONSIDERATIONS

Preliminary cost estimates were developed for each of the Sharp Park Golf Course Alternatives. For a majority of the estimates a unit cost-based approach was used. The unit cost values were based on recent cost quotations, and recent local actual costs analysis information. Unit cost values represent equipment, labor, materials, and contractor overhead and profit. The costs assume all work for each phase will occur at the same time and not result in multiple mobilizations.

These estimates include work that is necessary for the proposed conceptual changes addressed in each alternative. Other course improvements such as bunkers, irrigation, drainage etc. that may need to be implemented are not included in the concepts or cost estimate.

The work addressed and quantities were estimated based on the layout of each alternative. The size of greens, tees, bunkers, irrigation, grading, drainage, grassing, cart path and landscaping are based on the conceptual layout and accepted parameters for golf holes. The work includes greens constructed to USGA recommendations, sand based tees and bunkers built to minimize maintenance. Soil amendment and additional drainage is proposed in newly constructed areas to assist in turf quality and playability.

The alternative project costs were driven by the size of the area being newly constructed or reconstructed and the size and number of golf course features. The construction areas would utilize suitable fill material generated by the habitat restoration process. The cost of moving the material is included in the restoration estimates. The cost to grade the soil into golf course features is included in the golf course estimate.

Both alternatives suggest creating new golf on the east side of the existing golf course and include removal of existing mature vegetation, mostly eucalyptus trees. The costs include hauling away the trees. One alternative provides for the realignment of the archery club access road to allow the construction of a new green.

The inclusion of netting for a driving range is a major component of the nine hole project cost. The costs were based on a generalized netting layout to protect the parking lot and the adjacent golf hole.

ESTIMATED COSTS

Estimated costs reported here include site preparation, construction, and general markups but do not include long-term operations and maintenance. An estimated cost schedule, including maintenance costs, is given in Appendix D.

Table 4. Construction Costs – Offsite Disposal

	NO GOLF	A18	A9
Site Preparation	$2,789,875	$1,056,040	$1,549,454
Restoration Construction	$12,753,248	$4,872,183	$7,114,973
Golf Hole Construction	n/a	$1,612,755	$1,711,750
General Markups	$7,771,561	$3,770,489	$5,188,089
Total	**$ 23,314,684**	**$ 11,311,467**	**$15,564,266**

Table 5. Construction Costs – Excavated Materials Reused Onsite

	NO GOLF	A18	A9
Site Preparation	$858,361	$330,772	$498,867
Restoration Construction	$5,121,184	$2,017,719	$3,006,509
Golf Hole Construction	n/a	$1,612,755	$1,711,750
General Markups	$2,989,773	$1,980,623	$2,608,563
Total	**$ 8,969,318**	**$ 5,941,869**	**$ 7,825,689**

4.10 REGULATORY PROCESS

Many of the resources found in the wetlands complex and surrounding areas are protected under one or more state or federal regulations. These regulations are enforced by agencies including the USFWS, US Army Corps of Engineers (USACE), CDFG, and the Regional Water Quality Control Board (RWQCB). Table 6 describes the permits that may be needed for this project and the conditions under which they would be required. Permit applications are generally prepared after the 30% designs for the project have been completed.

This project will require significant consultation with the USACE and RWQCB. As the federal agency charged with enforcement of Section 404 of the Clean Water Act, USACE may permit this project under a Nationwide Permit (NWP) that allows fill of wetlands for restoration projects that result in greater amounts of restored wetlands, or under an Individual Permit. Under this or separate permit, USACE may also comment on the proposed reuse of dredged materials for restoration, as proposed under all alternatives. A Section 401 Water Quality Certification will be requested from RWQCB for impacts to wetlands, habitat, and water quality. Likely concerns during this process involve water quality effects that may arise during draining of the wetlands complex prior to construction, as well as the fate of decant water resulting from placement of dredge spoils in upland locations.

In addition to wetlands regulation, the main regulatory programs guiding this plan are the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), as well as the California provisions for fully-protected species. Although the City of San Francisco is carrying out the restoration of the wetland complex on a voluntary basis, as the owner of Sharp Park, the City must still comply with these regulatory programs in carrying out the alternatives set forth in this plan. Under the ESA, implementation of the plan may require consultation or permitting from the USFWS. Under CESA, implementation of the plan may require consultation or permitting from the CDFG

Table 6. State and Federal Permits That May Be Required for Plan Implementation

Agency	Permit/Approval	Required for
Federal Agencies		
USFWS/NMFS	Incidental Take Permit, Biological Opinion	Federal projects that may affect species listed as endangered, threatened, or proposed under the federal Endangered Species Act (16 USC 1531-1544)
USACE/EPA	Individual /Nationwide Section 404 Permit	Discharge of Dredge/fill into Waters of the U.S., including wetlands
	Section 10 Permit	Construction in navigable waters (may not apply to this project)
State Agencies		
California Coastal Commission	Coastal Zone Consistency Determination	Land development within the coastal zone including grading, removing, placement, and extraction of any earth material; and harvesting of major vegetation
CDFG	Section 2080 Permit (Endangered Species Management)	Activity where a species listed as candidate, threatened, or endangered under the California Endangered Species Act may be present in the project area and state agency is acting as lead agency for CEQA compliance
	Section 2081 Incidental Take Permit	Needed if it is determined through the Section 2080 Permit process that the proposed project may result in take of a state-listed species
	Lake/Streambed Alteration Agreement (California Fish and Game Code 1602)	Change in natural state of a river, stream, lake (includes road or land construction across a natural streambed)
State Water Resources Control Board	Construction Activities Storm Water General Permit	Stormwater discharges associated with construction
Regional Water Quality Control Board	Waste Discharge Requirements (Water Code 13000 et seq.)	Discharge of waste that might affect groundwater or surface water (nonpoint source) quality
	401 Certification (Clean Water Act, 33 USC 1341; required if the project needs a USACE Section 404 Permit)	Discharge into Waters of the US, including wetlands
State Historic Preservation Office	Section 106 (National Historic Preservation Act, PL 89-665, 16 U.S.C. 470 et seq.)	Projects that may impact a historic property within the area of potential effect.

Specific measures to avoid potential adverse effects on the CRLF and the SFGS during enhancement activities would be developed in consultation with the USFWS and CDFG. The following general measures provide guidelines for implementation of the conceptual restoration enhancement plan:

- Prior to any ground-disturbing activity, a qualified biologist should provide environmental awareness training for all workers who will be on site. The training should include a brief overview of the ESA, a description of the CRLF and SFGS, what steps should be taken to avoid impacts to their habitats, and what to do if an individual frog or snake is found.

- A temporary exclusion fence should be installed to prevent listed species from entering the work area. The placement of the fence would be directed by a qualified biologist in consultation with the USFWS and CDFG.

- Following installation of the exclusion fence and at least 6 weeks prior to construction, a trapping program will be conducted to remove all listed species from the area to be impacted.

- A qualified biologist should monitor all work activities on site. The monitor would verify that exclusion fence, erosion control measures and any other environmental protection measures are properly installed.

- Work should be confined to the smallest area possible to safely complete the project. Workers should be instructed to stay within the work corridor and limits should be clearly marked.

- Vehicle refueling and maintenance should be conducted a minimum of 150 feet from aquatic habitats and other sensitive areas identified by a qualified biologist.

- Construction activities should be done during the dry season (June 1 through October 15).

- If a CRLF or SFGS is found inside a work area a USFWS and CDFG-authorized biologist should relocate it out of harms way.

5. CONCLUSIONS

With no action, the future of SFGS at Sharp Park is, at best, uncertain. Although historically SFGS have existed at Sharp Park while it functioned as a golf course, conditions of the wetlands and adjacent uplands are far less favorable than in the past. During the past several decades sedimentation of the lagoon and flooding of the surrounding uplands has reduced available habitat. Saline overwash from Pacific storms in the early 1980s probably caused a sharp reduction in both the SFGS population and its prey base. The current population is more a reflection of these historic events than of direct impacts from the golf course, although substantial conflicts do exist, particularly with regard to upland habitat. Mori Point provides nearly all suitable upland habitat used by snakes at Sharp Park, and snakes traveling from these areas to the relatively poor foraging habitat at Laguna Salada face significant hazards. Although these hazards are being addressed and reduced through measures described in the compliance plan, some potential for harm to SFGS from golf operations will always exist. At a minimum the SFGS requires more upland habitat between Horse Stable Pond and Laguna Salada, and would also benefit from having more high quality CRLF breeding habitat in the lagoon.

Though beneficial, due to the limited availability of upland habitat in Sharp Park, increasing the distribution and carrying capacity of the SFGS will not be accomplished by increasing CRLF breeding habitat alone. Increasing SFGS use of the area north of Horse Stable Pond, the areas adjacent to Laguna Salada, and the connecting channel will require maintaining undisturbed upland habitat in these areas. These enhancements can be accomplished without significant changes to the golf course design or to the movement of golfers on the course.

All four conceptual alternatives would accomplish the main goals of restoring, increasing, and diversifying SFGS and CRLF habitat, and meeting the recommendations of the SFGS recovery plan. Under all alternatives, this would be accomplished by:

- Dredging and recontouring the wetlands complex to remove overgrown wetland vegetation, create a mix of shallow water habitat and open water areas, and increase water flow through the wetlands;
- Closing Hole 12 and shortening or narrowing other holes to allow for an SFGS dispersal corridor and upland retreat/basking areas on the east edge of the lagoon, on a peninsula in the center of the lagoon, between the lagoon and the pond, and around the pond;
- Removing non-native Monterey cypress trees to reduce shading in SFGS and CRLF habitat and to reduce perching and spotting locations for predatory birds;
- Installing fencing to restrict intrusions into sensitive habitat and interpretive signs to educate visitors about sensitive wildlife; and
- Developing a water control plan that will alleviate the potential for egg mass and tadpole stranding.

The main differences between the various alternatives are the degree of upland habitat that would be created east of the wetlands complex, the costs to implement the respective alternatives, and the tradeoff between the amount of habitat and the degree to which golf opportunities are lost. Implementing Alternative A18 (with excavation re-use) would be the least costly alternative, would result in the least impact to golf, and would restore the least amount of restored upland habitat for the SFGS. Implementing the No Golf Alternative (with excavation re-use) would have higher costs, would result in the greatest impact to golf, and would restore the greatest amount of upland habitat. Alternative A9 would fall in the middle of the No Golf Alternative and Alternative A18 in terms of cost and amount of restored upland habitat. However, because the best upland habitat for the SFGS is that which is found near water bodies, much of the upland habitat restored east of the wetlands complex under the No Golf Alternative would be of lower value than that

located immediately adjacent to the wetlands complex. Therefore, from a habitat restoration standpoint, converting uplands immediately adjacent to the wetland areas would result in the greatest net benefit to the SFGS per acre of enhanced habitat. Focusing restoration efforts on these areas also would result in the least amount of lost golf opportunities since more distant habitat would remain available for golf. While the No Golf Alternative would result in a greater total amount of upland SFGS habitat, the value of the habitat gained through this alternative would diminish with increasing distance from the wetland complex. Furthermore, because of the close proximity of major urban centers including housing, freeways, major roads, and businesses and the intrinsic threats posed by them to the snake, restoring uplands and locating additional wetlands further to the east would potentially increase the chance of take of this species by drawing the SFGS away from the relatively protected existing wetlands complex into areas that would likely be extensively used by hikers, mountain bikers, and dog walkers.

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APPENDIX J

Summary of Changes to the SNRAMP

Edwin M. Lee, Mayor
Philip A. Ginsburg, General Manager

August 24, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Clarification of Changes to the SNRAMP Project Description

Dear Mr. Wycko,

The San Francisco Recreation and Parks Department (SFRPD) published the Draft Significant Natural Resource Area Management Plan (SNRAMP) for environmental review and the following describes the modifications made to the Plan for one or more of the following reasons:

- The activity was determined to be infeasible
- The activity has been completed under separate environmental review
- The activity was incorrectly described
- The activity has been reassessed as contrary to policy
- Additional details and specificity have been developed for the activity

1. Prescribed Burning. While General Recommendation GR-3b of the February 2006 Final Draft San Francisco Natural Areas Management Plan (SNRAMP) mentions prescribed burning, no burning is proposed as part of the project. The following text has been added to the project description (Section III.H of the EIR):

(Note: The SNRAMP no longer is proposing prescribed burning. The SNRAMP will be updated to reflect this change. Should the SFRPD determine prescribed burning to be a desirable, feasible method for managing native grasslands, a separate environmental review would be required to comply with CEQA, and applicable permits and other regulatory agency approvals would be obtained.)

2. Dog Play Areas. While General Recommendation GR-8b of the SNRAMP mentions consideration of new dog play areas, no new dog play areas are proposed as part of the project. The following text has been added to the project description (Section III.H of the EIR):

(Note: An underlying assumption of this EIR is that there would be no new DPAs because there is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee. Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)

3. Bayview Park Key Avenue Modifications. While Recommendation VP-8a of the SNRAMP mentions modifying the Key Avenue roadway, some of those modifications have been completed and are not proposed as part of the project. The following text has been added to the project description (Section III.F.2 of the EIR):

(note that portions of this management action have been completed)

4. Lake Merced Dog Play Area. While Recommendation LM-7a of the SNRAMP mentions relocating a dog play area, no relocation of dog play areas is proposed as part of the project, in compliance with the current moratorium on dog play areas. The following text has been added to the project description (Section III.I.18 of the EIR):

(Note: The SFRPD determined following completion of the final draft SNRAMP that, due to ongoing disturbance of breeding birds, this DPA should be closed, rather than monitored. This DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011).Due to the San Francisco moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed. Restoration of the site would continue, following removal of the DPA.)

5. Lake Merced Environmental Education Center. While Recommendation LM-8b of the SNRAMP mentions development of an environmental education center, no such center is proposed as part of the project. The following text has been added to the project description (Section III.I.18 of the EIR):

(Note: Constructing and operating an environmental education center is no longer proposed as part of the SNRAMP. The SNRAMP will be updated to reflect this change. Should those activities be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.)

6. Former Sharp Park Rifle Range. While Recommendation SP-12a of the SNRAMP mentions cleanup and remediation of the former rifle range, those activities are not proposed as part of the project. Remediation of the rifle range is complete, and the CEQA lead agency for this project is the California Department of Toxic Substances Control. The following text has been added to the project description (Section III.I.23 of the EIR):

(Note: Because these cleanup and remediation activities are part of a separate process led by the SFRPD Capital Division, are complete, and have been evaluated under a separate CEQA review, they are not addressed as part of the SNRAMP in this EIR.)

7. Additional Management Details. To provide additional details for analysis of the potential environmental effects, the following text has been added to the project description regarding best management practices, program-level activities, and routine maintenance activities:

(Section III.E.5 of the EIR)
Depending on site conditions, trails may or may not be created in previously inaccessible areas, as opposed to improving existing social trails. Trail placement would be designed to avoid sensitive vegetation and habitat to the extent possible. Trail alignments in the SNRAMP are conceptual and require further refinement and site-by-site evaluation to confirm the best alignment to provide access and minimize effects on surrounding natural resources.

The Natural Areas Program gardeners would continue to carry fire extinguishers in their trucks and would use appropriate fire prevention and suppression measures for more extensive tree and shrub removal. The SFRPD would continue to hold regular meetings with the San Francisco Fire Department and would coordinate management activities, such as tree removal, with that department.

Tree Removal and Replacement. *Invasive trees removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area. The SFRPD would take into consideration the views from Natural Areas when locations are being selected for new trees; locations of replacement trees in San Francisco Natural Areas would be selected to preserve views from important points. Tree removal and other activities conducted at the edges of Natural Areas may require temporary closure of sidewalks and roads. For Sharp Park in Pacifica, many of the trees would be replaced not with trees but with more appropriate native vegetation, specifically coastal scrub. Tree removal is discussed in detail in Appendix F of the SNRAMP. For accounting purposes, the SNRAMP defines a tree as any plant having a dominant vertical trunk that is over 15 feet tall; tree species less than 15 feet tall are considered seedlings or saplings in the SNRAMP. Natural Areas Program staff could remove trees that have a diameter at breast height (dbh) of six inches or less; Natural Areas Program staff would coordinate with the SFRPD arborist, who would evaluate the removal of larger trees. Tree work would generally be limited to the nonbreeding season for bird species. Where tree work is required during the breeding season, surveys would be conducted before tree removal to determine the presence or absence of breeding birds, in accordance with GR-4b. Typically, trees would be removed limb-by-limb, rather than felling an entire tree; limb-by-limb removal techniques would always be applied in areas adjacent to other trees or sensitive habitat unless this technique is not feasible or practical from a safety perspective. Minimally impacting tree removal techniques would be employed and would involve removing the individual limbs of a tree, then cutting the trunk into individual sections. Tree removal would be conducted manually by someone climbing the tree or someone on a mechanical cherry picker next to the tree. If tree removal occurs in an area that is roadway-accessible, the limbs and trunk sections typically would be transported from the area by a flatbed truck; in other areas, the limbs and trunk sections would be left in place on the ground. Tree removal would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance; stumps may be ground to below grade where necessary to avoid tripping hazards. The SFRPD would spread tree removal across targeted portions of Natural Areas and would not concentrate it in a particular location. Larger-scale tree removal (that exceeds half an acre or on average more than 20 trees), identified and analyzed as long-term programmatic projects in this EIR, would remove trees within urban forests (MA-2 and MA-3) over time and not simultaneously in one portion of a Natural Area. The SFRPD's Tree Removal Procedures require that all trees designated for removal be posted at least 30 days before removal. The public is invited to comment about the proposed removal, and the SFRPD may or may not modify its plans based on public input.*

Implementing the SNRAMP would involve thinning both individual trees and small clusters of trees. In most cases, some trees within the area would be left, and the surrounding forest would remain intact. Removal of other vegetation in MA-1 areas would primarily affect individual plants within roughly half-acre plots.

(Section III.F.1 of the EIR)
Programmatic projects would include the following:

- *Rerouting or constructing trails, using heavy equipment (such as bobcats, backhoes, and excavators) at an average or maximum grading depth of two feet. This activity is typically conducted by contractors.*

- *Stabilizing hillsides, using erosion control measures that require heavy equipment and grading and possible installation of structures, such as gabions. This activity is typically conducted by contractors.*

- *Undertaking initial invasive weed or tree removal projects that typically exceed half an acre (or on average 20 trees) at any one time. Trees will be removed manually and limb-by-limb, as described previously. This activity can be conducted by contractors or SFRPD staff.*

While the SNRAMP may identify additional types of programmatic projects, the environmental effects of those projects are anticipated to be similar to or less than the above categories of program-level projects.

(Section III.F.2 of the EIR)
Routine Maintenance
Routine maintenance would include the following:

- *Removing invasive weeds by hand, either as follow-up on a previously treated site or as initial treatment in small areas (less than half an acre). This activity mostly involves the use of hand tools and volunteers, with some use of power equipment by SFRPD staff, such as brush blades or chainsaws. Ground disturbance from this activity is typically within the top inch or so of ground around the root zone.*

- *Installing plants using hand tools and plants in one-gallon containers or smaller. In addition to planting, volunteers also may assist Natural Areas Program staff with installation of erosion control materials, including coir rolls, straw bales, wattles, jute netting, and straw matting. These materials are installed with pins or two- to three-foot-long wooden stakes. This activity typically disturbs up to 12 inches of surface soil.*

- *Removing invasive trees (mostly eucalyptus), as well as overhanging tree limbs. This activity typically occurs in places where trees are expanding into or threatening a native habitat or presenting a safety concern. Following removal, stumps are left in place, resulting in little, if any, ground disturbance. Typically, no more than 20 trees (or half an acre) are treated at one time. This removal covers saplings and any tree over 15 feet high. Trees over six inches dbh are typically removed by tree crews at a rate of one to a few trees at a time. Trees will be removed manually and limb-by-limb, as described above.*

- *Maintaining trails, which includes clearing deposited soil from steps, replacing or installing steps or trail edging, and rerouting and benching trails. Ground disturbance for this activity is usually six inches or less.*

- *Maintaining catchment basins and sediment dams through hand removal of accumulated materials.*

(Section III.G of the EIR)
When the San Francisco Recreation and Park Commission approved the SNRAMP for environmental analysis under CEQA, it passed the following two amendments:

- *MA-3 areas would be maintained by the SFRPD Urban Forestry staff and may be reforested with native or nonnative species. Weed and brush removal and erosion control in MA-3 areas would be undertaken in accordance with the SNRAMP.*

- *Where appropriate in the SNRAMP, feral cat relocation would be implemented only on a determination by the San Francisco Recreation and Park Commission that other methods of population reduction failed to adequately reduce cat populations in the Natural Areas.*

8. General Recommendation GR-4b. The bird breeding season was changed from April to September 1 to February 1 to August 31. (Section III.H of the EIR)

9. General Recommendation GR-15c. The following language was added to the end of the description: "retain snags and dead branches on live trees, unless they are a hazard to public safety or contain significant harmful insect or disease infestations." (Section III.H of the EIR)

10. Recommended management action VP-7b. The following text was added: "(note that this new entryway may not be feasible given the steepness of the slopes)." (Section III.I.2 of the EIR)

11. Recommended management action CH-1e. The following text was added: "(note that a portion of these trees on the north side of Corona Heights were removed in August 2010 because they were determined to be hazardous)." (Section III.I.7 of the EIR)

12. Recommended management action DP-1b. The number of existing eucalyptus trees was changed from 120 to 100. (Section III.I.8 of the EIR)

13. Recommended management action DP-2a. The text was changed so that tree removal is prohibited within 150 feet of an occupied bird nest, rather than within 500 feet. (Section III.I.8 of the EIR)

14. Recommended management action GC/OH-4a. The text was changed so that tree removal is prohibited within 150 feet of an occupied bird nest, rather than within 500 feet. (Section III.I.12 of the EIR)

15. Recommended management action IG-2a. The following text was added: "(note that this work is underway and is expected to be completed in June 2011)." (Section III.F.16 of the EIR)

16. Recommended management action LM-3a. The text was changed so that tree removal is prohibited within 150 feet of an occupied bird nest, rather than within 500 feet. (Section III.I.18 of the EIR)

17. Recommended management action LM-3b. Heron nesting areas were added to the list of areas that could require closure of social trails to reduce disturbance of such areas. (Section III.I.18 of the EIR)

18. Sharp Park. The bulleted text under SP-4a was modified and deleted. The bulleted text under SP-4b was modified to match current restoration design. Under SP-4c, language was added indicating that the goal is to ensure that red-legged frog egg masses remain hydrated. Recommended actions SP-4e, SP-6a, SP-6b, and SP-9ca were deleted and the remaining measures were re-labeled. SP-10a was modified to specify that the subject trenches are located north of Sharp Park Road. The following detailed description of the Laguna Salada wetland complex restoration activities was added, as presented below (Section III.F.2 of the EIR):

Sharp Park Restoration

As part of the Sharp Park restoration activities, the following measures from the SNRAMP would be implemented. The full set of Sharp Park SNRAMP measures are presented in Section III.I.23 and include additional measures that may fall under either programmatic projects or routine maintenance.

- *SP-4a—Implement improvements to protect and enhance the habitat for the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following:*
    - *Create upland mounds for foraging, resting, and escape cover for the California red-legged frog and the San Francisco garter snake;*
    - *Dredge excess sediments and accumulated organic matter, including stands of invasive tules, to maintain open water and fringe habitat in the wetlands complex and use appropriate dredged material on site to create or enhance upland habitat or to increase the elevation of certain golf course fairways;*
    - *Continue monitoring for California red-legged frogs and San Francisco garter snakes; and*
    - *Install and maintain signs and barriers to prevent disturbance of sensitive habitat in Horse Stable Pond and Laguna Salada by dogs or other possible nuisances.*

- *SP-4b—Construct upland mounds in the area directly south and southeast of Laguna Salada and plant with native grasses and herbs to provide snake and frog basking sites, and to provide nesting habitat for riparian birds; and*

- *SP-9b—Establish a vegetation management plan for the canal connecting Laguna Salada and Horse Stable Pond that would allow channel maintenance without affecting the forktail damselfly, California red-legged frog, or San Francisco garter snake.*

The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. These restoration activities are intended to establish conditions that more resemble previous conditions and allow for thriving populations of these listed species. Figure 2 shows the restoration project footprint and the current vegetation communities, and Figure 3 shows the conceptual plan for restoring these areas. The goals of the Sharp Park restoration are to restore or enhance the wetland and upland habitat for the benefit of the San

Francisco garter snake and California red-legged frog, which will contribute to the recovery of these species, and to reduce the potential recurrence of the conditions that negatively affect the wetland complex and habitat for these species, including sedimentation, eutrophication due to the accumulation of dead and decaying vegetation, and loss of open water habitat due to accumulation of sediment and the proliferation of invasive plant species. Although the primary restoration features discussed in this section are not likely to change, some modification may occur during consultation with the USFWS and/or CDFG pursuant to the state and federal Endangered Species Acts and during other regulatory approval processes. The main components of the restoration to achieve recovery of the California red-legged frog and San Francisco garter snake populations are as follows:

- *Dredging up to 60,000 cubic yards of material to remove sediment, encroaching plant species, and decaying vegetation in Laguna Salada, Horse Stable Pond, and the channel that connects the two water bodies, resulting in the conversion of freshwater marsh, willow scrub, and wet meadow wetland habitat to open water habitat;*

- *Recontouring freshwater marsh wetland and ruderal (disturbed) habitat along the Laguna Salada, Horse Stable Pond, and channel shorelines to create shallow water wetland habitat;*

- *Creating an upland and wetland habitat corridor between Horse Stable Pond and Laguna Salada;*

- *Converting about half an acre of wet meadow/freshwater marsh wetland to upland habitat, creating an upland refuge in the middle of Laguna Salada to provide snakes and frogs with refugia from feral cats and other terrestrial predators, and creating about an acre of replacement wetland along the northern and western edges of the lagoon in place of coastal scrub habitat; and*

- *Constructing up to four acres of upland mounds on landscaped grass on the east side of the lagoon and between Laguna Salada and Horse Stable Pond. These mounds would be placed in the area currently occupied by part of the Hole 13 fairway, which would be narrowed and reconfigured.*

Some areas that are currently open water within Laguna Salada and Horse Stable Pond would be deepened by one to three feet, and parts of the eastern portions of the lagoon and pond shorelines, as well as the connector channel, would be excavated to restore open water habitat and to ensure that ample edge habitat consisting of open water/emergent vegetation interface would persist for the foreseeable future. This deepening would be conducted using excavating equipment positioned along the shore of the two water bodies. Up to 60,000 cubic yards of material would be excavated; of this, approximately 40,000 cubic yards would be used on-site and approximately 20,000 cubic yards would be stockpiled or spread at the Sharp Park rifle range site or disposed of at the Sharp Park organic dump. Excavated dredge spoils appropriate for use as golf course substrate materials would be used on-site to raise the elevation of Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. Prior to on-site use of dredged material, the sediments to be removed as part of the wetland restoration

project would be tested for elevated concentrations of sulfides and other characteristics to determine whether the sediments would serve as soils suitable for supporting desired vegetation. If the sediment proves unsuitable, it would be placed in a nonsensitive location or treated to render it capable of supporting the desired vegetation. Treatment may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils or adding lime to neutralize acidic soils. Excavation of the eastern portions of the lagoon, pond and the connector shoreline would convert up to six acres of freshwater marsh, willow scrub, and wet meadow wetland habitat to open water habitat.

To facilitate deepening of Laguna Salada, Horse Stable Pond, and the channel that connects them, as well as removal of encoraching bulrushes and tules, the water levels would be lowered temporarily to allow equipment to access the shoreline for removal of accumulated vegetation and sediments. This would be accomplished by operating the pumps at Horse Stable Pond to draw water through the wetland complex and out to the Pacific Ocean. It is anticipated that the water level in the wetland complex would be lowered from an approximate elevation of 7.5 feet above mean sea level (msl) to an elevation of approximately 4.5 feet msl, a decrease of 3 feet. Following lowering of the water levels, a qualified USFWS-approved biologist would survey the entire project area for California red-legged frogs and San Francisco garter snakes. If individuals are found during the survey, the biologist would relocate them to appropriate aquatic habitat, such as that near Mori Point, located south of Horse Stable Pond (or other suitable location as agreed to as part of consultation with the USFWS and/or CDFG); these activities would be conducted in coordination with the USFWS and CDFG.

An upland and wetland habitat corridor between the lagoon and the pond would be constructed with upland features designed to support the San Francisco garter snake; this action would necessitate permanently closing Hole 12 of the Sharp Park Golf Course. Sediment basins would be installed in two locations, one where Sanchez Creek enters a culvert to pass under Highway 1 and the other at the northern boundary of Sharp Park; the former sediment basin would be developed on about half an acre of the golf course (primarily upland Monterey pine habitat), and the latter sediment basin would be expanded onto about half an acre of ruderal and upland Monterey pine habitat. A post and rail fence would also be installed along the seawall to the west of the lagoon, with additional fencing around the wetland complex, to discourage human and pet intrusion into the restored habitat area.

Creating an upland refuge in the middle of the lagoon would require filling approximately half an acre of wet meadow and freshwater marsh wetlands. To compensate for this and other incidental loss of vegetated wetlands during construction, in-kind creation of approximately one acre of wetlands would occur in several upland locations around the northern and western edges of the lagoon. The newly created wetlands would cover the same or a greater amount of area as the wetlands that would be converted to upland habitat.

During the restoration activities, temporary equipment staging and materials storage would occur at the northwest corner of Sharp Park, at or near Hole 17 of the golf course. Equipment access to the project area from the north would be from Clarendon Street, which runs along the north side of Sharp Park. Access to the southern part of the project area would be from the sea wall levee road and the dirt road near the Horse Stable Pond pump house. Following completion

of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

Creating, restoring, and enhancing California red-legged frog and San Francisco garter snake habitat at Laguna Salada would also involve a reconfiguration of some holes of Sharp Park Golf Course and converting a portion of the area currently occupied by the course to Natural Area. Approximately 13 acres of the golf course would be modified to create important upland habitat adjacent to the wetlands for the endangered San Francisco garter snake, to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded, and to allow for creation of new wetlands to compensate for those filled during restoration. In order to create a habitat corridor between Horse Stable Pond and Laguna Salada, Holes 10 and 13 would be slightly shortened or narrowed, and the existing Hole 12 would be permanently closed and relocated to another area. The habitat corridor would cover approximately six acres, bringing the total of modified area at the golf course to about 19 acres.

To protect the frogs and snakes during restoration work, the SFRPD anticipates conducting the restoration activities between May 1 and October 15 and would continue to coordinate the planning and undertaking of those activities with the USFWS and CDFG; this activity period avoids the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. The SFRPD would coordinate with the San Mateo County Mosquito and Vector Control District on the proposed changes to Laguna Salada to minimize the potential for development of mosquito breeding habitat.

While management options for the Sharp Park sea wall, including a naturally managed sea wall and shoreline, have been considered by the SFRPD, those options are not proposed as part of the SNRAMP.

Following completion of the restoration activities, the SFRPD would conduct maintenance to ensure the success of those activities. The scope of the maintenance is subject to modification during consultation with the USFWS pursuant to the ESA and through other regulatory approval processes. Maintenance would include weeding and maintaining the restored areas. Maintenance of the wetland areas may include removal of invasive plant species and additional planting of wetland plant species. As needed, the SFRPD also would conduct small-scale dredging of accumulated sediments from the wetlands using a backhoe. Maintaining the sediment basins would involve the periodic removal of accumulated sediment. Needed surveys would be coordinated with the USFWS and CDFG to ensure compliance with endangered species laws and regulations (SFRPD 2009a). Wetland functionality would be assessed using ecologically based criteria to determine success of the project objectives.

The most recent restoration plan for which theLaguna Salada restoration plan is based upon are shown in figure 3 of the EIR.

Added a discussion of the ongoing management measures at Horse Stable Pond, as presented below (Section III.I.23 of the EIR):

SFRPD would continue to use pumps to manage water levels in Horse Stable Pond to conserve the California red-legged frog by conducting post-rainfall inspections of the pond for California red-legged frog egg masses and making any pumping changes necessary to prevent stranding and other impacts to egg masses, if found to be present.

19. Everson/Digby. The Everson/Digby Natural Area was added as the 32nd Natural Area in the Natural Areas Program, as detailed in Attachment 1. (Section III.I.27 of the EIR)

20. General Recommendation GR-8a. Lake Merced was removed from the list of Dog Play Areas whose boundaries and locations would be retained. (Section III.H of the EIR)

21. Recommended management action IB-1c. California seablite (Sueada californica) was added to the list of plants whose populations should be augmented. (Section III.I.15 of the EIR)

22. Recommended management action IG-2b. Language was added that only appropriate social trails would be formalized and inappropriate trails would be eliminated. (Section III.I.16 of the EIR)

23. Recommended management action MP-9b. Monitoring was expanded to include the Geneva Avenue dog play area. (Section III.I.19 of the EIR)

24. Recommended management action PL-1b. The phrase associated with the Pine Lake Park Improvement Project was removed, as that project has been completed. (Section III.I.22 of the EIR)

25. Recommended management action PL-7a. The number of dedicated access points to Pine Lake was changed from two to one. (Section III.I.22 of the EIR)

26. Recommended management action TK-2a. Language was added indicating that installed vegetation would include oaks. (Section III.I.24 of the EIR)

27. Recommended management action TP-3a. The following text was added: "Explore options with the San Francisco Municipal Transit Agency to convert a portion of Twin Peaks Boulevard to a multi-use trail." (Section III.I.25 of the EIR)

SFRPD intends to implement the recommended measures from the SNRAMP in our management of the Recreation and Park's Natural Areas, including the work practices related to integrated pest management and best management practices, as detailed in Section III.E.5 of the EIR, in a site appropriate manner.

Sincerely,



Dawn Kamalanathan
Director of Capital and Planning Division
San Francisco Recreation and Parks Department
30 Van Ness, 5th Floor
San Francisco, CA 94102



RESPONSES TO COMMENTS

Significant Natural Resource Areas Management Plan (Volume III)

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT
CASE NO. **2005.0912E**

STATE CLEARINGHOUSE NO. 2009042102

SAN FRANCISCO PLANNING DEPARTMENT

	Draft EIR Publication Date:	**AUGUST 31, 2011**
	Draft EIR Public Hearing Date:	**OCTOBER 6, 2011**
	Draft EIR Public Comment Period:	**AUGUST 31, 2011, to OCTOBER 17, 2011, and APRIL 27, 2012, TO JUNE 11, 2012**
	Final EIR Certification Hearing Date:	**DECEMBER 15, 2016**

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ENVIRONMENTAL PLANNING DIVISION | SAN FRANCISCO PLANNING DEPARTMENT

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CHAPTER 1 Introduction

1.A PURPOSE OF THE RESPONSES TO COMMENTS DOCUMENT

This Responses to Comments (RTC) document completes the Final Environmental Impact Report (EIR), analyzing potential environmental effects associated with implementation of the Significant Natural Resource Areas Management Plan (SNRAMP)[1] by the San Francisco Recreation and Park Department (SFRPD). The San Francisco Planning Department, as lead agency responsible for administering the environmental review for projects within the City and County of San Francisco (City) as required under the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21000 et seq.), published a Draft EIR on August 31, 2011. The Draft EIR was subject to a 61-day public review period. Thereafter, the Planning Department issued a notice dated April 27, 2012, advising that the Planning Department would accept additional comments on the Draft EIR through June 11, 2012. The Draft EIR, together with this RTC document, will be considered by the Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate. Only after certification of a Final EIR may the San Francisco Recreation & Park Commission consider approval of the proposed project.

The Draft EIR together with this RTC document constitute the Final EIR for the proposed project in fulfillment of CEQA requirements and consistent with CEQA Guidelines Section 15132. This RTC document contains a summary of all comments, the City's responses to comments, copies of the letters received, a transcript of the public hearing, and revisions to the Draft EIR to clarify or correct information in the Draft EIR. Refer to RTC Section 1.C, Document Organization, p. 1-4, for a description of the overall content and organization of this RTC document.

The Final EIR has been prepared in compliance with CEQA, the CEQA Guidelines (Title 14, California Code of Regulations [CCR] Chapter 3, Guidelines for Implementation of the California Environmental Quality Act), and San Francisco Administrative Code Chapter 31. It is an informational document for use by (1) government agencies (other than the City) and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the project and identifying possible ways of reducing or avoiding potentially significant impacts; and (2) the San Francisco Recreation & Park Commission to make a decision to approve, disapprove, or modify the proposed SNRAMP project. If the San Francisco Recreation & Park Commission approves the proposed project, it will be required to adopt CEQA findings and a Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures identified in the

[1] The Significant Natural Resource Areas Management Plan, or SNRAMP, is now referred to as the Natural Resources Management Plan; however, to maintain consistency between the Draft EIR and the RTC document, the term SNRAMP will continue to be used.

Final EIR will be implemented. Refer to RTC Section 1.B, Environmental Review Process, p. 1-2, for further description of the environmental review process. This document has been prepared in compliance with the requirements of CEQA. Consistent with CEQA, responses to comments are focused on providing clarification to the description of the proposed project, an adequate and accurate analysis of the physical environmental impacts of the proposed project, identification of appropriate mitigation measures and alternatives to the proposed project (i.e., physical impacts or changes to the environment attributable to the project rather than social or financial implications of the project).

Consistent with CEQA Guidelines Section 15064(e), economic and social changes caused by a proposed project are not themselves treated as significant effects on the environment. However where a physical change in the environment is caused by an economic or social impact of a project, that physical change may be regarded as a significant impact on the environment in the same manner as any other physical change caused by the project. Alternatively, economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment. If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether the physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect. Therefore, to the extent that comments pertaining to the socioeconomic impact of the proposed project results in physical environmental impacts, this document provides a thorough response.

1.B ENVIRONMENTAL REVIEW PROCESS

As described in the Draft EIR, the San Francisco Planning Department sent a Notice of Preparation (NOP) and Initial Study to more than 2,400 interested parties on April 22, 2009, including the California Office of Planning and Research (OPR, or State Clearinghouse), other governmental agencies, organizations and persons interested in the proposed projects. On that date, an environmental review notice associated with the NOP was published in the *San Francisco Examiner* and *Pacifica Tribune*. During a 30-day public scoping period that ended on May 26, 2009, the Planning Department accepted comments from agencies and interested parties identifying environmental issues that should be addressed in the EIR. The comment letters received in response to the NOP are available for review at the San Francisco Planning Department as part of the file for Case No. 2005.0912E. A summary of comment letters received in response to the NOP is included in Draft EIR Appendix A. In addition, two public scoping meetings were held (May 12, 2009, in the County Fair Building Auditorium in Golden Gate Park, and on May 14, 2009, at the Pedro Point Firehouse in Pacifica) to receive oral comments on the scope of the EIR. The Planning Department has considered the comments made by the public and agencies in preparing the EIR for the proposed project.

The Draft EIR was first published on August 31, 2011, and circulated to local, state, and federal agencies and to interested organizations and individuals for a 45-day public review period that was later extended for two weeks by the San Francisco Planning Commission, resulting in a 61-day public review period that began August 31, 2011, and continued through October 31, 2011. In addition, the Planning Commission held a public hearing on the Draft EIR on October 6, 2011, and Commissioners, organizations, and individuals made oral comments at that hearing. A second public review comment period, during which written comments were once again invited, was provided from April 27, 2012, to June 11, 2012, for a total of an additional 46 days. A Public Notice of the additional comment period was sent to over 300 neighborhood organizations and individuals through direct mailing and was also posted in the following locations: SFRPD's McLaren Lodge, the Planning Department, and the San Francisco County Clerk's office. Between the two public review periods, a total of 107 days were available to provide written public comment.

Paper copies of the Draft EIR were made available for public review at the following locations: (1) San Francisco Planning Department, 1660 Mission Street, 1st Floor, Planning Information Counter, San Francisco, California; and (2) San Francisco Main Library, 100 Larkin Street, San Francisco, California. The documents referenced in the EIR were also available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

On August 31, 2011, the Planning Department also distributed notices of availability of the Draft EIR, published notification of its availability in newspapers of general circulation in San Francisco (*San Francisco Chronicle*) and in Pacifica (*Pacifica Tribute*), and posted a notice at the Planning Department office and at SFRPD's McLaren Lodge, San Francisco, California. On October 6, 2011, the San Francisco Planning Commission conducted a public hearing to receive oral comments on the Draft EIR at the San Francisco City Hall, 1 Dr. Carlton B. Goodlett Place, Room 400. A court reporter present at the public hearing transcribed oral comments verbatim and prepared a written transcript; Attachment C, Draft EIR Hearing Transcript, of this RTC document contains a copy of the public hearing transcript. A public hearing before the Historic Preservation Commission (HPC) on the Draft EIR was held on September 20, 2011. The HPC transmitted written comments to the Planning Department on September 26, 2011. This RTC also provides a response to those comments. (The HPC comment letter is included in Attachment B, Draft EIR Comment Letters.)

During the Draft EIR public review period, including the extended period from April 27, 2012, through June 11, 2012, the Planning Department received a total of 308 comment letters from approximately 289 commenters, including seven public agencies, 31 nongovernmental organizations, and 251 individuals. Comments were received by email, facsimiles, mail, or hand delivery. In addition, 199 persons submitted a signed form letter. Oral testimony was also provided from 19 individuals at the October 6, 2011, Planning Commission hearing. RTC Chapter 3, List of Persons Commenting, p. 3-1, contains a complete list of persons commenting on the Draft EIR.

During the two public comment periods on the Draft EIR, which ended on June 11, 2012, the Planning Department received over 2,400 comments. This high volume of comments required extensive time to prepare adequate responses and to update or revise the text of the SNRAMP Draft EIR, where required. Contracting issues also contributed to the time required to prepare this RTC document.

The San Francisco Planning Department distributed this RTC document for review to the San Francisco Planning Commission, as well as to the agencies, organizations, and persons who commented on the Draft EIR. In compliance with CEQA requirements, the Planning Commission will hold a public hearing to consider the adequacy of the Final EIR (Draft EIR and the RTC document). If the Planning Commission finds that the Final EIR complies with CEQA requirements, it will certify the Final EIR. Following certification of the Final EIR, the Recreation & Park Commission will review and consider the certified Final EIR and the associated MMRP before making a decision and taking an approval action on the proposed project. Consistent with CEQA Guidelines Section 15097, the MMRP is a program designed to ensure that the mitigation measures identified in the Final EIR and adopted by decision makers to mitigate or avoid the project's significant environmental effects are implemented. CEQA also requires the adoption of findings prior to approval of a project for which a certified EIR identifies significant environmental effects (CEQA Guidelines Sections 15091 and 15092). If the EIR identifies significant adverse impacts that cannot be mitigated to less-than-significant levels, the findings must include a statement of overriding considerations for those impacts (CEQA Guidelines Section 15093(b)) if the project is approved. The project sponsor, SFRPD, would be required to adopt the CEQA findings and an MMRP in connection with project approval.

1.C DOCUMENT ORGANIZATION

This Comments and Responses document is organized by the four major chapters listed below:

- Chapter 1, Introduction
- Chapter 2, Project Description Revisions
- Chapter 3, List of Persons Commenting
- Chapter 4, Comments and Responses
- Chapter 5, Draft EIR Revisions

Chapter 2, Project Description Revisions, contains refinements or clarifications to the Project Description chapter of the Draft EIR either in response to comments received during the public review period for the Draft EIR or as initiated by the SFRPD.

Chapter 3, List of Persons Commenting, includes a list of persons, agencies, and organizations who submitted written comments on the Draft EIR and who testified at the Draft EIR public hearing held on October 6, 2011. The comment letters received and the public hearing transcript are presented in

Attachment B, Draft EIR Comment Letters, and Attachment C, Draft EIR Hearing Transcript, respectively.

Chapter 4, Comments and Responses, presents a summary of the substantive comments received on the Draft EIR and responses to those comments. The comments and responses are organized by topic area, as presented in the Draft EIR, with general comments on the EIR grouped together at the beginning of the section. This chapter also contains refinements or clarifications to the Draft EIR in response to comments received during the public review period for the Draft EIR.

Chapter 5, Draft EIR Revisions, contains all of the changes to the text of the Draft EIR that were previously identified in Chapter 2, Project Description Revisions, and Chapter 4, Comments and Responses. These changes are organized in the order of the Draft EIR table of contents. The proposed text changes (or text revisions) represent a refinement or clarification to the text of the EIR and are presented for informational purposes only. The changes do not result in new significant environmental impacts or substantially increase the severity of a significant impact identified in the Draft EIR, and no new mitigation measures are required. Further, none of the text changes identified in this Response to Comments document change any of the conclusions in the Draft EIR and do not constitute significant new information that requires recirculation of the Draft EIR under CEQA (California PRC Section 21092.1) or the CEQA Guidelines (14 CCR Section 15088.5).

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CHAPTER 2 **Project Description Revisions**

2.A PROJECT DESCRIPTION REVISIONS

In response to comments received during the public review period for the Draft EIR and also as initiated by the San Francisco Recreation and Parks Department (SFRPD), the Project Description chapter of the Draft EIR for the SNRAMP Project has been refined or clarified. These changes are provided below; in addition, for those project description changes that are staff-initiated, they will be presented both in this Chapter and in Chapter 5. As part of the Sharp Park Conceptual Restoration Alternatives Report, the SFRPD proposed identified restoration alternatives that would be compatible with either a nine-hole layout at the Sharp Park Golf Course or with removal of the golf course entirely. These alternatives have been rejected because they are not compatible with the existing and planned continued 18-hole layout of the historic golf course.

For those project description changes that are in response to a comment, they will occur in this section, in response to the comment (in Chapter 4, Comments and Responses, RTC p. 4-1), and in Section 5.A, Changes in Response to Comments, RTC p. 5-1. The Project Description changes are followed by an evaluation of the environmental effects of implementing these project revisions. This evaluation considers whether incorporating the Project Description revisions would alter the impact analysis or conclusions presented in the Draft EIR.

Deleted text is shown in ~~strikethrough~~, and new text is <u>double underlined</u>. These changes are organized numerically according to where they occur in the Project Description.

As discussed in Response PD-13, RTC p. 4-175, beginning with the first paragraph on Draft EIR p. 77, the text has been changed as follows:

> While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks of San Francisco and Pacifica that are managed by the SFRPD. In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation ~~and~~<u>&</u> Park Commission approved the first Significant Natural Resource Areas Management Plan.
>
> <u>Since 1995, the SFRPD has embarked on an almost 10-year process that involved SFRPD, meetings with over 3,000 members of the public, task forces, advisory groups, independent technical advisers, consultants, and decision-making bodies to study, consider, and ultimately propose the 2006 Significant Natural Resource Areas Management Plan.</u>
>
> <u>In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city. Outreach included sending fliers to neighborhood groups and residents within 300 feet of all Natural Areas, the Mayor's Office of Neighborhood Groups, SFRPD's list of neighborhood groups, and other interested parties. Announcements were also posted at all Natural Area sites. An online survey was available for individuals and members</u>

of the public that were unable to attend in person. Feedback was received from approximately 2,700 members of the public. Further, several task forces, committees, and working groups were convened as part of this process, including (1) the Natural Areas Program Citizen Advisory Committee, an ad hoc group that made recommendations on how to revise the plan, (2) a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and (3) the Sharp Park Working Group. The Sharp Park Working Group, which was convened by SFRPD and facilitated by an independent party, consisted of land managers with an interest in the property, including San Mateo County, the City of Pacifica, the Golden Gate National Recreation Area, and the SFRPD. In addition, revisions to the Sharp Park Restoration Plan were also specifically made in response to input from scientists and regulatory agencies.

Three independent scientific reviews of the 2005 Draft SNRAMP were also conducted in August 2005. The goal of this independent review was to assess the scientific basis for the plan and evaluate the goals, issues, and recommendations. Additionally, the reviewers were asked to determine if the 2005 Draft SNRAMP was feasible to implement and if implementation of the proposed management activities would result in the desired outcome. The first review was conducted by Dr. Lynn Huntsinger and James W. Bartolome,[2] who provided a detailed report to the SFRPD (Huntsinger and Bartolome 2005). This review reached the following overall conclusions:

- The 2005 Draft SNRAMP was based on sound science and was a reasonable compromise between ideals, practicality, and competing uses.
- The management goals (conservation, restoration, education, stewardship, recreation, and monitoring) are consistently addressed throughout the Plan.
- The proposed actions and monitoring seemed generally feasible.

The review suggested revisions to the recommendations dealing with management of the urban forest understory, grasslands (see GR-3 in Section 5), and butterfly host plants (see GR-10). The general recommendations referenced by these comments have been revised and updated. The review also suggested minor changes to the Monitoring protocols (Section 7), which were implemented.

A second review was conducted by Roy A. Woodward, PhD. Dr. Woodward made comments on and suggested edits to the text, particularly as it related to the Monitoring Plan and Protocols. The 2005 Draft SNRAMP was revised per these edits as appropriate.[3]

A third review was conducted by Peggy Fiedler, PhD. Dr. Fiedler concluded that the 2005 Draft SNRAMP in general succeeded in its goals and "strikes a balance between natural resource protection and the needs of citizens in a highly urbanized, densely populated, highly ethnically diverse, overall well-educated area."[4]

~~Over the course of several years,~~ Ultimately, the SFRPD updated and expanded the level of detail in the 1995 plan, as well as incorporated the comments from the above scientific reviews on the

[2] Review: Significant Natural Resource Areas Management Plan, Lynn Huntsinger and James W. Bartolome, Submitted to the San Francisco Recreation and Parks Department, August 2005.

[3] Hand edits to 2005 SNRAMP text from Dr. Roy A. Woodward, Ph.D., Senior Environmental Scientist, Natural Resources Division, State of California, Department of Parks and Recreation, no date.

[4] Peer review of the Public Draft Significant Natural Resource Areas Management Plan, June 2005, Peggy L. Fieldler, Ph.D., Senior Scientist II/Associate, BBL Ecosystem Science and Restoration Services to Ms. Lisa Wayne, San Francisco Recreation and Parks, September 29, 2005.

2005 Draft SNRAMP, ~~ultimately~~ resulting in ~~a new~~ the 2006 Final Draft Significant Natural Resource Areas Management Plan (SNRAMP, SFRPD 2006)~~, with a final draft plan~~. The San Francisco Recreation ~~and~~& Park Commission approved the final draft SNRAMP ~~plan~~ for CEQA evaluation in August 2006. In April 2009, the Board of Supervisors introduced legislation that required the SFRPD to develop and plan for restoring Sharp Park for the California red-legged frog and the San Francisco garter snake; in response to this, the SFRPD began to develop the Sharp Park Conceptual Restoration Alternative Report, which was completed in September 2009.

In December 2009, the Recreation & Park Commission agreed to proceed with the Laguna Salada Restoration while preserving the 18-hole golf course at Sharp Park. In August 2011, the SNRAMP Draft EIR was released for public comment and in September 2011, a Historic Preservation Commission Hearing was held (with split votes as to whether Sharp Park is a historic resource) and in October 2011, the Planning Commission Hearing on the Draft EIR was held.

This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 in San Francisco and one (Sharp Park) in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP

As discussed in Response HZ-1, RTC p. 4-531, the text on Draft EIR pp. 90 and 91 have been revised as follows:

IPM is a multistep ecologically based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests. Conventional pest control methods attempt to control the symptoms of a pest problem, but IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem. IPM implements effective, long-term management solutions through the use of a broad range of expertise, a combination of treatment methods, and comprehensive monitoring and evaluation.

In accordance with Chapter ~~39~~ of the San Francisco ~~Administrative~~ Environment Code, the Natural Areas Program employs IPM as its strategy for preventing new and managing existing pest infestations. Four general weed management strategies exist: prevention, containment, reduction, and eradication; each of these results in a different level of weed control and reflects available resources. The Natural Areas Program's policy is to use the least-toxic control methods whenever feasible and practical. In addition, to reduce the need for pesticides, manual pest control efforts are employed by a collaborative effort between SFRPD employees and volunteers. Apart from the 10 full-time staff that conduct management and maintenance actions within the Natural Areas, the Natural Areas Program also has a robust volunteer program, with individual groups that range in size from 10 to 50 people.

Factors that make manual and/or mechanical methods impractical include:

- Direct threats to human health and safety (e.g., steep, inaccessible, unstable slopes, significant poison oak infestations, etc.);
- Large infestations requiring ongoing repeated strenuous physical labor, such as picking and lifting, that may cause injury to staff, contract field crews, or volunteers; and
- Areas where access, human trampling, or soil disturbance may directly or indirectly damage native plant communities, affect wildlife, or cause soil erosion.

Management methods to be employed by the Natural Areas Program include:

- Physical control methods employed by Natural Areas Program staff and volunteers, which range from hand-pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
- ~~Biological~~Pest control,[5] which, in the case of the Natural Areas Program, involves revegetating cleared areas and introducing native plants in an area to encourage competition with weeds; and
- Chemical control, which involves the use of herbicides to suppress wildland weeds~~; and~~, in compliance with the San Francisco Pest Management Ordinance.
- ~~Public education and outreach.~~

Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies. The application of herbicides, including Garlon and Roundup, is not allowed within 15 feet of either side of established trails.

As discussed in Response GE-1, RTC p. 4-472, the text on Draft EIR p. 94 has been changed to add the following paragraph after the second bullet on the page:

Where alternative materials are available to achieve the intended erosion control objectives while also minimizing inadvertent impacts to wildlife and habitat, a preference would be given to the use of biodegradable, certified weed-free, and wheat-free erosion control materials. To help ensure that appropriate materials are used that are compatible with the materials and features present at the sites in which they are used, a qualified SFRPD biologist would be consulted during design of erosion control measures.

As discussed in Response PD-13, RTC p. 4-175, the beginning of the only full paragraph on Draft EIR p. 98 has been changed as follows:

The Sharp Park Restoration project is a voluntary and discretionary action by the City, a primary purpose of which is to provide higher quality habitat for the San Francisco garter snake, a State and Federally endangered species, as well as a species identified as fully protected under the State Fish and Game Code, and the California red-legged frog, a State threatened species; further, it is an action that is consistent with the species recovery objectives of both the federal Endangered Species Act and the California Endangered Species Act. The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. …

As discussed in Response BI-7, RTC p. 4-365, after the first paragraph on Draft EIR p. 102, the following text is added.

To facilitate the proposed sediment and emergent vegetation removal and to reduce potential impacts to California red-legged frog, suction hydraulic equipment may be used in consultation with the USFWS and CDFW to minimize the disturbance of sediments in the water. While

[5] Pest control generally involves the management of pests (insects, diseases, weeds) by manipulation of the environment or implementation of preventive practices including using plants that are resistant to pests, raising the mowing height of turf to shade out weeds, aerating turf to reduce compaction and plant stress, or dethatching to remove habitat, food sources and impediments to management.

> generally resulting in a higher percentage of water in the excavated materials than a clamshell dredge, the use of suction hydraulic equipment generally results in less turbidity and overall disturbance at the point of use than a clamshell. In sensitive environments, the use of suction hydraulic equipment is often preferred, provided that the excavated materials and residual water are properly handled. If suction hydraulic equipment is to be used as part of this project, the slurry that is created by suction hydraulic equipment would go into a settling area until the sediments settle out and the decant water can be tested for its acidity. If the result of such testing indicates that the water is pH neutral, it would either be released into the Horse Stable Pond or pumped into the Pacific Ocean.[6] No permit is required for discharges from the Laguna Salada Wetland Complex into the Pacific Ocean because both the Laguna Salada Wetland Complex and the Pacific Ocean are considered "waters of the United States" under the federal Clean Water Act. However, should any permit be required by SFBRWQCB or any other resource agency for the proposed SNRAMP project, SFRPD will seek such a permit and comply with any and all conditions that are attached to the permit,[7] as already indicated by Table 3, Potentially Required Regulatory Approvals, p. 81.

As discussed in Response PD-13, RTC p. 4-175, the text on Draft EIR p. 103, lines 7 to 10, has been changed as follows:

> Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified (or identified as staging or storage areas for the next season's restoration activities) would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

As discussed in Response BI-7, RTC p. 4-365, the text on Draft EIR p. 103, lines 22 to 26, has been changed as follows:

> To protect the California red-legged frogs and San Francisco garter snakes during restoration work, the SFRPD anticipates conducting the restoration activities between May 1 and October 15 and would continue to coordinate the planning and undertaking of these activities with the USFWS and CDFG; this activity period avoids the breeding season for the California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. …

As discussed in Response PD-12, RTC p. 4-168, the following paragraph has been added to Draft EIR p. 104 following Table 4, Laguna Salada Habitat Types within Restoration Footprint, to clarify the changes to the Sharp Park Natural Area boundary resulting from completion of the Sharp Park Restoration Project, as follows:

> Following completion of the Laguna Salada Sharp Park Restoration Project, those areas that were previously designated as part of the golf course that have been restored to provide habitat for special-status species would become part of the Sharp Park Natural Area.

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[6] San Francisco Planning Department, *Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project Final Mitigated Negative Declaration*, January 17, 2014, p. 88.

[7] San Francisco Planning Department, *Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project Final Mitigated Negative Declaration*, January 17, 2014, p. 103.

As initiated by staff, the text provided in the last bullet on Draft EIR p. 105 has been changed as follows:

> ■ While General Recommendation GR-8b of the SNRAMP mentions consideration of new dog play areas (DPAs), no new DPAs are proposed as part of the project~~, due to the current moratorium on new DPAs;~~.[8]

As discussed in Response BI-32, RTC p. 4-441, the text on Draft EIR p. 109, fourth bullet, has been changed as follows:

> GR-4c – If surveys indicate that parasitism by brown-headed cowbirds or predation by crows, European starlings, English house sparrows, or other bird species subsidized by human activities is a significant problem, consult with the CDFG and the USFWS to determine the proper ~~protocols~~ course of action, if any, to address population increases of these species and to minimize the ~~negative~~ effects of ~~this~~ these species on local breeding birds.

As discussed in Response AE-1, RTC p. 4-220, a footnote has been added to Table 5 on Draft EIR p. 114 to indicate that the replacement locations have not yet been determined. In addition, as initiated by Staff, Table 5 has also been revised to indicate the reduction in the size of the McLaren Park Natural Area. The SNRAMP and the Draft EIR identified the entire McLaren Park Natural Area as subject to the SNRMAP. Since publication of the SNRAMP, the SFRPD noted that the SNRAMP identified the McLaren Park Natural Area as entirely within SFRPD jurisdiction; however, a 12-acre portion of McLaren Park known as the Amazon Reservoir Tract is under the jurisdiction of the San Francisco Public Utilities Commission (SFPUC). The SFPUC recently indicated their desire to regain management of 6.32 acres of the Amazon Reservoir Tract and have requested that it is removed from the SNRAMP and SNRAMP Draft EIR. Consequently, as the SNRAMP would no longer apply to a portion of the Amazon Reservoir Tract, the Draft EIR has been revised to reflect removal of this area from the SNRAMP.

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[8] The Draft EIR conservatively characterized the ~~There is~~ direction from the Recreation ~~&~~and Park Commission ~~not to~~ concerning establishment of ~~establish~~ new DPAs as ~~until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a~~ moratorium for the purpose of analyzing cumulative impacts in the Natural Areas ~~in that no new DPAs are reasonably foreseeable~~. This direction was ~~announced~~ presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. For the purposes of this EIR, it is assumed that no new DPAs are reasonably foreseeable to provide a worst-case analysis.

Table 5
Summary of Natural Areas Management Plan

Natural Area Site	Park Acreage	Natural Area Acreage*	Management Area (acres)				Invasive Trees			Trails (feet)				Dog Play Areas (acres)			
			MA-1	MA-2	MA-3	Total MA[1]	Existing	To Remove	To Remain	Existing	To Close/ Relocate	To Create	Resulting	Existing	To Remove	To Remain	Monitor**
Balboa	1.8	1.8	1.1	0.7	0	1.8	0	0	0	637	90	0	547				
Bayview Park	43.9	43.9	8.2	15.8	19.7	43.7	6,000	511	5,489	8,496	1,439	1,020	8,077				
Bernal Hill	24.3	24.3	7.6	5.8	10.7	24.1	100	0	100	12,239	4,544	464	8,159	21.0	6.0	15.0	No
Billy Goat Hill	3.5	3.5	0.6	1.1	1.6	3.3	20	0	20	2,600	745	0	1,855				
Brooks Park	3.5	2.0	0.8	0.9	0.3	2.0	20	3	17	1,340	456	0	884				
Buena Vista Park	36.1	6.1	0	6.1	0	6.1	140	10	130	3,741	0	0	3,741	1.0	0	1.0	Yes
Corona Heights	12.6	9.6	2.9	2.5	4.2	9.6	200	15	185	6,701	1,845	0	4,856	0.4	0	0.4	No
Dorothy Erskine Park	1.5	1.5	0.2	0.3	1.0	1.5	100	14	86	771	0	0	771				
Duncan-Castro	0.5	0.5	0.3	0.1	0.1	0.5	0	0	0	333	0	0	333				
Edgehill Mountain	2.3	2.3	0	0.9	1.4	2.3	300	0	300	747	0	438	1,185				
Everson/Digby	1.2	1.2	0.9	0.1	0.2	1.2	0	0	0	0	0	0	0				
Fairmount Park	0.7	0.7	0	0	0.7	0.7	100	0	100	187	0	0	187				
Glen Canyon Park and O'Shaughnessy Hollow***	72.6	63.8	8.1	33.0	22.4	63.5	6,000	120	5,880	23,242	3,653	0	19,589				
Golden Gate Heights	6.0	0.8	0.2	0.5	0.1	0.8	30	0	30	559	390	188	357				
Golden Gate Park Oak Woodlands	1,021.0	26.2	0.7	25.5	0	26.2	900	82	818	24,844	12,381	0	12,463	2.8	0	2.8	Yes
Grandview Park	4.0	4.0	0.9	2.4	0.7	4.0	25	5	20	1,722	409	0	1,313				
Hawk Hill	4.5	4.5	1.4	3.0	0	4.4	10	0	10	1,609	692	0	917				
India Basin Shoreline Park	11.8	6.2	3.2	2.8	0	6.0	0	0	0	1,885	0	0	1,885				
Interior Greenbelt	19.4	16.5	0	1.8	14.7	16.5	5,800	140	5,660	935	0	620	1,555				
Kite Hill	2.7	2.7	0.6	0.5	1.6	2.7	10	0	10	1,957	398	0	1,559				
Lake Merced	614.0	395.0	60.8	101.8	231.5	394.1	12,000	134	11,866	11,106	3,319	365	8,152	5.0	5.0	0	
Lakeview/Ashton Mini Park	0.5	0.5	0.1	0.2	0.2	0.5	0	0	0	651	0	0	651				
McLaren Park****	306.3 ~~312.6~~	159.0 ~~165.3~~	31.7 ~~34.9~~	66.0 ~~68.3~~	60.6 ~~61.4~~	158.3 ~~164.6~~	19,500	809	18,691	59,185	15,681	0	43,504	61.7	8.3	53.4	Yes
Mount Davidson	40.2	40.2	8.8	11.0	20.1	39.9	11,000	1,600	9,400	15,456	2,867	0	12,589				
Palou-Phelps	2.5	2.1	0.8	0.4	0.8	2.0	40	2	38	1,049	527	496	1,018				
Pine Lake	30.3	8.4	1.0	3.8	3.6	8.4	1,000	0	1,000	3,157	608	13	2,562	3.3	0	3.3	No
Rock Outcrop	1.6	1.6	0.8	0.7	0	1.5	0	0	0	0	0	0	0				
Tank Hill	2.9	2.9	1.5	0.6	0.7	2.8	50	0	50	2,672	1,411	0	1,261				
Twin Peaks	34.1	31.1	12.6	14.3	3.8	30.7	88	3	85	8,741	2,303	501	6,939				
15th Avenue Steps	0.3	0.3	0	0.2	0	0.2	0	0	0	0	0	0	0				
San Francisco Subtotal	**2,312.9**	**869.5**	**159.0**	**305.1**	**401.5**	**865.6**	**63,433**	**3,448**	**59,985**	**196,562**	**53,758**	**4,105**	**146,909**	**95.2**	**19.3**	**75.9**	
Sharp Park (Pacifica)	411.0	237.2	35.0	125.1	76.5	236.6	54,000	15,000	39,000	14,741	653	1,792	15,880				
Total	**2,723.9**	**1,106.7**	**194.0**	**430.2**	**478.0**	**1,102.2**	**117,433**	**18,448**	**98,985**	**211,303**	**54,411**	**5,897**	**162,789**	**95.2**	**19.3**	**75.9**	

*The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.

**The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.

***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.

****The acreage of the management areas within McLaren Park have been revised to reflect the exclusion of a portion of the Amazon Reservoir Tract that is under the jurisdiction of the SFPUC. Information regarding the number of trees, trails, or DPAs within the SFPUC Amazon Reservoir Tract and SFRPD McLaren Park is not available.

Note: All trees removed would be replaced, although not necessarily with the same species or within the same Natural Area.

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As discussed in Response G-23, RTC p. 4-93, the text provided in the fifth bullet on Draft EIR p. 110 has been changed as follows:

- GR-8b—Match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas;

  (Note: ~~An underlying assumption of this EIR is that there would be no new DPAs because there is~~ The Draft EIR conservatively characterized the direction from the Recreation &~~and~~ Park Commission concerning establishment of new DPAs as ~~not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered~~ a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas ~~in that no new DPAs are reasonably foreseeable~~. This direction was ~~announced~~ presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. ~~Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.~~)

As discussed in Response G-19, RTC p. 4-88 the text provided in the ninth bullet on Draft EIR p. 136 has been changed as follows:

- LM-7a—Relocate the DPA to a different area to avoid disturbing breeding birds in the current location; (Note: The SFRPD determined following completion of the final draft SNRAMP that, due to ongoing disturbance of breeding birds, this DPA should be closed, rather than monitored. This DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011). ~~Due to the San Francisco moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed.~~ Restoration of the site would continue, following removal of the DPA.)

As initiated by staff, a second paragraph has been added to Draft EIR p. 137 of Section III.I.19:

> McLaren Park covers 312.6 acres near the southeast corner of San Francisco and is bisected by Mansell Street. Sunnydale and Visitacion Avenues cross the southern half of the park, while John F. Shelley Drive crosses the northern half. Recreational facilities within the park include over 11 miles of trails, tennis courts, ball fields, a golf course, picnic areas, and an amphitheater. Three designated DPAs are within the park, two within and one next to the Natural Area. The Natural Area covers 165.3 acres and is made up of grassland, scrub, and tree-dominated vegetation series.
>
> Since publication of the SNRAMP, the SFRPD noted that the SNRAMP identified the McLaren Park Natural Area as entirely within SFRPD jurisdiction; however, a 12-acre portion of McLaren Park known as the Amazon Reservoir Tract is under the jurisdiction of the SFPUC. The SFPUC has recently indicated their desire to regain management of 6.32 acres of the Amazon Reservoir Tract and have requested that it is removed from the SNRAMP and SNRAMP Draft EIR. Consequently, as the SNRAMP would no longer apply to a portion of the Amazon Reservoir Tract, the Draft EIR has been revised to reflect removal of this area from the SNRAMP. Table 5 of this EIR reflects this change, further describing which management areas would be reduced in size.

A graphical representation of the 6.32-acre portion of the Amazon Reservoir Tract relative to the rest of McLaren Park is provided as Figure RTC-1, p. 2-11.

As discussed in Response PD-35, RTC p. 4-211, the text on Draft EIR p. 143, line 14, has been changed as follows:

> Mori Point, ~~recently~~ acquired by the GGNRA in 2004, borders the southwestern edge, and the Sweeny Ridge GGNRA borders the park on the southwestern and eastern edges.

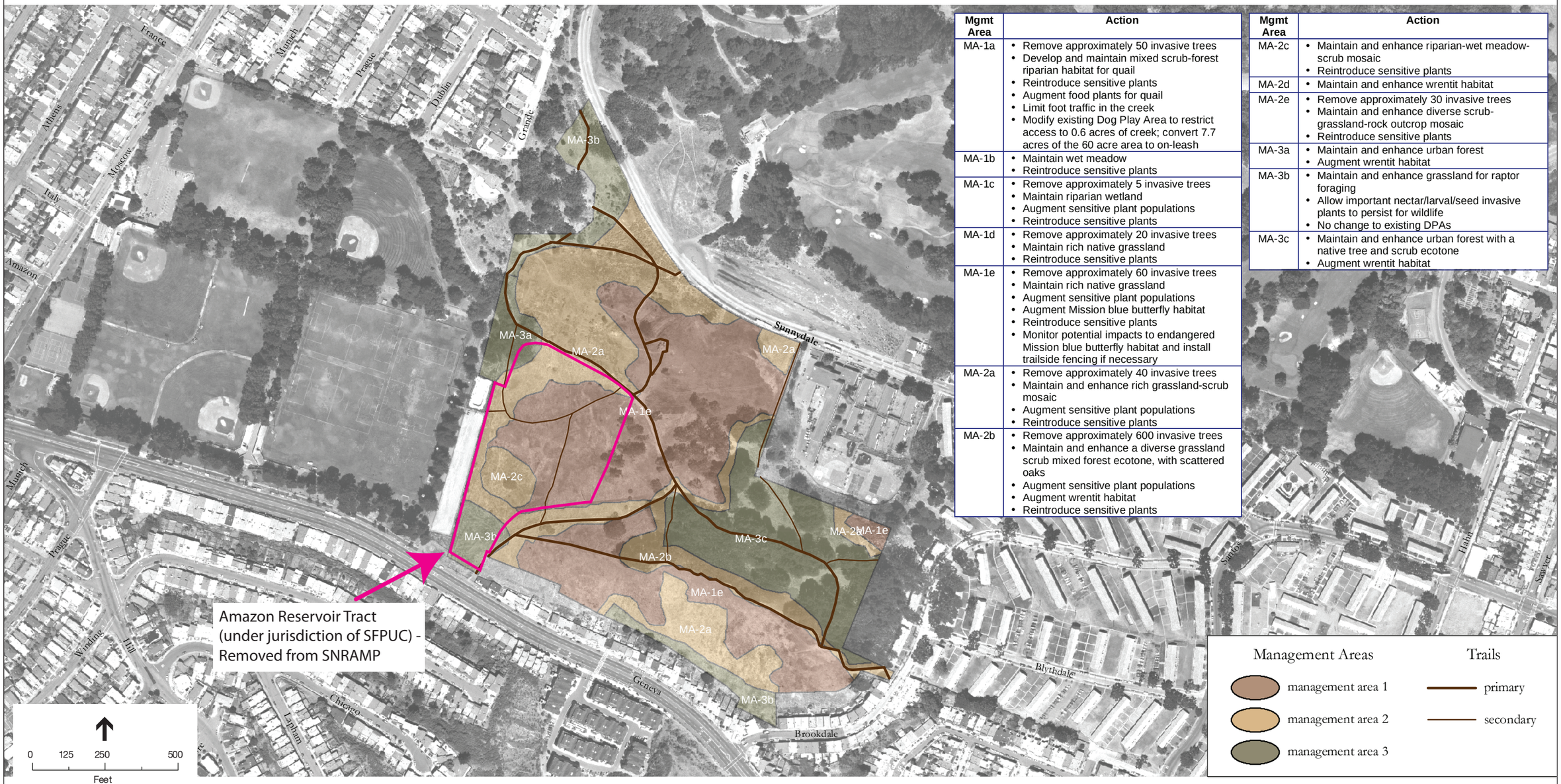
As discussed in Response PD-29, RTC p. 4-204, the text on Draft EIR p. 144, seventh bullet, has been changed as follows:

- SP-3a – Preserve natural or biodegradable elements (branches, trees, and logs) during vegetation management and remove other materials. Elements that are contaminated with invasive species (such as invaded with ripe seeds, cape ivy, untreated [chemically] eucalyptus trees, etc.) would not be retained;

2.B ENVIRONMENTAL EFFECTS OF THE PROJECT DESCRIPTION REVISIONS

The Project Description changes, as outlined above, include the following minor changes or clarifications: (1) clarification of existing text or data; (2) refinement of a project objective or SNRAMP Recommendation; (3) clarification of construction methods at Sharp Park; (4) clarification that the restored areas at Laguna Salada would become part of the Sharp Park Natural Area following restoration activities; (5) expanding the list of potential predators on native, local breeding birds; (6) removing a 6.32 acre portion of the Amazon Reservoir Tract that is under SFPUC jurisdiction from the McLaren Park Natural Area; and (7) editorial changes.

In summary, the modifications to the Project Description would not result in new significant environmental impacts or substantially increase the severity of a significant impact identified in the Draft EIR, and no new mitigation measures would be necessary. Therefore, no further analysis of the above Project Description modifications is necessary. Further, these revisions do not change any of the conclusions in the Draft EIR and do not constitute significant new information that requires recirculation of the Draft EIR under CEQA (California PRC Section 21092.1) and the CEQA Guidelines (14 CCR Section 15088.5).



Mgmt Area	Action
MA-1a	• Remove approximately 50 invasive trees • Develop and maintain mixed scrub-forest riparian habitat for quail • Reintroduce sensitive plants • Augment food plants for quail • Limit foot traffic in the creek • Modify existing Dog Play Area to restrict access to 0.6 acres of creek; convert 7.7 acres of the 60 acre area to on-leash
MA-1b	• Maintain wet meadow • Reintroduce sensitive plants
MA-1c	• Remove approximately 5 invasive trees • Maintain riparian wetland • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1d	• Remove approximately 20 invasive trees • Maintain rich native grassland • Reintroduce sensitive plants
MA-1e	• Remove approximately 60 invasive trees • Maintain rich native grassland • Augment sensitive plant populations • Augment Mission blue butterfly habitat • Reintroduce sensitive plants • Monitor potential impacts to endangered Mission blue butterfly habitat and install trailside fencing if necessary
MA-2a	• Remove approximately 40 invasive trees • Maintain and enhance rich grassland-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2b	• Remove approximately 600 invasive trees • Maintain and enhance a diverse grassland scrub mixed forest ecotone, with scattered oaks • Augment sensitive plant populations • Augment wrentit habitat • Reintroduce sensitive plants

Mgmt Area	Action
MA-2c	• Maintain and enhance riparian-wet meadow-scrub mosaic • Reintroduce sensitive plants
MA-2d	• Maintain and enhance wrentit habitat
MA-2e	• Remove approximately 30 invasive trees • Maintain and enhance diverse scrub-grassland-rock outcrop mosaic • Reintroduce sensitive plants
MA-3a	• Maintain and enhance urban forest • Augment wrentit habitat
MA-3b	• Maintain and enhance grassland for raptor foraging • Allow important nectar/larval/seed invasive plants to persist for wildlife • No change to existing DPAs
MA-3c	• Maintain and enhance urban forest with a native tree and scrub ecotone • Augment wrentit habitat

SOURCE: San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.

Figure RTC-1
Location of Amazon Reservoir Tract Relative to McLaren Park

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2.C CUMULATIVE IMPACT ANALYSIS CHANGES

The analysis of the potential for the project's incremental effects to be cumulatively considerable is based on a list of related projects identified by San Francisco and neighboring jurisdictions, as provided in Appendix G of the Draft EIR. This list includes those San Francisco Planning Department projects within a quarter mile of a Natural Area that are active or that were closed on or after January 1, 2009. The list also includes General Plan area plans within a quarter mile of each Natural Area. The analysis is also based on reasonably anticipated buildout of the San Francisco General Plan or other planning documents, depending on the specific impact being analyzed. The list of cumulative projects provided in Appendix G was updated in the summer of 2016 to include those past, present, or reasonably foreseeable projects identified since 2009. The updated list is provided in Section 5.B.9, RTC p. 5-58, which will augment Appendix G of the Draft EIR.

The cumulative analysis for recreation, hazards and hazardous materials, cultural resources, biological resources, and hydrology and water quality has been updated (as text changes to the Draft EIR) to reflect the new cumulative projects identified since 2009. The updated analysis is presented in the text changes provided in Chapter 5, RTC p. 5-1. In addition, key responses that also address cumulative impacts are provided in Response G-13, RTC p. 4-62; Response G-15, RTC p. 4-65; Response G-23, RTC p. 4-93; Response PD-9, RTC p. 4-151; Response PD-13, RTC p. 4-175; Response LU-4, RTC p. 4-216; Response CP-4, RTC p. 4-255; Response GG-1, RTC p. 4-297; Response RE-3, RTC p. 4-319; Response RE-4, RTC p. 4-320; Response RE-12, RTC p. 4-341; Response RE-13, RTC p. 4-347; Response BI-12, RTC p. 4-391; Response BI-34, RTC p.4-467; Response HY-2, RTC p. 4-493; and Response HY-5, RTC p. 4-501.

None of the projects identified since 2009 result in a change in the analysis or conclusions of the cumulative impact analysis provided in the Draft EIR.

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CHAPTER 3 List of Persons Commenting

3.A WRITTEN COMMENTS

Public agencies, organizations, and individuals submitted written comments (letters, emails, and facsimiles) on the Draft EIR, which the City received during the public comment period from August 31, 2011, to October 31, 2011, and from April 27, 2012, to June 11, 2012. In addition, the Planning Commission held a public hearing on the Draft EIR on October 6, 2011, and Commissioners, organizations, and individuals made oral comments at that hearing. A complete list of commenters, with the corresponding written communication and/or transcript designation for each, is provided below in Table 3-1, List of Written Comment Letters Received on the Draft EIR, and Table 3-2, Oral Comments Received on the Draft EIR, RTC p. 3-13. In Table 3-1, the names of persons who submitted written comments are presented first, organized into three groups: A, comments from agencies (i.e., federal, state, and local); B, comments from organizations; and C, comments from individuals. Within each group, written comments are organized alphabetically. In Table 3-2, commenters are presented in the order in which they spoke.

Attachment A, Comment Matrix by Commenter, contains a matrix identifying each commenter, the commenter's affiliation (if any), the comment letter number, a designation for individual comments contained within each comment letter, and the response number to which each individual comment is assigned within this RTC document.

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
WRITTEN COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD OF AUGUST 31, 2011, TO OCTOBER 31, 2011		
A. Agencies		
Federal Agencies		
NPS-1	National Park Service, Golden Gate National Recreation Area Frank Dean, General Superintendent	October 31. 2011
State Agencies		
CCC-1	California Coastal Commission Renee Ananda, Coastal Program Analyst	November 16, 2011
NAHC-1	Native American Heritage Commission Katy Sanchez, Program Analyst	September 7, 2011
OPR-1	Office of Planning and Research Scott Morgan, Director, State Clearinghouse	October 18, 2011
Local Agencies		
BAAQMD-1	Bay Area Air Quality Management District Christine Holmes, Human Resources Analyst	October 17, 2011

Table 3-1	**List of Written Comment Letters Received on the Draft EIR**	
Designation	***Commenter***	***Date of Written Comments***
City of Pacifica-1	City of Pacifica Mary Ann Nihart, Mayor	October 26, 2011
HPC-1	San Francisco Historic Preservation Commission Charles Chase, President	September 26, 2011
B. Organizations		
BAGCNC-1	Bay Area Golf Club of Northern California Nathaniel Jackson, President	October 5, 2011
BDunes-1	Bandon Dunes Michael L. Keiser	September 22, 2011
CAAONC-1	Council of Armenian American Organizations of Northern California Charles Paskerian, Chairman	October 5, 2011
CBD-1	Center for Biological Diversity Jeff Miller, Conservation Advocate	October 31, 2011
CFDG-1	Crissy Field Dog Group Martha Walters, Chair	October 31, 2011
CNPS-1	California Native Plant Society, Yerba Buena Chapter Jake Sigg, Chair, Conservation Committee	October 31, 2011
DB-1	Doggie Business Janet Slissman	October 30, 2011
DogPACSF-1	DogPAC SF Bruce Wolfe	October 31, 2011
FOW-GGP-1	Friends of Oak Woodlands – Golden Gate Park Robert Bakewell, Co-founder	October 31, 2011
GCSAA-1	Golf Course Superintendents Association of America J. Rhett Evan, Chief Executive Officer	October 6, 2011
GGAS-1	Golden Gate Audubon Society Michael Lynes, Conservation Director	October 31, 2011
GGHNA-1	Golden Gate Heights Neighborhood Association Sally Stephens, President	October 31, 2011
GLS-1	Gay and Lesbian Sierrans of the San Francisco Bay Chapter of the Sierra Club [Illegible Signatures]	November 1, 2011
MGSG-1	Mission Greenbelt Sidewalk Gardens Amber Hasselbring	October 5, 2011
MPIC-1	Miraloma Park Improvement Club Dan Liberthson, Corresponding Secretary	October 6, 2011
NGCOA-1	National Golf Course Owners Association Michael K. Hughes, CEO	December 1, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
NTC-1	Nature in the City Peter Brastow, Founding Director	November 1, 2011
NTC-2	Nature in the City Peter Brastow, Founding Director	September 30, 2011
PGA-1	The Professional Golfers' Association of America Allen Wronowski, PGA, President, and Joseph P. Steranka, Chief Executive Officer	September 27, 2011
SCBC-1	Sierra Club Bay Chapter Arthur Feinstein California Native Plant Society, Yerba Buena Chapter Casey Allen, President Golden Gate Audubon Society Noreen Weeden, Volunteer Coordinator San Francisco Tomorrow Jennifer Clary, President Wild Equity Institute Brent Plater Executive Director Nature in the City Peter Brastow, Executive Director San Francisco League of Conservation Voters Steven Krefting	September 26, 2011
SFDOG-1	San Francisco Dog Owners Group Sally Stephens, Chair	October 6, 2011
SFDOG-2	San Francisco Dog Owners Group Sally Stephens, Chair	October 30, 2011
SFPGA-1	San Francisco Public Golf Alliance Richard Harris	September 20, 2011
SFPGA-2	San Francisco Public Golf Alliance Richard Harris	October 25, 2011
SFPGA-3	San Francisco Public Golf Alliance Richard Harris	October 31, 2011
SFSPCA-1	San Francisco Society for the Prevention of Cruelty to Animals Jennifer Scarlett, Co-President	October 24, 2011
SFT-1	San Francisco Tomorrow Jennifer Clary, President	October 31, 2011
SF Tree-1	San Francisco Tree Council Carolyn Blair, Past Founder, San Francisco Tree Council, Founding Member, SF Urban Forest Council	October 3, 2011
Sierra Club-1	Sierra Club, San Francisco Bay Chapter Arthur Feinstein, Conservation Chair, San Francisco Group	October 31, 2011

Table 3-1	**List of Written Comment Letters Received on the Draft EIR**	
Designation	***Commenter***	***Date of Written Comments***
Tank Hill Neighbors-1	Paul R. Potter Elizabeth W. Potter Alicia Snow Donna Goodman Terry Craig Lucy Horner Lisa Gautier Patrice Gautier Betty Singer Paul Conttorma [4 Illegible Signatures]	October 18, 2011
WEI-1	Wild Equity Institute Brent Plater	October 31, 2011
WGF-1	World Golf Foundation Stephen F. Mona, Chief Executive Officer	September 29, 2011
C. Individuals		
Adam-1	Adam	October 4, 2011
Adams-L-1	Lile Adams	October 4, 2011
Adams-S-1	Susan Adams	October 4, 2011
Ahlberg-1	Todd Ahlberg	October 5, 2011
Anonymous-1	Anonymous	September 21, 2011
Anonymous-2	Anonymous	September 21, 2011
Anonymous-3	Anonymous	Undated
Archer-1	Donna Archer	October 5, 2011
Armanini-1	Mark Armanini	October 28, 2011
Art-1	Catherine Art	November 4, 2011
Asher-1	Poe Asher	October 30, 2011
Barnsdale-1	Mary Barnsdale	October 29, 2011
Bartley-1	Eddie Bartley	October 31, 2011
Bartolotta-1	Victor Bartolotta	October 31, 2011
Baye-1	Peter R. Baye	October 31, 2011
Beberman-1	Gary Beberman	October 4, 2011
Beemsterboer-1	Joni Beemsterboer	October 29, 2011
Betcher-1	Peter Betcher	October 31, 2011
Blum-1	Jan Blum	October 12, 2011
Borden-1	Tom Borden	November 2, 2011
Bors-1	Margo Bors	September 26, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Bose-1	Rupa Bose	October 24, 2011
Bowling-1	Alane Bowling	October 31, 2011
Bowman-1	Arnita Bowman	October 31, 2011
Brown-1	Judith Brown	October 28, 2011
Browne-1	Luke Browne	October 31, 2011
Browning-1	Nadine Browning	October 31, 2011
Browning-2	Nadine Browning	October 31, 2011
Browning-3	Nadine Browning	October 31, 2011
Buckley-1	Kathy Buckley	October 31, 2011
Buffa-1	Andrea Buffa	October 29, 2011
Butler-1	Barbara Butler and Jeffrey Beal	October 30, 2011
Cabada-1	Ingrid Cabada	October 29, 2011
Campbell-C-1	Christopher Campbell	October 31, 2011
Campbell-N-1	Norma Campbell	October 31, 2011
Carrington-1	Rick Carrington	October 4, 2011
Caskey-1	Julie Caskey	October 5, 2011
Cech-1	Nancy Cech	October 4, 2011
Cerf-1	Diane Cerf	October 31, 2011
Chambers-1	Thompson Chambers	October 31, 2011
Chase-1	Greg Chase and Eva and Oban	October 28, 2011
Chasnoff-1	Debra Chasnoff	October 31, 2011
Child-1	Katrina Child	October 31, 2011
Chirico-1	John Chirico	October 30, 2011
Cook-1	Elizabeth Cook	October 31, 2011
Corvan-1	Marianna Corvan	October 3, 2011
Coxon-1	Michele Coxon	October 31, 2011
Creely-1	Elizabeth Creely	October 31, 2011
Crouch-1	Dyer Crouch	October 24, 2011
D'Antonio-1	Georgia D'Antonio and Corinne Barreca	October 12, 2011
Delacroix-1	Pierre Delacroix	October 31, 2011
Demetrious-1	Amad Demetrious	October 31, 2011
Devine-1	Deirdre Carlin Devine	October 30, 2011
DeWitt-1	Natalie DeWitt	October 30, 2011
Donovan-1	Catherine Donovan	October 24, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Dotz-1	Lawrence Dotz	October 31, 2011
Dougherty-1	Mary Dougherty	October 31, 2011
Drechsler-1	Richard Drechsler	October 31, 2011
Elkins-1	Tod Elkins	October 10, 2011
Elliott-1	Lisa Ruth Elliott	October 31, 2011
Emanuel-1	David Emanuel	October 24, 2011
Emanuel-2	David Emanuel	October 25, 2011
Enzi-1	Christopher Enzi	October 29, 2011
Fasman-1	Michael Fasman	October 29, 2011
Fitzer-1	Susan, Gene, and Wanda Fitzer	October 31, 2011
Flasher-1	Bob Flasher	October 31, 2011
Fong-1	Edward Fong	October 17, 2011
Form Letter-1	Various commenters (refer to Attachment B, Draft EIR Comment Letters, pp. B-645 to B-843)	October 30, 2011
Fox-1	Camilla Fox	October 31, 2011
Furney-1	Gary Furney	November 4, 2011
Gaar-1	Greg Gaar	October 12, 2011
Gachowski-1	Michele Gachowski	October 30, 2011
Garber-1	Ted Garber	October 31, 2011
Garbutt-1	Gerard Garbutt	October 4, 2011
Garnett-1	Elizabeth Garnett	October 7, 2011
Gavin-1	Gregory Gavin	October 25, 2011
Gerrie-1	Philip Gerrie	October 31, 2011
Ghosh-1	Samir Ghosh	October 31, 2011
Gleichenhaus-1	D. Peter Gleichenhaus	October 24, 2011
Gordon-1	Kelly Gordon	October 30, 2011
Gottesman-1	Judith Gottesman	October 31, 2011
Gravanis-1	Ruth Gravanis	October 31, 2011
Greenberg-1	Sharon Greenberg	October 31, 2011
Griggs-1	Michael Griggs	October 5, 2011
Grim-1	Dema Grim	October 31, 2011
Haire-1	Janet Haire	November 17, 2011
Hammer-1	Milo Hammer	October 31, 2011
Hartnett-1	William E. Harnett	October 26, 2011
Hasbrouck-1	Edward Hasbrouck	October 4, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Hatch-1	Carolyn Hatch	October 31, 2011
Hayes-1	Dylan, Veronica and Isa Hayes	November 1, 2011
Hecht-1	Alma Hecht	October 28, 2011
Hershkowitz-1	Daniel Hershkowitz	October 4, 2011
Hochschild-1	Frances Hochschild, Christie Hochschild, and Isabella Hochschild	October 26, 2011
Holzman-1	Barbara Holzman	October 25, 2011
Hooker-1	Steve Hooker	October 29, 2011
Horn-1	Margaret A. Horn	October 26, 2011
Hovland-1	Madeline Hovland	October 27, 2011
Huebsch-1	Nina Huebsch	October 13, 2011
Hull-1	Prudence Hull	October 30, 2011
Illig-1	Jim Illig	October 31, 2011
Ingle-1	Kay Ingle	October 31, 2011
Jake-1	Krist Jake	October 31, 2011
Johnson-1	Amanda Johnson	October 31, 2011
Joyce-1	Ann Joyce	October 4, 2011
Jungreis-1	Jason Jungreis	October 31, 2011
Karpa-1	Mike Karpa	October 30, 2011
Kathie-1	Kathie	October 4, 2011
Keating-1	John B. Keating	October 31, 2011
Keats-1	Carma Keats	October 31, 2011
Keitelman-1	Mary Keitelman	September 21, 2011
Kelly-1	Kimberly Kelly	October 31, 2011
Kenealy-1	Patrick Kenealy	October 31, 2011
Kesel-1	Rachel Kesel	October 21, 2011
Kessler-1	Janet Kessler	October 24, 2011
Kessler-2	Janet Kessler	October 25, 2011
Kind-1	Jean Kind	October 31, 2011
King-1	Julie King	October 31, 2011
Koster-1	Carolyn Koster	October 13, 2011
Koury-1	Richard Koury	October 31, 2011
Kovinsky-1	Matthew Kovinsky	October 27, 2011
Kushner-1	Pinky Kushner	October 31, 2011
Langille-1	Celeste Langille	October 31, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR		
Designation	***Commenter***	***Date of Written Comments***
Lansdown-1	Victoria Lansdown	October 17, 2011
Lapins-1	Denise Lapins	October 30, 2011
Lee-P-1	Pam Lee	October 10, 2011
Lee-Y-1	Yen L. Lee	November 14, 2011
Lendaro-1	Melody Lendaro	November 1, 2011
Levins-1	Alan S. Levins	October 18, 2011
Links-1	Bo Links	September 29, 2011
Litehiser-1	Linda Stark Litehiser	October 30, 2011
Lock-1	Ken Lock	October 5, 2011
Loeffler-1	Joan Loeffler	October 12, 2011
Lorenz-1	Henry Lorenz	October 31, 2011
Louie-1	Denise Louie	October 31, 2011
Lu-1	Kathy Lu	October 31, 2011
Lundeen-1	Eddie Lundeen	October 6, 2011
Lynch-1	Paul Lynch	October 3, 2011
Mace-1	Shannon Mace	October 29, 2011
Madar-1	Jennifer Madar	October 29, 2011
Mansbach-1	Larry Mansbach	October 28, 2011
Mar-1	Glenn Mar	October 13, 2011
Masud-1	Chuck Masud	October 4, 2011
Mattingly-1	Judith Mattingly	October 29, 2011
McAllister-1	Mary McAllister	September 22, 2011
McAllister-2	Mary McAllister	October 26, 2011
McAllister-3	Mary McAllister	October 24, 2011
McCalla-1	Kim McCalla	October 31, 2011
McGinnis-1	Paula McGinnis	October 28, 2011
Miller-E-1	Eric Miller	October 25, 2011
Miller-J-1	Jennifer Miller	October 4, 2011
Miller-N-1	Norma Miller	October 12, 2011
Mills-1	Claire Mills	October 31, 2011
Miner-1	Laura Brunow Miner	October 29, 2011
Minsuk-1	Sue Minsuk	October 30, 2011
Monagle-1	Patricia Monagle	October 30, 2011
Moseley-1	Beth Moseley	October 10, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Moyer-1	Leigh Moyer	October 31, 2011
Mundy-1	Al Mundy	October 4, 2011
Muniz-1	Laurel Muniz	October 5, 2011
Murphy-B-1	Bob Murphy	October 13, 2011
Murphy-D-1	Dan and Joan Murphy	October 31, 2011
Nagle-1	Taylor Nagle	October 31, 2011
Naima-1	Reza Naima	October 31, 2011
Nelson-1	Tiffany Nelson	October 31, 2011
Norton-1	Donald Norton and Nancy Sack	October 27, 2011
Oliva-1	Veronica Oliva	October 31, 2011
Olliphant-1	Hugh Olliphant	October 5, 2011
O'Neill-1	Elizabeth O'Neill	October 21, 2011
Otto-1	Nancy Otto	October 17, 2011
Pattillo-1	Chris Pattillo	October 27, 2011
Perrins-1	Georgina Perrins	October 30, 2011
Perry-J-1	John Perry	October 9, 2011
Pfister-1	Charles Pfister	October 31, 2011
Pittin-1	Renee Pittin	October 31, 2011
Popoff-1	Michael Popoff, Georgette Petropoulos	October 31, 2011
Pruitt-1	Beth Pruitt	October 31, 2011
Quinn-1	Chris Quinn	October 24, 2011
Radetsky-1	Ruth Radetsky	October 3, 2011
Raffaelli-1	Paulo Raffaelli	October 29, 2011
Rafferty-1	Patrick Rafferty	October 23, 2011
Randt-1	Bill Randt	October 4, 2011
Ray-1	Jamie Ray	October 31, 2011
Reichardt-1	Kathy Reichardt	October 9, 2011
Reque-1	Peter Reque	October 3, 2011
RileyHoppes-1	Donna Riley Hoppes	October 31, 2011
Rodriguez-1	Marilyn I. Rodriguez	October 27, 2011
Rogers-1	Glenn Rogers	October 31, 2011
Roman-1	Jonathan Roman	October 27, 2011
Rosentahl-1	Nancy Rosenthal	October 7, 2011
Rotter-E-1	Elizabeth W. Rotter	October 30, 2011

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Rotter-P-1	Paul Rotter	October 19, 2011
Saino-1	Celia Saino	October 30, 2011
Salamone-1	Lisa Salamone	October 29, 2011
Saltzer-Lamb-1	Vicki Saltzer-Lamb	October 31, 2011
Schlund-1	Claus Schlund	October 31, 2011
Schmoll-1	Gisela Schmoll	October 31, 2011
Scott-1	Jan Scott	October 31, 2011
Sebastian-1	Sandi Sebastian	November 4, 2011
Shapiro-1	Arthur M. Shapiro	October 6, 2011
Sharp-1	Alisa Sharp	October 3, 2011
Shepard-J-1	Jane Shepard	October 31, 2011
Simons-1	Kevin Simons	October 4, 2011
Skippy-1	Skippy	October 3, 2011
Smith-1	Megan Smith	October 31, 2011
Stafford-1	Nancy Stafford	October 31, 2011
Stevenson-1	Jan Stevenson	Undated
Stewart-M-1	Matt Stewart	October 5, 2011
Strasbaugh-1	Louise Strasbaugh	October 3, 2011
Stringer-1	Lew Stringer	October 31, 2011
Summer-1	William Summer	October 31, 2011
Sutch-1	Jeff Sutch	October 31, 2011
Swenerton-1	Kirra Swenerton	October 28, 2011
Thompson-C-1	Clare M. Thompson	October 31, 2011
Thompson-D-1	Doug Thompson	October 5, 2011
Tondelli-1	Natalie Tondelli	October 31, 2011
Tully-1	Sean Tully	October 1, 2011
Valente-1	Suzanne M. Valente and Stephen R. Golub	Undated
Vittori-1	Lisa Vittori	October 31, 2011
Vitulano-1	Karen Vitulano	October 31, 2011
Von Erb-1	Jon Von Erb	October 27, 2011
Wade-1	Isabel Wade	October 31, 2011
Walker-1	Josh Walker	October 11, 2011
Weed-1	Thomas Weed	October 31, 2011
Werger-1	Alison Werger	November 1, 2011

Table 3-1	**List of Written Comment Letters Received on the Draft EIR**	
Designation	***Commenter***	***Date of Written Comments***
Wilford-1	Linda Wilford	October 31, 2011
Wilson-1	Bill Wilson	October 31, 2011
Winquist-1	Kelly Winquist	October 31, 2011
Woo-1	Ginny Woo	October 29, 2011
Yip-1	TY Yip	October 31, 2011
Zendarski-1	Art Zendarski	October 31, 2011
WRITTEN COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD OF APRIL 27, 2012, TO JUNE 11, 2012		
A. Agencies		
None.		
B. Organizations		
GHCC-1	Green Hills Country Club Paul Grech and Joseph Michelucci	May 19, 2012
MPIC-2	Miraloma Park Improvement Club Dan Liberthson, Corresponding Secretary	June 7, 2012
SFFA-1	San Francisco Forest Alliance Eric Miller, President	May 14, 2012
SFFA-2	San Francisco Forest Alliance Eric Miller, President	May 18, 2012
SFFA-3	San Francisco Forest Alliance Eric Miller, President	June 8, 2012
WEI-2	Wild Equity Institute Brent Plater	July 23, 2012
WTPCC-1	West of Twin Peaks Central Council Matt Chamberlain, President	June 4, 2012
C. Individuals		
Bachmanov-1	Eugene Bachmanov	June 7, 2012
Besser-1	Ken Besser	May 15, 2012
Bley-1	Andrew Bley	June 11, 2012
Bose-2	Rupa Bose	June 11, 2012
Bowman-2	Arnita Bowman	June 11, 2012
Burgard-1	Joe Burgard and Suzanne Kirrane	June 10, 2012
Caughman-1	Erin Caughman	June 10, 2012
Freedman-1	Aubrey Freedman	June 10, 2012
Glikshtern-1	Anastasia Glikshtern	May 26, 2012
Gomez-1	Oswald L. Gomez and Carol L. Borden-Gomez	June 9, 2012
Heldman-1	Mary Heldman	June 5, 2012

Table 3-1 List of Written Comment Letters Received on the Draft EIR

Designation	*Commenter*	*Date of Written Comments*
Hess-1	Claire Hess, David Hess, David Young, Helen Zisser, and David Zisser	May 27, 2012
Hu-1	Karin Hu	June 11, 2012
Ingram-1	Terry Ingram	May 16, 2012
Johns-1	Belinda Johns	May 16, 2012
Johnston-1	Carolyn Johnston	June 7, 2012
Kalafati-1	Anton Kalafati	June 19, 2012
Kass-1	Sidney Kass	June 2, 2012
Klebaner-1	Susanna Klebaner	June 5, 2012
Links-2	Robert D. “Bo” Links	June 11, 2012
Miller-E-2	Eric Miller	May 23, 2012
Miller-N-2	Norma Miller	June 2, 2012
Milstein-1	Prabha Milstein	May 16, 2012
Perry-A-1	Andrea and Arie Perry	May 31, 2012
Potts-1	Jason Potts	May 16, 2012
Rehling-1	Lu Rehling	May 15, 2012
Risk-1	Jane and Jerry Risk	May 19, 2012
Shepard-A-1	Avrum Shepard	June 10, 2012
Stewart-E-1	Ethan Stewart	June 1, 2012
Thayer-1	Nick Thayer	June 8, 2012
Thomas-1	Barbara Thomas	June 11, 2012
Zeiger-1	Felicia Zeiger	June 11, 2012

3.B PUBLIC HEARING COMMENTS

The names of persons who spoke at the October 6, 2011, public hearing follow, in the order of the speakers (refer to Attachment C, Draft EIR Hearing Transcript, for a copy of the hearing transcript).

Table 3-2 Oral Comments Received on the Draft EIR

Designation	*Commenter*
PH-Stephens	Sally Stephens, Chair, San Francisco Dog Owner's Group
PH-Links	Bo Links
PH-Pittin	Renee Pittin
PH-Shaffer	Linda Shaffer, Vice-President, local chapter, California Native Plant Society
PH-Sherap	Tenzin Sherap
PH-Mozingo	George Mozingo
PH-Skain	Pat Skain
PH-Bryant	Clarence Bryant
PH-Rotter-P	Paul Rotter
PH-Rotter-N	Neff Rotter
PH-Bowman	Arnita Bowman
PH-Gaar	Greg Gaar
PH-Brastow	Peter Brastow, Director, Nature in the City
PH-Keating	John Keating
PH-Harris	Richard Harris, Founder, Public Golf Alliance
PH-Noetzel	Steven Noetzel
PH-Emanuel	David Emanuel
PH-Solomon	Mark Solomon
PH-Antonini	Commissioner Michael Antonini, San Francisco Planning Commission

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CHAPTER 4 **Comments and Responses**

The order of the comments and responses is shown below, with the subject area prefix indicated in square brackets:

Within each of these sections (or subject areas), such as General [G] or Biological Resources [BI], individual comments that are similar are further grouped together using a descriptive subheading and numbered sequentially. For example, General Comments [G] are listed as [G-1], [G-2], [G-3] and so on, with each responding to a similar set of comments (e.g., G-7, Prohibition on the Use of Artificial Turf; G-10, Public Outreach and Draft EIR Public Review Process; or G-17, Impacts on People within the Natural Areas). The response to the group of comments contained in Comment G-1 is termed Response G-1; similarly, the response to the group of comments contained in Comment PD-11 is termed Response PD-11.

The convention for assigning individual comment codes is as follows: Name of Agency/Organization/Individual-Letter Number-Comment Number. For instance, the first individual comment in Comment/Response G-6 is WTPCC-1-10, indicating that it is the first letter from the West of Twin Peaks Central Council (WTPCC), and it is the 10th comment in that letter. Using another example, Bowman-2-17 is the second letter from Arnita Bowman, and it is the 17th comment in that letter. Written comments were received as either letters or e-mails.

There are two primary tools to help the reader navigate the document, one allowing the reader to easily identify comments and responses by subject area and subheading, and the second allowing the reader to locate comments and responses by individual commenter. Each method is further described below.

Table 4-1, RTC p. 4-3, is organized by section of the Draft EIR and includes the detailed comment/response title and page number where both the comment and response is provided.

Because this RTC document groups similar comments together, as required by the City's Environmental Guidelines, an individual comment letter, and all of the responses to it, may be located in different parts of this document. Attachment A, Comment Matrix by Commenter, allows the reader to determine where responses to each of the comments are provided. Attachment A contains a matrix identifying each commenter (e.g., Arnita Bowman), the commenter's affiliation (if any), the comment letter number (e.g., Bowman-1 or Bowman-2), a designation of individual comments contained within each comment letter (e.g., Bowman-1-1, Bowman-2-1), and the response number that addresses each individual comment (e.g., G-6, PD-11, BI-16). For example, Attachment A shows that the response to Comment NPS-1-01 is addressed in Response PD-26. If a commenter wishes to cross-reference Table 4-1 and Attachment A, there is a common column – RTC Comment/Response No. – that allows easy correlation between the two tables.

Where revisions or clarifications to the text of the Draft EIR are made in response to public comments received on the Draft EIR or as initiated by City staff, deleted text is shown in ~~strikethrough~~, and new text is double underlined. These changes are organized in the order of the Draft EIR table of contents, which is consistent with the list provided at the beginning of this Chapter. If text changes are not identified in response to a comment, it is assumed that the comment did not necessitate any changes to the Draft EIR.

Many comments focus on the relative merits of the proposed project (that is, question the validity of the proposed project) or express support or opposition for the proposed project (or elements of the project), and do not comment on the adequacy or accuracy of the data, analysis, and conclusions of the Draft EIR. As required by CEQA, this Draft EIR evaluates the impact of the proposed action and does not—and need not—substantiate the reason for the action. While all of the information contained in this RTC document will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project, comments unrelated to the environmental analysis are considered independent of the decision to certify the EIR. Where responses are provided for comments that are unrelated to the environmental analysis, they are provided for informational purposes only.

The decision to certify the EIR is outlined in CEQA Guidelines Section 15090, which requires that the decision-making body certify that the Final EIR: (1) has been completed in compliance with CEQA; (2) has been presented to the decision-making body of the lead agency and the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and (3) reflects the lead agency's independent judgment and analysis.

None of the comments, responses, or additional information presented in this RTC or included in the EIR present significant new information, which is defined in CEQA Guidelines Section 15088.5 as a new significant environmental impact; a substantial increase in the severity of an environmental impact; a feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it; or the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043). The information presented herein and revisions to the EIR add clarity or provide minor modifications to the EIR that do not change the conclusions. Thus, recirculation pursuant to CEQA (California PRC Section 21092.1) and the CEQA Guidelines (14 CCR Section 15088.5) is not required. Further, while revisions to the Draft EIR text have been proposed in this RTC document, none of the revisions change any of the conclusions in the Draft EIR and do not constitute significant new information, as defined above, which requires recirculation of the Draft EIR.

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
General [G]					
Comment G-1	Data that the Natural Areas support a "substantial amount of outdoor recreation"	4.A.1	General Comments on SNRAMP and the Draft EIR	4-13	4-13
Comment G-2	Draft EIR should acknowledge the current areas already set aside for native plant habitats	4.A.1	General Comments on SNRAMP and the Draft EIR	4-15	4-15
Comment G-3	Previous Natural Areas Program actions	4.A.1	General Comments on SNRAMP and the Draft EIR	4-16	4-19
Comment G-4	Financial considerations for implementation of SNRAMP	4.A.1	General Comments on SNRAMP and the Draft EIR	4-25	4-29
Comment G-5	Impacts of Natural Areas access restrictions on social fabric of San Francisco	4.A.1	General Comments on SNRAMP and the Draft EIR	4-30	4-31
Comment G-6	Impacts on Natural Areas from poor maintenance	4.A.1	General Comments on SNRAMP and the Draft EIR	4-32	4-34
Comment G-7	Prohibition on use of artificial turf	4.A.1	General Comments on SNRAMP and the Draft EIR	4-35	4-36
Comment G-8	Co-existence of sensitive species and golf	4.A.1	General Comments on SNRAMP and the Draft EIR	4-36	4-36
Comment G-9	Need for a recirculated or subsequent project-specific Draft EIR	4.A.2	CEQA Process	4-36	4-37
Comment G-10	Public outreach and Draft EIR public review process	4.A.2	CEQA Process	4-39	4-50
Comment G-11	Draft EIR is adequate, accurate, and complete	4.A.2	CEQA Process	4-54	4-57
Comment G-12	Objectivity of the EIR	4.A.2	CEQA Process	4-58	4-60
Comment G-13	Sharp Park analysis piecemealed regarding sea wall and golf course redesign	4.A.2	CEQA Process	4-61	4-62
Comment G-14	Historic Preservation Commission review of future project under the National Environmental Policy Act	4.A.2	CEQA Process	4-64	4-64
Comment G-15	GGNRA activities (unrelated to the SNRAMP)	4.A.3	Dog Play Areas	4-64	4-65
Comment G-16	Dog problems result from lack of monitoring, lack of enforcement of existing leash laws, and lack of responsibility from dog owners	4.A.3	Dog Play Areas	4-67	4-68

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment G-17	Impacts of people within Natural Areas	4.A.3	Dog Play Areas	4-69	4-69
Comment G-18	Disagree that dog walkers should be limited to seven dogs	4.A.3	Dog Play Areas	4-71	4-71
Comment G-19	Support for maintaining or expanding amount of dog play areas/opposition to reducing DPAs	4.A.3	Dog Play Areas	4-72	4-88
Comment G-20	Support for reduced dog play areas as proposed in the SNRAMP	4.A.3	Dog Play Areas	4-90	4-91
Comment G-21	No dog group advisory involvement for the Natural Areas Program	4.A.3	Dog Play Areas	4-91	4-92
Comment G-22	Recreation and Park Department process for closing dog play areas	4.A.3	Dog Play Areas	4-92	4-92
Comment G-23	Prohibition on new dog play areas	4.A.3	Dog Play Areas	4-93	4-93
Comment G-24	Data on disturbance to breeding birds at Lake Merced dog play area	4.A.3	Dog Play Areas	4-95	4-95
Comment G-25	Analysis of dog impacts related to plants, wildlife, and erosion	4.A.3	Dog Play Areas	4-96	4-106
Comment G-26	Social impacts of dog ownership and dog play areas access restrictions	4.A.3	Dog Play Areas	4-109	4-114
Project Description [PD]					
Comment PD-1	General support for the project	4.B.1	Support for the Project	4-116	4-122
Comment PD-2	Support protecting the Golden Gate Park oak woodlands	4.B.1	Support for the Project	4-122	4-122
Comment PD-3	General opposition to the project	4.B.2	Opposition to the Project	4-123	4-132
Comment PD-4	Opposition to habitat restoration activities	4.B.2	Opposition to the Project	4-133	4-139
Comment PD-5	Native plant restoration versus providing more recreational areas	4.B.2	Opposition to the Project	4-141	4-141
Comment PD-6	Opposition to the proposed public access restrictions	4.B.2	Opposition to the Project	4-142	4-145
Comment PD-7	Opposition to reduction of Bernal Hill dog play area	4.B.2	Opposition to the Project	4-146	4-148
Comment PD-8	Opposition to reduction of McLaren Park dog play area	4.B.2	Opposition to the Project	4-149	4-149
Comment PD-9	Decommissioning of trails	4.B.3	SNRAMP Goals	4-150	4-151
Comment PD-10	Goals and objectives of the proposed project	4.B.3	SNRAMP Goals	4-153	4-155
Comment PD-11	Goals and implementation of the Natural Areas Program	4.B.3	SNRAMP Goals	4-157	4-159

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment PD-12	Recommend removing Sharp Park and Laguna Salada from the SNRAMP	4.B.4	Proposed Modifications to Sharp Park	4-160	4-168
Comment PD-13	Proposed actions for Sharp Park	4.B.4	Proposed Modifications to Sharp Park	4-173	4-175
Comment PD-14	Support the configuration and continued operation of the Sharp Park Golf Course	4.B.4	Proposed Modifications to Sharp Park	4-184	4-185
Comment PD-15	Support limiting Sharp Park activities to controlling invasive species, reintroducing native species, and exclusion of dogs in wetlands	4.B.4	Proposed Modifications to Sharp Park	4-186	4-186
Comment PD-16	Proposed actions for Bayview Park	4.B.5	Proposed Modifications to Other Natural Areas	4-186	4-187
Comment PD-17	Proposed actions for Glen Park	4.B.5	Proposed Modifications to Other Natural Areas	4-187	4-187
Comment PD-18	Opposition to any habitat restoration at Glen Park that destroys coyote habitat	4.B.5	Proposed Modifications to Other Natural Areas	4-188	4-188
Comment PD-19	Proposed actions for Lake Merced	4.B.5	Proposed Modifications to Other Natural Areas	4-188	4-189
Comment PD-20	Proposed actions for Mount Davidson	4.B.5	Proposed Modifications to Other Natural Areas	4-189	4-192
Comment PD-21	Proposed actions for Pine Lake	4.B.5	Proposed Modifications to Other Natural Areas	4-195	4-195
Comment PD-22	Proposed actions for Tank Hill	4.B.5	Proposed Modifications to Other Natural Areas	4-196	4-196
Comment PD-23	The SNRAMP should consider options to control off-leash dog use other than closing dog play areas	4.B.6	Other Proposed Modifications	4-197	4-198
Comment PD-24	Specificity about which dog-related activities would be allowed in specific areas and locations	4.B.6	Other Proposed Modifications	4-200	4-200
Comment PD-25	Employ adaptive management for dog-related damage to native grassland and wildflower areas	4.B.6	Other Proposed Modifications	4-201	4-201
Comment PD-26	Coordinate management actions with adjacent open space managers	4.B.6	Other Proposed Modifications	4-202	4-202

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment PD-27	Recreation activities should include community stewardship	4.B.6	Other Proposed Modifications	4-202	4-203
Comment PD-28	Identify long-term, sustainable solutions of wetland protection and restoration	4.B.6	Other Proposed Modifications	4-203	4-203
Comment PD-29	Management action based on vegetation type	4.B.6	Other Proposed Modifications	4-204	4-204
Comment PD-30	Request that Mount Davidson be removed from the SNRAMP if the Maximum Recreation Alternative is not adopted	4.B.6	Other Proposed Modifications	4-204	4-205
Comment PD-31	Success of existing habitat restoration efforts should be evaluated	4.B.6	Other Proposed Modifications	4-205	4-206
Comment PD-32	Native restoration should be allowed in unforested areas	4.B.6	Other Proposed Modifications	4-207	4-207
Comment PD-33	Maintenance of city parks	4.B.6	Other Proposed Modifications	4-208	4-209
Comment PD-34	Elimination of 18,000 trees	4.B.6	Other Proposed Modifications	4-210	4-210
Comment PD-35	Draft EIR inaccurately describes the acquisition date for Mori Point	4.B.7	Correction to Project Description	4-211	4-211
Plans and Policies [PP]					
Comment PP-1	Consistency with plans and policies	4.C	Plans and Policies [PP]	4-212	4-212
Land Use and Land Use Planning [LU]					
Comment LU-1	Applicability of Pacifica Logging Ordinance and San Mateo County Tree Ordinance	4.D.1	Land Use and Land Use Planning [LU]	4-212	4-213
Comment LU-2	Effects on existing community	4.D.1	Land Use and Land Use Planning [LU]	4-214	4-214
Comment LU-3	Effects on existing character	4.D.1	Land Use and Land Use Planning [LU]	4-214	4-215
Comment LU-4	Applicability of San Francisco Urban Forestry and Landmark Tree Ordinances	4.D.1	Land Use and Land Use Planning [LU]	4-216	4-216
Aesthetics [AE]					
Comment AE-1	Aesthetic impacts of tree removal	4.D.2	Aesthetics [AE]	4-218	4-219
Comment AE-2	Aesthetic impacts of brush piles and brown vegetation	4.D.2	Aesthetics [AE]	4-222	4-223
Comment AE-3	Tree removal simulations	4.D.2	Aesthetics [AE]	4-224	4-224

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment AE-4	Impacts of fence on Sharp Park berm	4.D.2	Aesthetics [AE]	4-225	4-226
Comment AE-5	Analysis of proposed tree management at Grandview Park	4.D.2	Aesthetics [AE]	4-227	4-227
Comment AE-6	Impacts of poor maintenance	4.D.2	Aesthetics [AE]	4-229	4-230
Cultural and Paleontological Resources [CP]					
Comment CP-1	Support determination that Sharp Park Golf Course is a historical resource	4.D.3	Cultural and Paleontological Resources [CP]	4-232	4-240
Comment CP-2	Opposition or uncertainty about determination that Sharp Park Golf Course is a historic resource	4.D.3	Cultural and Paleontological Resources [CP]	4-240	4-246
Comment CP-3	Agree with significant impacts and mitigation measures regarding the Sharp Park Golf Course Historical Resource	4.D.3	Cultural and Paleontological Resources [CP]	4-249	4-251
Comment CP-4	Disagree with significant impacts and mitigation measures regarding the Sharp Park Golf Course Historical Resource	4.D.3	Cultural and Paleontological Resources [CP]	4-252	4-255
Comment CP-5	Modifications to mitigation measures	4.D.3	Cultural and Paleontological Resources [CP]	4-259	4-259
Comment CP-6	Research recommendations for archaeological resources analysis	4.D.3	Cultural and Paleontological Resources [CP]	4-260	4-262
Comment CP-7	Preservation of the Sharp Park Golf Course	4.D.3	Cultural and Paleontological Resources [CP]	4-263	4-263
Comment CP-8	Impacts of tree removal on historic Mount Davidson Area	4.D.3	Cultural and Paleontological Resources [CP]	4-264	4-265
Comment CP-9	Inadequate/Incomplete HRER for Mount Davidson	4.D.3	Cultural and Paleontological Resources [CP]	4-266	4-270
Transportation and Circulation [TR]					
Comment TR-1	Impacts of driving if more dog play areas are closed	4.D.4	Transportation and Circulation [TR]	4-278	4-279
Comment TR-2	Request Lake Merced Dog play area visitor use data to verify whether an increase in traffic would be minimal	4.D.4	Transportation and Circulation [TR]	4-279	4-280

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Noise [NO]					
Comment NO-1	Permanent noise impacts of tree removal	4.D.5	Noise [NO]	4-281	4-281
Air Quality [AQ]					
Comment AQ-1	Increased pollution from tree removal activities	4.D.6	Air Quality [AQ]	4-283	4-283
Greenhouse Gas Emissions [GG]					
Comment GG-1	Climate change analysis of vegetation changes is insufficient and inaccurate	4.D.7	Greenhouse Gas Emissions [GG]	4-285	4-297
Comment GG-2	Draft EIR ignores changes to San Francisco's climate	4.D.7	Greenhouse Gas Emissions [GG]	4-302	4-303
Wind and Shadow [WS]					
Comment WS-1	Analysis of wind impacts from tree removal	4.D.8	Wind and Shadow [WS]	4-304	4-309
Comment WS-2	Disagree that all tree removal will have less than significant effects on wind	4.D.8	Wind and Shadow [WS]	4-310	4-310
Recreation [RE]					
Comment RE-1	Actual number of dog play areas is 29, not 19, and total acreage of DPAs is 120 acres, including DPAs outside of the Natural Areas	4.D.9	Recreation [RE]	4-311	4-311
Comment RE-2	Characterization of dog play area moratorium	4.D.9	Recreation [RE]	4-312	4-313
Comment RE-3	Use GGNRA estimate of closing 90% of off-leash lands for cumulative analysis	4.D.9	Recreation [RE]	4-317	4-319
Comment RE-4	Address increase in passive recreation for cumulative analysis	4.D.9	Recreation [RE]	4-320	4-320
Comment RE-5	Consider adding holes to the Sharp Park Golf Course east of Highway 1	4.D.9	Recreation [RE]	4-321	4-321
Comment RE-6	Replace the removed hole at the Sharp Park Golf Course to maintain 18 holes	4.D.9	Recreation [RE]	4-321	4-322
Comment RE-7	If Bernal Hill and McLaren Park are closed, remaining dog play area land would be less suitable	4.D.9	Recreation [RE]	4-322	4-323
Comment RE-8	Impacts resulting from restrictions on recreational access	4.D.9	Recreation [RE]	4-323	4-324
Comment RE-9	Impacts on recreation from planting threatened and endangered species	4.D.9	Recreation [RE]	4-326	4-329
Comment RE-10	Recreational analysis related to trails	4.D.9	Recreation [RE]	4-330	4-337
Comment RE-11	Impacts of removing benches and recreational amenities	4.D.9	Recreation [RE]	4-340	4-340

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment RE-12	SNRAMP proposals for park access	4.D.9	Recreation [RE]	4-340	4-341
Comment RE-13	Effect of the reduction of DPAs on other DPAs in terms of recreational capacity	4.D.9	Recreation [RE]	4-342	4-347
Biological Resources [BI]					
Comment BI-1	Consider adding California Clapper Rail to Table 9	4.D.10	Biological Resources [BI]	4-350	4-351
Comment BI-2	Corrections to permitting process	4.D.10	Biological Resources [BI]	4-354	4-354
Comment BI-3	San Francisco sightings of Mission blue butterfly	4.D.10	Biological Resources [BI]	4-356	4-356
Comment BI-4	Sharp Park restoration and the San Francisco Garter Snake Recovery Plan	4.D.10	Biological Resources [BI]	4-356	4-357
Comment BI-5	Laguna Salada and Horse Stable Pond dredging effects on habitats	4.D.10	Biological Resources [BI]	4-358	4-358
Comment BI-6	Adequacy of Sharp Park sensitive-species analysis	4.D.10	Biological Resources [BI]	4-359	4-359
Comment BI-7	Impacts of lagoon drainage on sediment and water quality	4.D.10	Biological Resources [BI]	4-361	4-365
Comment BI-8	Cost of off-site disposal of dredged material	4.D.10	Biological Resources [BI]	4-382	4-382
Comment BI-9	Contamination from dog urine	4.D.10	Biological Resources [BI]	4-383	4-383
Comment BI-10	Role of fertilizers on lagoon wetlands	4.D.10	Biological Resources [BI]	4-384	4-384
Comment BI-11	SNRAMP use of native vs. nonnative/invasive plants in terms of habitat diversity and the ability to support native or sensitive species	4.D.10	Biological Resources [BI]	4-385	4-388
Comment BI-12	Tree removal at Mount Davidson	4.D.10	Biological Resources [BI]	4-390	4-391
Comment BI-13	Potential impacts of implementing the proposed habitat restoration and other management and maintenance actions on biological resources	4.D.10	Biological Resources [BI]	4-393	4-397
Comment BI-14	Mitigation measures should include 30-day notice prior to any tree removal or trail closure	4.D.10	Biological Resources [BI]	4-400	4-400
Comment BI-15	Effects of retaining nonnative and/or invasive species (including blue gum eucalyptus) on native habitats	4.D.10	Biological Resources [BI]	4-401	4-402
Comment BI-16	California Red Legged Frogs in Laguna Salada	4.D.10	Biological Resources [BI]	4-405	4-405
Comment BI-17	Disagree with Draft EIR identification of feral geese	4.D.10	Biological Resources [BI]	4-406	4-406
Comment BI-18	Scrub habitat should be clearly defined	4.D.10	Biological Resources [BI]	4-407	4-407

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment BI-19	Impacts and associated mitigation for wetlands and other coastal resources	4.D.10	Biological Resources [BI]	4-408	4-408
Comment BI-20	Draft EIR does not address impacts to common wildlife	4.D.10	Biological Resources [BI]	4-409	4-409
Comment BI-21	Biodiversity would decrease with removal of plants and planting of native coastal dune plants	4.D.10	Biological Resources [BI]	4-410	4-410
Comment BI-22	Distinction regarding native and nonnative predators	4.D.10	Biological Resources [BI]	4-411	4-411
Comment BI-23	Feral cat and predator control	4.D.10	Biological Resources [BI]	4-412	4-415
Comment BI-24	Distinction between native and nonnative species and invasive species	4.D.10	Biological Resources [BI]	4-417	4-420
Comment BI-25	Extent of wetlands filled for the conversion of marsh to fairways	4.D.10	Biological Resources [BI]	4-423	4-424
Comment BI-26	Coastal development permit requirements	4.D.10	Biological Resources [BI]	4-428	4-428
Comment BI-27	Glossary of terms and definitions	4.D.10	Biological Resources [BI]	4-430	4-431
Comment BI-28	SNRAMP does not address monitoring of native species	4.D.10	Biological Resources [BI]	4-433	4-434
Comment BI-29	Effects of previous Natural Areas Program projects on the Mission blue butterfly	4.D.10	Biological Resources [BI]	4-434	4-435
Comment BI-30	Impacts related to the removal of nonnative trees and invasive vegetation	4.D.10	Biological Resources [BI]	4-436	4-437
Comment BI-31	Native vegetation planting impacts on ecosystems and landscapes	4.D.10	Biological Resources [BI]	4-439	4-439
Comment BI-32	Effects on nesting birds	4.D.10	Biological Resources [BI]	4-440	4-441
Comment BI-33	SNRAMP proposals for tree replacement	4.D.10	Biological Resources [BI]	4-441	4-457
Comment BI-34	Provide square footage and percentages of trees to be removed	4.D.10	Biological Resources [BI]	4-466	4-467
Comment BI-35	Discuss brush pile creation where tree trimming or removal is planned	4.D.10	Biological Resources [BI]	4-469	4-469
Comment BI-36	Replacing nonnative vegetation with more appropriate native vegetation is self-contradicting	4.D.10	Biological Resources [BI]	4-470	4-470
Geology and Soils [GE]					
Comment GE-1	Erosion control measures should be site-appropriate, certified weed free, and composed of natural fiber	4.D.11	Geology and Soils [GE]	4-472	4-472
Comment GE-2	Drifting sand impacts and mitigation measures	4.D.11	Geology and Soils [GE]	4-473	4-474
Comment GE-3	Erosion impacts from habitat restoration and/or tree removal	4.D.11	Geology and Soils [GE]	4-475	4-483

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Hydrology and Water Quality [HY]					
Comment HY-1	Drainage issues and downstream flooding from tree removal activities	4.D.12	Hydrology and Water Quality [HY]	4-485	4-486
Comment HY-2	Sea level rise at Laguna Salada	4.D.12	Hydrology and Water Quality [HY]	4-490	4-493
Comment HY-3	Analysis of wetland hydrology, sediment and water quality, and dewatering activities	4.D.12	Hydrology and Water Quality [HY]	4-497	4-497
Comment HY-4	Effects of Sharp Park Tree Removal Activities within the Coastal zone	4.D.12	Hydrology and Water Quality [HY]	4-498	4-498
Comment HY-5	Dredging Impacts on Water Quality (Salinity Assessment, Water Budget Model, and Storm Response Modeling)	4.D.12	Hydrology and Water Quality [HY]	4-499	4-501
Comment HY-6	Practices contributing to algal blooms	4.D.12	Hydrology and Water Quality [HY]	4-503	4-503
Hazards and Hazardous Materials [HZ]					
Comment HZ-1	Use of herbicides/pesticides by the Natural Areas Program	4.D.13	Hazards and Hazardous Materials [HZ]	4-504	4-531
Comment HZ-2	Public safety impacts from closure and relocation of dog play areas	4.D.13	Hazards and Hazardous Materials [HZ]	4-544	4-544
Comment HZ-3	Concerns regarding contaminated sites	4.D.13	Hazards and Hazardous Materials [HZ]	4-545	4-545
Comment HZ-4	Disagree with Draft EIR explanation of vegetation and fire hazards	4.D.13	Hazards and Hazardous Materials [HZ]	4-547	4-557
Comment HZ-5	Disagree that all project alternatives will have less than significant effects from pesticide use	4.D.13	Hazards and Hazardous Materials [HZ]	4-560	4-560
Alternatives [AL]					
Comment AL-1	Support the No Project Alternative	4.E.1	No Project Alternative	4-561	4-562
Comment AL-2	Inadequate description of Maximum Restoration Alternative	4.E.2	Maximum Restoration Alternative	4-562	4-563
Comment AL-3	Maximum Restoration Alternative should restore all of Sharp Park Golf Course	4.E.2	Maximum Restoration Alternative	4-564	4-565
Comment AL-4	Support the Maximum Restoration Alternative	4.E.2	Maximum Restoration Alternative	4-566	4-566
Comment AL-5	Opposition to the Maximum Restoration Alternative	4.E.2	Maximum Restoration Alternative	4-567	4-568

Table 4-1 Topical List of Comment Letters Received

RTC Comment/ Response No.	*RTC Comment/Response Title*	*RTC Section No.*	*RTC Section Name*	*RTC Page No. of Comment*	*RTC Page No. of Response*
Comment AL-6	At Mount Davidson, use cypress, cedar, and pine trees	4.E.2	Maximum Restoration Alternative	4-568	4-569
Comment AL-7	Support for Maximum Recreation Alternative	4.E.3	Maximum Recreation Alternative	4-571	4-572
Comment AL-8	Support the Maintenance Alternative	4.E.4	Maintenance Alternative	4-573	4-585
Comment AL-9	Support minimum activity	4.E.4	Maintenance Alternative	4-586	4-587
Comment AL-10	Environmentally Superior Alternative	4.E.5	Environmentally Superior Alternative	4-587	4-595
Comment AL-11	Nondredging alternatives for Sharp Park	4.E.6	Alternatives Considered but Rejected	4-596	4-600
Comment AL-12	Choosing feasible alternatives over the proposed project	4.E.6	Alternatives Considered but Rejected	4-605	4-605
Comment AL-13	Propose alternative of reducing, redirecting, or shutting down the Natural Areas Program	4.E.6	Alternatives Considered but Rejected	4-605	4-606

4.A GENERAL COMMENTS [G]

This section addresses general comments on the SNRAMP or the Draft EIR, including comments in opposition to, or in favor of, the proposed project, comments pertaining to the CEQA process, glossary, and definitions presented in the Draft EIR, and other comments on the Draft EIR that do not explicitly relate to, or would not substantially affect, the analysis contained in the Draft EIR.

4.A.1 General Comments on SNRAMP and the Draft EIR

Comment G-1	**Data that the Natural Areas support a "substantial amount of outdoor recreation"**

The response to Comment G-1 addresses all or part of the following individual comment:

NPS-1-07

- Pg. 252: We would appreciate receiving any user data collected in preparation of this draft EIR that underlies the statement that the natural areas support a "substantial amount of outdoor recreation." The City submitted comments on the GGNRA Dog Management Plan/DEIS asking that we consider the re-distributional effects of closing areas, and noted that the City would provide visitor information to this effect. User data that documents the number of visitors (and dog walkers) currently using these areas will help us address this comment. [NPS-1-07]

Response G-1

This comment requests data supporting the statement that the Natural Areas support a "substantial amount of outdoor recreation" and also requests visitor use data. The response below provides the requested data to the extent possible.

While SFRPD does not have specific data or user counts for the outdoor recreation usage by visitors to the Natural Areas for all recreation categories, regular use of the trails and other passive areas, for a variety of recreational uses, such as dog-walking, is evident through general observation. While usage levels vary from one area to another, the Natural Areas, which make up 1,107 acres of SFRPD's 4,113 acres of total recreation and open spaces areas (with 3,100 acres located in the City of San Francisco), support a substantial amount of outdoor recreational activities. As reflected on SNRAMP pp. 3-13 and 3-14, Natural Areas are used extensively by residents and visitors of San Francisco for walking, hiking, running, nature watching, dog walking, and other passive recreational activities.[9] All Natural Areas provide easy trail-walking opportunities, and most

[9] Passive recreation—Recreation that occurs in a natural setting and that requires minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

provide views of the city. The larger regional parks, such as Glen Canyon Park and McLaren Park, also provide hiking opportunities in areas of moderate to challenging steepness. Dog walking is popular in many Natural Areas. Key parks for wildlife observation are Bayview Park, McLaren Park, Mount Davidson, Glen Canyon Park, and Lake Merced. Stewardship and volunteering also are popular recreational activities that occur in Natural Areas. Approximately 15 stewardship groups work regularly restoring Natural Areas under the guidance of the Natural Areas Program (NAP).[10] Thousands of volunteer hours are spent each year enhancing natural and recreational features in Natural Areas. Development of site-stewardship and recreational uses compatible with natural resource protection are two of the main goals of the SNRAMP.

In 2004, SFRPD developed a Recreation Assessment[11] in order to evaluate community program and facility needs. As part of this assessment, a statistically significant number of households (1,035) were surveyed,[12] and 61 percent of respondents visit Natural Areas for some form of recreation.

In terms of recreational use of the Dog Play Areas (DPAs), in 2009 and 2011, the SFRPD not only conducted dog use counts at numerous dog parks throughout the city, but also specifically within the Natural Areas (Bernal Hill, McLaren Park, Lake Merced,[13] Buena Vista, Corona Heights, and Pine Lake). The 2009 and 2011 dog use count data is included in this EIR as new Appendix K (Dog Use Count Data: 2009 and 2011). The dog-use counts revealed that an average of 66 dogs and 38 owners use the parks on an hourly basis, excluding Lake Merced, which only had one dog (and one owner) use the park over the survey time periods. The survey time periods vary by park, and specific information regarding the survey dates and time periods are provided in Chapter 5, Draft EIR Revisions, "new" EIR Appendix K, which is provided on RTC p. 5-64. Based on the total dogs recorded over the survey time period, the park with the highest total recorded dog use was Pine Lake (with 122 dogs), and the park with the lowest total recorded dog use was Lake Merced (with 1 dog). The remaining Natural Area parks (Bernal Hill, McLaren Park, Buena Vista, and Corona Heights) had a combined total of 112 recorded dogs over the survey time period, with counts ranging from 19 (McLaren Park) to 32 (Corona Heights).

In summary, due to high urban density and limited park areas in San Francisco, the properties managed by the SFRPD, including the Natural Areas, are highly valued and utilized for their recreational opportunities.

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10 The Natural Areas Program, or NAP, is now referred to as the Natural Resources Division; however, to maintain consistency between the Draft EIR and this RTC document, the term NAP will continue to be used.

11 San Francisco Recreation and Park Department, *Recreation Assessment Report*, August 2004. This document (and all other documents cited in this report, unless otherwise noted), is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA, 94103, as part of Case File No. 2012.1427E 400.

12 San Francisco Recreation and Park Department, *Recreation Assessment Report*, August 2004.

13 For Lake Merced, the dog counts were taken in 2011.

Refer also to Response RE-13, RTC p. 4-347, for a discussion of the impacts on other DPAs (in terms of recreational capacity) of the conversion of DPAs to on-leash dog areas, and refer to Response RE-1, RTC p. 4-311, for a discussion of the total number of dog parks available for on-leash, off-leash, or on-trail dog use in the city.

Comment G-2	**Draft EIR should acknowledge the current areas already set aside for native plant habitats**

The response to Comment G-2 addresses all or part of the following individual comment:

Lorenz-1-04

- Also, the plan does not recognize that the city of SF has already set aside huge areas for native plant habitats in the form of the San Francisco Peninsula Watershed. This needs to be acknowledged in the EIR. [Lorenz-1-04]

Response G-2

This comment requests acknowledgement that there are native plant habitats set aside as part of the San Francisco Peninsula Watershed.

The 23,000-acre Peninsula Watershed, to which the commenter refers, is located in central San Mateo County, south of the city and is not under the jurisdiction of the SFRPD, but rather the SFPUC, which is why it is not included in the SNRAMP. While areas of the Peninsula are set aside for open space, as are other areas within the Bay Area, the Peninsula Watershed Plan Final EIR does not identify a specific acreage for native plant restoration activities.

Irrespective of other native plant habitat restoration activities in other portions of the Bay Area, the Recreation and Open Space Element (ROSE) of the City's General Plan (updated in April 2014) requires the City to protect and enhance the biodiversity, habitat value, and ecological integrity of open spaces and encourage sustainable practices in the design and management of the City's open space system (Objective 4). The ROSE identifies four policies that are applicable to the City's natural areas: Policy 4.1: Preserve, protect and restore local biodiversity; Policy 4.2: Establish a coordinated management approach for designation and protection of natural areas and watershed lands; Policy 4.3: Integrate the protection and restoration of local biodiversity into open space construction, renovation, management and maintenance; and Policy 4.4: Include environmentally sustainable practices in construction, renovation, management and maintenance of open space and recreation facilities.[14] Further, the protection of Natural Areas in San Francisco is also addressed in the City's *Sustainability Plan*[15] and SFRPD's Strategic Plan[16] under Strategy Four: Inspire Stewardship (Protect

[14] San Francisco Planning Department, *Recreation and Open Space Element of the San Francisco General Plan*, April 2014. This document is available online at: http://openspace.sfplanning.org/, accessed on January 29, 2016.

[15] City of San Francisco Commission on the Environment, *Sustainability Plan for the City of San Francisco,* 1997. This document is available online at: http://sustainablecity.org/, accessed on June 6, 2016.

and enhance San Francisco's precious natural resources through conservation, education, and sustainable land/facility management practices) and specifically through Objective 4.1: Conserve and strengthen natural resources and Objective 4.2: Increase biodiversity and interconnectivity on City parkland.

The proposed project does not involve converting areas outside of the Natural Areas managed by the SFRPD to native plant habitat (with exception of minor areas around the Laguna Salada wetland complex in Sharp Park), but instead seeks to improve and enhance those native plant communities within the Natural Areas.

Comment G-3 Previous Natural Areas Program actions

The response to Comment G-3 addresses all or part of the following individual comments:

SFFA-3-12	SFPGA-3-11	WTPCC-1-09
Bowman-2-17	Kessler-1-09	Kessler-2-09

- **1. The Natural Areas Program has violated California Fish & Game Code and the Migratory Bird Treaty Act**

  The DEIR states that SNRAMP is consistent with all federal and state laws governing the protection of biological resources. One of those laws is California Fish & Game Code 1600-1616 regarding the protection of fish and wildlife within "bodies of water of any natural river, stream or lake." These codes obligate those who are engaged in any "streambed alteration" to apply for a permit and "to propose reasonable project changes to protect the resource." (DEIR, page 274)

  Islais Creek in Glen Canyon Park is such a water body which is protected by this law. Accordingly, the Natural Areas Program applied to California Fish & Game for a Streambed Alteration Permit in preparation for their project which began in November 2011. **The Natural Areas Program made the following commitment to mitigate harm to wildlife in Glen Canyon Park in its Streambed Alteration Permit:**

  > "It is the policy of RPD's Natural Areas Program that **no new projects will begin during the breeding season (December to May).** Follow up work in previously cleared areas may be done during the breeding season, however, because areas will have been cleared previously. Wildlife will not likely be using these areas for breeding. This protocol has been effective in reducing impacts to breeding wildlife."

  The Natural Areas Program began to destroy the nonnative vegetation in Glen Canyon Park in San Francisco in November 2011. In addition to destroying valuable habitat with chainsaws, they also sprayed herbicides. This destructive activity continued through winter and spring 2012 and cannot be dismissed as "follow-up work" on previously cleared areas.

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[16] San Francisco Recreation and Parks Department, *Strategic Plan FY 2016–2020*. This document is available online at: http://sfrecpark.org/wp-content/uploads/RPD-Strategic-Plan-FY16-20.pdf, accessed on June 6, 2016.

The San Francisco Forest Alliance (SFFA) protested this destructive project many times but it has continued unabated to as recently April 27, 2012, when they pruned trees and sprayed herbicides.

Earlier in April, SFFA learned from a public records request that this project violated a legal commitment to the California Department of Fish & Game. SFFA immediately brought this violation of NAP's commitment to the attention of the General Manager of the Recreation and Park Department. The head of the Natural Areas Program said that the violation was necessary because the grant funding for the project was about to expire. To avoid losing the funding for the project, the birds and animals of Glen Canyon Park were subjected to this destructive project during their breeding and nesting season.

SFFA brought this violation to the attention of the California Department of Fish & Game. Their regulations commit them to enforce the terms of the Streambed Alteration Permit, including the mitigation of potential harm to wildlife. Violations of the terms of the permit are subject to "civil penalties" according to the regulations: "A person who violates this chapter is subject to a civil penalty of not more than twenty-five thousand dollars ($25,000) for each violation."

One month after informing California Department of Fish & Game of this violation, nothing seems to be done about it. In fact, several weeks after sending this information to Fish & Game, another episode of destruction occurred in Glen Canyon Park on April 27, 2012.

As the breeding/nesting season is also the season during which migratory birds are occupying their nests and the federal Migratory Bird Treaty Act "… also applies to the removal of nests occupied by migratory birds during the breeding season," (DEIR, page 273) we assume this law was also violated.

In other words, the legal commitments made by the Natural Areas Program to conduct the destructive phase of their project outside of the breeding and nesting season were not observed. Furthermore, no action was taken by California Fish & Game to stop this project when it was brought to their attention. The law is apparently ignored with impunity.

In addition to the violation of federal and state laws, the Natural Areas Program has also violated the commitments made in both the SNRAMP and the DEIR: "In compliance with the MBTA [Migratory Bird Treaty Act], the SFRPD would avoid harming or removing the nests of these species and any migratory bird species. Measure GR-4b (page 109) in the SNRAMP requires that vegetation management activities be conducted outside the breeding season (February 1 to August 31), unless these activities had already begun before the breeding season and had already removed nesting habitat or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present." (DEIR, page 305)

The commitment to California Fish & Game in NAP's Streambed Alteration Permit and the commitment made in Measure GR-4B of SNRAMP are contradictory. These contradictions should be resolved by the final EIR: When is the breeding season? What evidence is there that a breeding bird survey was conducted prior to vegetation removal activities which took

place continuously from November 2011 to April 27, 2012? Is the mitigation required by the Streambed Alteration Permit consistent with the caveats of Measure GR-4b?

The final EIR is not in a position to reassure the public that the implementation of SNRAMP will not harm wildlife because the Natural Areas Program has violated the laws that theoretically protect wildlife. [SFFA-3-12]

- The EIR should contain a detailed description of the process which led to the design and selection of the proposed Sharp Park Restoration project. (a) Over the last several years, the City has performed extensive analyses (including the Sharp Park Conceptual Restoration Alternatives Report included as Appendix I) of the endangered species and associated issues at Sharp Park, and engaged in a comprehensive and public effort to analyze numerous alternatives to address those issues. That process resulted in the decision by the City to implement the Restoration project which is now addressed in the Draft EIR. However, the Draft EIR is largely silent regarding how the Restoration project came to be. The Final EIR should rectify this oversight by incorporating into the Project Description section a detailed description of the City studies and decision-making processes that resulted in the City's decision to implement the Restoration project now being analyzed. [SFPGA-3-11]
- We are also concerned that some habitat conversion is being done during breeding and nesting season. For example, NAP applied for a "streambed alteration" permit from the California Fish and Game Dept. for habitat conversion work to be done near Islais Creek in Glen Canyon. In the application, NAP clearly stated: "It is the policy of RPD's Natural Areas Program that no new projects will begin during the breeding season (December to May)." Similar commitments were made in the SNRAMP. However, NAP contractors used chainsaws and herbicides to destroy underbrush habitat in Glen Canyon in March and April, continuing work done sporadically since November 2011. This work took place throughout the breeding/nesting season, despite NAP's legal commitment to CA Fish and Game and in the SNRAMP to not do habitat work during breeding season. When people informed RPD management about this, during a meeting at McLaren Lodge, Lisa Wayne, the head of NAP, said the work was being done during the breeding/nesting season because the grant for the project was set to expire. In other words, NAP's decision on habitat conversion in Glen Canyon appeared to be motivated by financial considerations, not by any concerns about the wildlife and birds living there. [WTPCC-1-09]
- It is also disturbing that RPD has proceeded with implementing much of the SNRAMP plans prior to the completion of the DEIR, which doesn't seem to comply with CEQA. For example, 1) signs are already posted at the Natural Area entrances calling the entire Natural Area "sensitive habitat" and requiring visitors to "stay on the designated trails" and 2) the 2008 Park Bond Trail Restoration Program - $4 million budget with about $900,000 already spent - has already been used to start the SNRAMP proposed plans to decommission trails, erect permanent fencing, remove existing landscaping, and install new native plants. In addition in the Glen Canyon Creekside Trail Habitat Conservation Fund (9/13/10) (See *Attachment A*), RPD claims that the proposed project is "not related to any larger project, series of projects, or program", when in fact the project is directly implementing the SNRAMP proposed plans and altering the park land use. [Bowman-2-17]

- NAP was originally intended to preserve the few remnants of San Francisco's historical habitat, but the program has morphed into an empire that controls over one-quarter of all the city-managed parkland – land for which access is being limited by the NAP program in a city coping with more and more people. We have wonderful natural areas – forests, thickets and overgrown areas, which everyone loves as they are – they are truly natural – but they are being removed for NAP's program. NAP is actually harming the environment by destroying trees, established habitat, and established ecosystems which include our existing wildlife. NAP wants to recreate our environment as one of native grasses which might have existed in the area in 1776 – in very delimited spaces this seems fine, but they should not be taking over our parks which have evolved on all levels since that time. The grasses were native to a sand-dune ecology, but that is no longer the case within the city, and the grasses provide no protective habitat to the animals which now occupy these spaces – animals which are not on NAP's "specified" or "endangered" lists. There has been an alarmingly high rate of failure when "endangered" species have been introduced – this is because they are no longer suited to this environment which has evolved and changed since 1776. NAP is a political program, not a program based on science, and one which is hampering people's enjoyment and use of their parks.

  We have now discovered that, for native plants, there is a huge issue of "sustainability" which has been totally overlooked by the NAP program: the Native Plants in fact cannot survive without artificial means of keeping them going, including huge amounts of human management and poisons to keep other growth down: this project is an absolute waste of resources. And the result is artificial museum gardens which preclude other uses of the parks – access to more and more areas is being restricted because of the NAP program. The very phrase "natural areas" is totally deceptive to the public – these are artificial creations.

  If you want to look at areas which have been left totally bare because NAP ripped out what was there, look at the periphery of Pine Lake – the NAP program first began there 15 years ago and it is a mess. And now the lush growth in Glen Canyon is slowly and systematically being removed, NAP is turning a gem of a wilderness park – something that everyone wants retained – into a native grassland area, even removing and thinning truly-native willows and coyote brush. No one wants these parks turned into these artificial museum gardens except the NAP people themselves. Twin Peaks is sprayed with poisons every four months so that native plants can grow. More people that I speak to are for ending the NAP domination of our so-called "natural areas." [Kessler-1-09] [Kessler-2-09]

Response G-3

One of the comments asserts that SFRPD is violating CEQA by implementing elements of the 2006 SNRAMP before environmental review has been completed for the 2006 SNRAMP. Other comments question the scope of the parkland improvements under the management of the SFRPD. Another comment states that the NAP harms the environment, that previous restoration efforts have not been successful, and questions whether native plants are sustainable.

Compliance with CEQA

The Natural Areas Program is currently operating under the 1995 Management Plan and any actions the Natural Areas Program is currently undertaking is either a separate project, such as the 2008 and 2012 Clean and Safe Neighborhoods Park Bond or the Glen Canyon Trail Restoration Project, or under the authorization of the 1995 Management Plan. The 2008 Clean and Safe Neighborhoods Parks Bond and the Glen Canyon Trail Restoration Project referenced in the comment above is separate and independent of the 2006 SNRAMP, and underwent separate CEQA analyses as described below. All current actions are currently authorized by the 1995 Management Plan or separate environmental review. The proposed SNRAMP would provide a comprehensive program for the ongoing management and stewardship of Natural Areas, building upon the conceptual framework outlined in the 1995 Management Plan.

Previous Actions of the Natural Areas Program

Many of the commenters concerns relate to previous actions of the NAP, which are separate and independent from the 2006 SNRAMP. Nonetheless, a response has been provided for informational purposes. Further, as with all of the comments provided on this Draft EIR, they have been forwarded to the SFRPD staff and Commission for review and consideration.

These previous actions of the NAP, while independent of the 2006 SNRAMP, may include projects funded by the 2008 and 2012 San Francisco Clean and Safe Neighborhoods Bond. The 2008 General Obligation Bond (2008 Clean and Safe Neighborhoods Parks Bond) underwent CEQA review as part of Planning Department Case File No. 2007.1013E. The 2012 General Obligation Bond (2012 Clean and Safe Neighborhoods Parks Bond) underwent CEQA review as part of Case File No. 2011.1359E. The Glen Canyon Trail Restoration Project, referenced in the comment above was largely funded from the 2008 Clean and Safe Neighborhood Parks Bond, which underwent CEQA review under Planning Department Case File Nos 2007.1247E and 2010.0870E.

The 2008 Clean and Safe Neighborhood Parks Bond was a general obligation bond for improvements to parks owned and/or operated by the SFRPD and the Port of San Francisco. The 2012 San Francisco Clean and Safe Neighborhood Parks Bond, which is also a general obligation bond, would build on that precedent by delivering voter-approved parks and open-space recreation projects owned and/or operated by SFRPD or the Port of San Francisco. The projects identified in the 2008 and 2012 Clean and Safe Neighborhood Parks Bond are separate and independent from the SNRAMP; however, in the case of the 2012 Clean and Safe Neighborhood Parks Bond, some of the bond money is set aside for Citywide Parks improvements, which includes improvements to Golden Gate Park, McLaren Park, and Lake Merced Park. It is possible that some of these monies could be used for management actions and improvements proposed under the SNRAMP, but no physical improvements could be accomplished unless and until this EIR is certified by the Planning Commission.

The Glen Canyon Restoration Project, which is now substantially complete, repaired existing trails and steps, provided fencing for public safety, protected sensitive habitat areas, provided erosion control measures, restored native plants, and provided wayfinding signage. The existing trails were in poor condition and in need of restoration. The Glen Canyon Restoration Project improved safety, repaired retaining edges, addressed seeps and wet areas to improve pedestrian access, addressed invasive plant and hazardous tree removal, and enhanced the trail experience in Glen Canyon Park by retaining the rustic quality of the trail.[17] The Planning Department's Office of Environmental Review completed its environmental review and the project received a categorical exemption under CEQA State Guidelines (Case no. 2010.0870E, 9/29/10, after which time conceptual design for this project was approved by the Recreation & Park Commission in August 2011).

2006 SNRAMP and Sharp Park Restoration Development Process

In response to a commenter's request that the EIR contain a description of the process that led to the design of the Sharp Park Restoration, the development of the SNRAMP occurred over almost 10 years, beginning in 1995 and initially culminating in the 2005 Draft SNRAMP. Development of the 2005 Draft SNRAMP consisted of numerous and extensive meetings with involvement of over 3,000 individuals. In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city. Outreach also included sending fliers to neighborhood groups and residents within 300 feet of all Natural Areas, the Mayor's Office of Neighborhood Groups, SFRPD's list of neighborhood groups, and other interested parties. Announcements were also posted at all Natural Area sites. An online survey was available for individuals and members of the public who were unable to attend in person. Feedback was received from approximately 2,700 members of the public and recommendations were received from three independent scientists. Further, several task forces, committees, and/or working groups were convened as part of the development of the SNRAMP, including the Natural Areas Program Citizen Advisory Committee, an ad hoc group that made recommendations on how to revise the plan, a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and the Sharp Park Working Group. Scientists were members of these independent working groups, providing technical expertise and functioning in a peer review capacity. All of this input was considered during preparation of the 2006 Final Draft SNRAMP (or 2006 Public Review Draft), which was circulated for public review in February 2006. For clarity, the 2005 Draft SNRAMP was subject to scientific review and the 2006 Final (or public review) Draft was subject to public review.

Revisions to the Sharp Park Restoration Plan were also made in response to input from scientists and regulatory agencies. In fact, as previously mentioned, resource agencies, including the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC), have reviewed and provided input on the SNRAMP, the

[17] http://sfrecpark.org/project/glen-canyon-urban-trails-project/, accessed on July 28, 2014.

Sharp Park Conceptual Restoration Alternatives Report, and, ultimately, the Draft EIR, which was first circulated for public review August 31, 2011 and again on April 27, 2012. The USFWS also prepared the Biological Opinion[18] for the Sharp Park Pumphouse Project, with many of the conditions also applying to the proposed SNRAMP activities at Laguna Salada. Further, scientists commented on both the 2005 Draft SNRAMP and the 2011 SNRAMP Draft EIR, which provided another opportunity for technical review and input.

With respect to a formal scientific review, as stated on SNRAMP p. 1-10, three independent scientific reviews of the 2005 Draft SNRAMP were conducted in August 2005. Dr. Lynn Huntsinger[19] and James W. Bartolome[20, 21] reviewed the entire 2005 Draft SNRAMP and provided a detailed report to the SFRPD. The goal of the independent review was to assess the scientific basis for the SNRAMP and evaluate the goals, issues, and recommendations. Additionally, the reviewers were asked to determine if the 2005 Draft SNRAMP was feasible to implement and if implementation of the proposed management activities would result in the desired outcome. The review reached the following overall conclusions:

- The Plan was based on sound science and was a reasonable compromise between ideals, practicality, and competing uses.
- The management goals (conservation, restoration, education, stewardship, recreation, and monitoring) are consistently addressed throughout the Plan.
- The proposed actions and monitoring seemed generally feasible.

The review suggested revisions to the recommendations dealing with management of the urban forest understory, grasslands (see GR-3 in Section 5), and butterfly host plants (see GR-10). The general recommendations referenced by these comments have been revised and updated. The review also suggested minor changes to the Monitoring protocols (Section 7), which were implemented.

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18 Letter from Susan K. Moore, Field Supervisor, United States Fish and Wildlife Service to Jane M. Hicks, Chief, Regulatory Division, United States Army Corps of Engineers, October 2, 2012.

19 Dr. Huntsinger holds a Ph.D. in Wildland Resource Science from the University of California, Berkeley; an M.S. in Rangeland Science from the University of California, Berkeley; and a B.A. in Chinese Studies (Modern History) from the University of California, San Diego. She is currently a Professor of Rangeland Ecology and Management at the University of California, Berkeley.

20 Dr. Bartolome holds a Ph.D. in Wildlife Resource Science from the University of California, Berkeley and a B.A. in Biology from the University of California, Santa Barbara. He is currently a Professor of Graduate-level Education at the University of California, Berkeley.

21 Review: Significant Natural Resource Areas Management Plan, Lynn Huntsinger and James W. Bartolome, Submitted to the San Francisco Recreation and Parks Department, August 2005.

A second review was conducted by Roy A. Woodward, PhD.[22, 23] Dr. Woodward made comments on and suggested edits to the text, particularly as it related to the Monitoring Plan and Protocols, which were implemented, as appropriate.

A third review was conducted by Peggy Fiedler, PhD.[24, 25] Dr. Fiedler concluded that the Plan in general succeeded in its goals and "strikes a balance between natural resource protection and the needs of citizens in a highly urbanized, densely populated, highly ethnically diverse, overall well-educated area." Dr. Fiedler made many comments regarding clarity, content, organization, editing, format, and consistency. To the extent possible, these clarity and organizational comments, as well as her specific technical comments, were incorporated.

Ultimately, all of the input from both scientists and regulatory agencies was considered and implemented, as appropriate, in the 2006 Final Draft SNRAMP, which was circulated for public review in February 2006.

Continued Access to Local Open Space and Recreational Areas

There is significant parkland and recreation and open space areas within the city, estimated as upwards of 5,800 acres, both under the control of the SFRPD, as well as under the control of other public entities, such as the Port of San Francisco, federal government (e.g., Presidio Trust or Golden Gate National Recreation Area), SFPUC, and University of California San Francisco (UCSF). SFRPD maintains 4,113 acres of total recreation and open space areas and within this total acreage, the Natural Areas comprise about 1,107 acres. Refer also to Response PD-6, RTC p. 4-145, Response G-5, RTC p. 4-31, and Response RE-8, RTC p. 4-324, for a further discussion of potential impacts associated with access restrictions.

Native Plants and Plant Removal

With respect to the sustainability of native plants, refer to Response G-2, RTC p. 4-15, and Response PD-11, RTC p. 4-159, for a discussion of the City's policy guidance that supports the protection and maintenance of biodiversity within the City's Natural Areas, including guidance

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22 Dr. Woodward, Ph.D., CPESC, works with the California Department of Parks and Recreation in Sacramento, CA.

23 Hand edits to 2005 SNRAMP text from Dr. Roy A. Woodward, Ph.D., Senior Environmental Scientist, Natural Resources Division, State of California, Department of Parks and Recreation, no date.

24 Dr. Fiedler earned her B.A. from Harvard University and her Ph.D. from the University of California, Berkeley. She then joined the faculty at San Francisco State University (SFSU) where she was promoted to full Professor in 1997. While at SFSU she initiated the first Conservation Biology master's degree program of its kind in the United States. In 2000, Dr. Fiedler left SFSU to work as an environmental consultant in rare plant protection and ecosystem restoration.

25 Peer review of the Public Draft Significant Natural Resource Areas Management Plan, June 2005, Peggy L. Fieldler, Ph.D., Senior Scientist II/Associate, BBL Ecosystem Science and Restoration Services to Ms. Lisa Wayne, San Francisco Recreation and Parks, September 29, 2005.

provided in the City's *Sustainability Plan*[26] regarding the protection of Natural Areas in San Francisco. Refer also to Response BI-36, RTC p. 4-470, for a discussion of the temporary intervention and maintenance activities that are required for native species to become established.

One of the commenters questions whether the NAP is harming the environment by removing established trees, habitats, and ecosystems and also questions whether the removal of grasses would cause harm to species that use grassland as its habitat. Refer to Response BI-13, RTC p. 4-397, and Response BI-31, RTC p. 4-439, for a discussion of the impacts of removing vegetation, including impacts to common species, and refer to Response BI-15, RTC p. 4-402, for a discussion of the impacts of retaining nonnative vegetation and the relative benefits of removing nonnative vegetation.

Breeding and Nesting Season

With regard to the commenter's reference to activities at Glen Canyon Park, prior to undertaking the project in Glen Canyon Park in 2011-2012 that is referenced in the above comments, NAP staff conducted a breeding bird survey pursuant to the requirements of the MBTA and found no nesting birds in the area.

With respect to the commenter's concerns about when activities proposed under the SNRAMP would occur relative to the breeding and nesting season, the section on *Invasive Vegetation Removal* provided under Impact BI-2 on Draft EIR pp. 304 and 305 notes that "vegetation management activities would be conducted outside the breeding season for bird species (February 1 through August 31, as designated by CDFW), unless these activities had already begun before the breeding season and had already removed nesting habitat, or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present". Other impacts on sensitive species resulting from implementation of the programmatic projects, as well as the proposed maintenance activities and the Sharp Park Restoration Project, are comprehensively analyzed in Impacts BI-2 through BI-6 provided on Draft EIR pp. 306 through 330, concluding, in all cases, that impacts would be reduced to a less-than-significant level with the implementation of the identified mitigation measures.

[26] City of San Francisco Commission on the Environment, *Sustainability Plan for the City of San Francisco,* 1997. This document is available online at: http://sustainablecity.org/, accessed on June 6, 2016.

Comment G-4 Financial considerations for implementation of SNRAMP

The response to Comment G-4 addresses all or part of the following individual comments:

GGAS-1-11	MPIC-1-14	MPIC-2-06
WTPCC-1-14	Art-1-06	Bartley-1-04
Blum-1-03	Bowman-1-10	Cook-1-07
Delacroix-1-06	Fitzer-1-04	Fox-1-06
Freedman-1-02	Gomez-1-04	Hess-1-07
Johns-1-08	Jungreis-1-07	Lorenz-1-02
Ray-1-06	Rehling-1-03	Risk-1-06
Schlund-1-04	Shepard-A-1-03	Valente-1-10
Wade-1-03		

- Overall, Golden Gate Audubon endorses the Monitoring Program as written, but is concerned that the DEIR does not commit the City to fully executing or funding the Monitoring Program. (DEIR, at 94-95) Golden Gate Audubon strongly recommends that this section be improved to identify funding sources and state an affirmative commitment that monitoring will be conducted and that findings will be made available to the public (via reports or other means of sharing data) in a timely manner. This is of particular importance for the monitoring of special status species. [GGAS-1-11]

- Economic Factors. The DEIR lacks any cost estimate for implementing the SNRAMP and has no information about how it will be funded. It also does not address the potential impact of shifting resources such as park bond funds away from recreation and park maintenance/improvements to complete the SNRAMP. The substantial cost of removing the trees from Mt. Davidson will divert significant resources from providing what the MPIC considers a higher priority for resource use: basic maintenance of Mt. Davidson Park including litter and graffiti removal, forest and trail maintenance, and installation of benches and trail direction signage. [MPIC-1-14]

- The DEIR does not address the economic impact of the significant financial resources that would be diverted from SF Park and Recreation services to implement SNRAMP. There is no cost estimate for implementing the SNRAMP and no information about how it will be funded. It also does not address the potential impact of shifting resources, such as park bond funds, away from recreation and park maintenance and improvements in order to complete the SNRAMP. The substantial cost of removing the trees from Mt. Davidson will divert significant resources from providing what the MPIC considers a higher priority for resource use: basic maintenance of Mt. Davidson Park, including litter and graffiti removal, forest and trail upkeep, and installation of benches and trail direction signage. Ongoing costs for herbicide spraying, erosion control, replanting, and fencing are also not addressed. [MPIC-2-06]

- There are many tree maintenance issues around the City that need attention. The NAP funds would be put to much better use:

  1) getting the ivy out of all trees, as it will eventually strangle and kill all growth on the tree.

2) removing the fusarium from our remaining pine trees between November and February so that the pitch pine cankor and the bark beetle do not spread. If the pines are fed with deep root fertilizer and the yellowing needles are removed, the pines will be much healthier and have longer lives.

3) planting many more big beautiful trees that do well in our microclimate. [WTPCC-1-14]

- As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases. The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums. Spending tax dollars to take away recreation areas from residents is outrageous. I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks. [Art-1-06] [Cook-1-07] [Delacroix-1-06] [Fox-1-06] [Jungreis-1-07] [Ray-1-06]
- Considering long term costs and the current budget: Today San Francisco, like all U.S. municipalities, is suffering from the effects of a national recession. This will not likely be the case in five or ten years but maximizing the efficiency of available staff should always be a goal of long term planning. One way to maximize that efficiency is through a reduction of long term maintenance burden. Trees in a city require professional arborists for safety reasons and are much more expensive to maintain than grasslands or coastal chaparral in the long term. Most local native plants, once well established, require less or no irrigation and little or at least less maintenance. As has been demonstrated motivated volunteers can make a huge, cost-effective, difference on small scale restorations using simple tools. [Bartley-1-04]
- Some of the unresolved conflicts surrounding Sharp Park include:
  - > failure of RPD to deal with the financial losses of Sharp Park Golf Course which are being underwritten by San Francisco taxpayers even as San Mateo County has offered to help manage the Golf Course and take on certain responsibilities to alleviate the situation.
  - > improper redirection of limited RPD financial resources from San Francisco located RPD parks to shore up the losses of Sharp Park, in San Mateo County.
  - > Failure by RPD to implement sound financial restraint and management practices at Sharp Park in a way that makes it financially self-sustainable.
  - > Potential mis-management of taxpayer funds by taking funds from one RPD account, redirecting it to the Sharp Park Golf Course, and not reimbursing the original RPD account.
  - > Failure to consider the increased maintenance costs it will take to stave off sea rise which will further damage the park and the endangered species and who will pay for the increased maintenance cost
  - > Failure to ascertain if the citizens and taxpayers of San Francisco are willing to allow RPD to continue to redirect limited funds to continue to underwrite a failed San Mateo golf

experience at the cost of shortchanging San Francisco City parks even further than they are today. [Blum-1-03]

- In addition, the NAP is not free. Just removing and replanting some 15,000 trees in Sharp Park has to be a significant cost and yet no financial information is provided. I am personally quite appalled that large amounts of time and money are spent on removing healthy trees and vegetation when toilets are non-existent (e.g. Stern Grove) or badly maintained (e.g. Lake Merced), and the city is cutting other critical services. No plan should be complete without a financial analysis to evaluate the opportunity costs. [Bowman-1-10]
- For 10 years now, GGNRA has acted unilaterally and spent millions of dollars on a misguided plan that will require millions of dollars through the hiring of park rangers and police. I, for one, think this money would be more wisely spent on our schools. [Fitzer-1-04]
- Has the City no better use for taxpayer dollars during tough times than cutting down perfectly healthy trees to take us back to 1776? [Freedman-1-02]
- 3. Cost

  It is difficult to understand the logic of this reality: Throughout our City, young trees are being planted by our City workers in median strips, etc. as part of beautifying San Francisco. At the same time, plans are underway to remove thousands of healthy full grown trees in our parks. How does this make fiscal sense, especially during our current economic climate? City Departments are

  > Consider the cost of implementing this extensive tree removal plan during this time of fiscal crisis. This is not a prudent use of taxpayer funds. [Gomez-1-04]
- (7) Per the SF Forest Alliance taxpayer funds will be diverted to pay for this destruction and blight. [Hess-1-07]
- I would also like to know where the $$ is going to come from. The Parks budget is already stretched and our parks are suffering as a result. So the city wants to divert more funds from that budget to rip out “non-native” flora? Honestly, this “non-native” flora has been here for over 100 years - I am really not sure it’s so “non-native” now and it is a great improvement over sand dunes. Does the NAP extend to ripping out everything in Golden Gate Park as well and turning that beautiful stretch of land back into its “native” state? That would be sand dunes again.

  I will do everything I can to defeat this plan. [Johns-1-08]
- I also am quite concerned that limited city finances are being used for these type of obituary projects, and a financial analysis hasn’t been completed to understand the cost of the programs. [Lorenz-1-02]
- Thanks for listening. I am copying the mayor and the supervisor for this district on this message, so that they also will be aware of my concerns. Although the supervisor has been quoted in the SF Chronicle as dismissing the concerns of citizens such as me for being so much “rhetoric” and implying exaggeration, the fact is that approval of the EIR as it stands would privilege NAP to execute its misguided plan as it saw fit and on its own discretionary

time frame. That seems reason enough to me to sound an alarm. Of course, the huge cost of NAP's plans at a time when the budget should be managed most carefully also is a real shame. [Rehling-1-03]

- * The DEIR does not include any cost estimate for implementing the SNRAMP and does not explain how it will be funded. We object to spending scarce park funds on the Natural Areas Program when other essential services are being cut, Recreation Directors have been laid off, and fees are being charged for use of formerly free Park facilities. [Risk-1-06]
- The NAP program will produce an ongoing maintenance burden - since the pre-existing native species were displaced by the current non-natives, it seems logical that once planted native species will once again be displaced in a matter of time unless ongoing maintenance is applied. Maintenance = dollars last time I checked. Is this a good use of our limited funds? [Schlund-1-04]
- Bathrooms at playgrounds throughout the city are in pitiful condition. No human wants to go into these horrible pits, but RPD spends money on developing a NAP plan. NAP has been working on this plan for many years instead of providing the services that citizens want.

  And how is it that NAP is exempt from the standards established by Proposition C that apply to all other parks?

  One more thing needs mention. The idea of a city department taking so long to come up with a plan for what it is to do is completely absurd. NAP has been a major section of RPD since 1997. How much money should we spend developing a plan that provides so little return? And how long can we afford to keep the section of a city department functioning without a plan? [Shepard-A-1-03]
- NAP siphons funds from legitimate park purposes. NAP is exorbitantly expensive. At a time when SFRPD is not fulfilling its mandate to repair, maintain and improve existing park facilities, it is poor planning to incur even greater financial responsibility by undertaking the creation of Natural Areas within the parks. These areas are expensive to create and their maintenance is labor intensive and thus expensive to maintain. When children still are forced to play on fields so riddled with gopher holes that they risk serious injury, play in recreational centers that are severely in need of repair, and utilize bathrooms that are so unclean they present a health hazard, serious discussion of this NAP becomes ludicrous. [Valente-1-10]
- Finally, the cost of the proposed NAP Plan tree removals must be considered in relation to implementing this plan. San Francisco's park trees need serious attention and many older ones do need to be removed because they are dangerous. However, the Recreation and Park Department has almost no funding for this critical task. We cannot afford to maintain even the most hazardous trees in the most visited areas of popular parks; how can we possibly justify prioritizing the removal of perfectly healthy trees, all at huge financial and environmental cost to our City? [Wade-1-03]

Response G-4

These comments express concern regarding the funding sources and cost for implementation of the SNRAMP. Some comments suggest that implementing the SNRAMP would result in the reallocation of SFRPD resources, specifically maintenance resources, in order to fund the actions proposed in the SNRAMP. Comment GGAS-1-11 expresses concern that the SNRAMP does not commit the City to execute or fund the SNRAMP's proposed Monitoring Program.

CEQA does not require that an EIR include a detailed financial analysis of the proposed project. CEQA does require that an EIR include a detailed statement setting forth all the significant effects on the environment of a proposed project (California PRC Section 21100 (b)(1)). Additionally, CEQA defines the "environment" as the physical conditions that exist within the area that would be affected by a proposed project, including: land, air, water, minerals, flora, fauna, noise, and objects of historic or aesthetic significance (California PRC Section 21060.5). CEQA Guidelines Section 15064(e) discusses the treatment of social and economic impacts under CEQA. In short, the social and economic effects of a proposed project are only considered significant if there are associated physical effects on the environment.

As described on Draft EIR p. 89, the NAP staff is composed of biologists, ecologists, and natural resource managers that conduct routine maintenance within the Natural Areas on a daily basis. The NAP staff of approximately ten gardeners would continue to conduct the management actions within Natural Areas. The NAP also utilizes volunteer groups that range in size from 10 to 50 people per activity, but there are thousands of volunteer hours spent on an annual basis in the Natural Areas. Therefore, it is not anticipated that routine maintenance activities, which are substantially similar to current activities, would result in a need for SFRPD to hire additional staff. Also discussed on Draft EIR p. 89, larger projects, identified as programmatic projects in the Draft EIR, would be implemented by the SFRPD's Capital Division.

Some comments suggest that implementation of the SNRAMP would result in a reallocation of resources away from park maintenance standards that are imposed by Proposition C. The commenter is correct in that the Natural Areas are not subject to the maintenance standards imposed by Proposition C. However, while funding of programmatic projects identified in the SNRAMP would be required for implementation, it is speculative to assume that funding of the proposed SNRAMP would result in the reallocation of resources required for other park maintenance or improvements, which could in turn result in a significant adverse physical impact on the environment. As stated in CEQA Guidelines Section 15064(d)(3), "[a]n indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable." Comments about the relative economic merits of the proposed project will be considered by the decision makers as part of their decision to approve, modify, or disapprove the

proposed project. That consideration is carried out independent of the environmental review process.

With respect to concerns regarding the implementation of the SNRAMP's proposed Monitoring Plan, the Monitoring Plan has been proposed by SFRPD in their proposal for management of the Natural Areas and is included in the project description, as discussed on Draft EIR pp. 94 to 96. Given the nature of the proposed project and the goals identified in the SNRAMP, which specifically include those related to monitoring of the Natural Areas (refer to Draft EIR pp. 85 to 87), it would be speculative to assume that SFRPD would not carry out the project as proposed. As stated on SNRAMP p. 7-4, the monitoring "protocols have been designed and adapted to provide critical information using methods that are easily repeatable by SFRPD personnel and volunteers." SNRAMP Appendix I describes the monitoring protocol, which includes mapping, data collection, and data recording and analysis. Furthermore, decision makers would consider the financial implication of the proposed project and the environmental impacts of the project in its decision to approve or disapprove the SNRAMP.

It is noted that the Monitoring Plan proposed in the SNRAMP is different from a Mitigation and Monitoring Reporting Program (MMRP) required by CEQA. CEQA requires that an EIR identify feasible mitigation measures which could minimize significant adverse impacts of a proposed project (CEQA Guidelines Section 15126.4(a)(1)) and that a public agency adopt a program for monitoring or reporting on the measures it has imposed to mitigate or avoid significant environmental effects (CEQA Guidelines Section 15097). Should decision makers choose to carry out the proposed project, they would adopt a MMRP, committing the SFRPD to implement the mitigation measures identified in the EIR that were found to be feasible.

Comment G-5	**Impacts of Natural Areas access restrictions on social fabric of San Francisco**

The response to Comment G-5 addresses all or part of the following individual comments:

Bartolotta-1-16 Bowman-2-11 Jake-1-06
Litehiser-1-04

- The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting. [Bartolotta-1-16]
- 2. Evaluate the environmental impacts on public health related to discouraging daily exercise and recreation and on the changes to air quality for those exercising in the parks.

The DEIR does not specifically address the public health implications of policies that discourage exercise and diminish mental health benefits of the Natural Areas. In addition, trees benefit air quality and the plan does not address the impact of the removal of trees on air quality for those exercising or using the parks. The environmental impact on public health is significantly degraded by the SNRAMP proposed plan and the policies implemented by the Natural Areas Program since the creation of the SNRAMP [Bowman-2-11]

- More generally, the NARMP EIR does not adequately consider the impacts on the social fabric (environment) of San Francisco if one-quarter of its city parklands are closed to residents. Since the term "crime" is not found in the EIR, it evidently does not consider the effects of closing parks on changes in the park usage including more usage for criminal behavior such as drugs, camping out, and crimes against other citizens. [Jake-1-06]
- I also want to comment on what I consider an obsessive zeal of some Natural Areas promoters to restrict use of large parts of our parks for recreation … as well as the removal of plants, habitat and trees to "restore" the park lands to some sort of "pristine wilderness" dating back hundreds of years. We need to look first at the needs of our citizens to enjoy the outdoors in their local parks and have as much access to them as possible. Plans that restrict "people" use of the parks is going in the wrong direction. I am also concerned about the use of pesticides use on attempts to eradicate invasive species in areas where people ad pets may be exposed.

  I think my husband put it best, "a native plant is just an invasive species that got there first." We have to be sensible about how we use our open space. Urban parks need to serve their populations first. [Litehiser-1-04]

Response G-5

These comments express concern that the SNRAMP would prohibit access to the Natural Areas, resulting in secondary social impacts on society including increased rate of crime and air quality and public health effects. Comments concerning the use of pesticides are directed to Response HZ-1, RTC p. 4-531, and comments concerning the air quality impacts of tree removal are directed to Response AQ-1, RTC p. 4-283.

The proposed project does not involve closing parks or reducing access to Natural Areas, but instead focuses on enhancing the remnant native communities within the Natural Areas. The impacts of trail closure on recreation and access is addressed under Impact RE-1 on Draft EIR p. 256. As discussed on Draft EIR p. 256, the SNRAMP calls for closing about 10.3 miles of social trails and creating about 1.1 miles of new trails. Social trails are defined as undesignated and redundant pathways that have developed through use of a Natural Area, and they are not maintained by the SFRPD. The SFRPD determined that social trails require closure because they are considered unsafe, to protect sensitive species or habitat, or to prevent erosion (Draft EIR p. 256). However, Natural Areas would remain open to the public and designated trail access would continue to be provided in all Natural Areas and, in some areas, existing trails would be improved and additional trails

would be created. On p. 256, the Draft EIR concludes that "[i]t is unlikely that closing social trails, redundant trails, or trails near sensitive species or habitat would deter a substantial number of people from using Natural Areas … because general access would remain unimpeded and may improve through the creation of new trails and improving existing trails." Furthermore, the recreation goals of the SNRAMP, as identified on Draft EIR p. 86, include providing opportunities for passive recreation, such as hiking and nature observation and development of a recreation trail system that provides the greatest amount of accessibility while protecting natural resources. Given that trail access within all Natural Areas would continue to be provided, it would be speculative to conclude that removal of social or redundant trails could result in the secondary social impacts suggested by the commenters. Furthermore, CEQA Guidelines Section 15064(e) discusses the treatment of social and economic impacts under CEQA. Social and economic effects under CEQA are only considered significant if they result in a significant physical environmental effect. The commenters have provided no evidence that any potential social effect resulting from implementation of the SNRAMP would have a significant physical impact on the environment.

One commenter reflected that "a native plant is just an invasive species that got there first." Throughout time, humans have moved plants and animals around the globe, out of the environments they evolved in. Some species were introduced intentionally, and others were introduced unintentionally. A portion of those species—invasive species—are capable of spreading rapidly and displacing native species generally because they are adapted to similar climatic conditions, they lack predators or pests, and/or they have other characteristics that have allowed them to thrive. If left alone, Natural Areas would contain only a handful of native plants, and the animals that rely on a diversity of flora could become extinct.[27] In fact, the California Invasive Plant Council states that:

> "When plants that evolved in one region of the globe are moved by humans to another region, a few of them flourish, crowding out native vegetation and the wildlife that feeds on it. Some invasives can even change ecosystem processes such as hydrology, fire regimes, and soil chemistry. These invasive plants have a competitive advantage because they are no longer controlled by their natural predators, and can quickly spread out of control. In California, approximately 3% of the plant species growing in the wild are considered invasive, but they inhabit a much greater proportion of the landscape."[28]

Comment G-6 Impacts on Natural Areas from poor maintenance

The response to Comment G-6 addresses all or part of the following individual comments:

DogPACSF-1-20	GGHNA-1-05	SFDOG-2-21
Brown-1-17	Carrington-1-03	

[27] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on August 6, 2014.

[28] http://www.cal-ipc.org/ip/definitions/index.php, accessed on August 7, 2014.

- The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland. The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis. [DogPACSF-1-20] [Brown-1-17]
- The analysis does not adequately address impacts from poor maintenance of NAP areas.

  The NAP program has a history of poor maintenance. One of the GGRNA Board members has testified at hearings that he and his daughter once spent a very enjoyable time planting native plants in a NAP-managed natural area. Six months later, when his daughter wanted to see how "her" plants were doing, they went to the park and discovered nothing but a bunch of dead and dying plants. There had been no maintenance done since the original planting. His daughter was devastated at the death of all the plants she had worked so hard to plant. The NAP Management Plan allocates fewer than 20 days/year for planting/maintenance of each natural area. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. A few parks are scheduled for only one work day/year. Clearly, NAP cannot maintain all the areas that it now controls. The NAP EIR must consider the impacts on aesthetics, and on the biological resources themselves of this lack of maintenance. What good does it do to plant native plants if they die within a few months because no maintenance was done? These impacts must be considered in the NAP EIR. [GGHNA-1-05]
- The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland (1/3 if you add in Sharp Park in Pacifica). The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis. This must be considered in the NAP EIR when considering aesthetics and maintenance. [SFDOG-2-21]
- Suggestions that this added burden can be addressed with added monitoring are ludicrous. As the dust and dirt swirl up just what is going to be done? Hose us all down? Rather than

propose closures and restrictions the City should step up and improve its maintenance of these areas. There seems to be a disregard for the condition of many dog parks, orphans of the City. Shame. [Carrington-1-03]

Response G-6

These comments express concern that the NAP currently does not provide sufficient maintenance of the Natural Areas including the DPAs within those Natural Areas. Comment Carrington-1-03 suggests that rather than closing DPAs, NAP should increase maintenance activities. Other comments suggest that NAP should scale back their program to a fraction of the existing Natural Areas.

In terms of maintenance, as described on Draft EIR p. 89, the NAP staff is composed of biologists, ecologists, and natural resource managers that conduct routine maintenance within the Natural Areas on a daily basis. The NAP staff of approximately 10 gardeners conducts management actions within the Natural Areas, and the NAP also uses volunteer groups that range in size from 10 to 50 people. The current levels of funding do not allow the SFRPD to employ additional maintenance staff; however, with the collaboration of SFRPD employees and volunteers, the Natural Areas are maintained to allow positive recreational experiences while enhancing natural habitats.

With respect to comments regarding closure of DPAs, the SNRAMP proposes the closure of only one DPA, located at Lake Merced. As described in Draft EIR Chapter III, Project Description, p. 136, this DPA is proposed for closure not because of poor maintenance, but rather to avoid disturbance to breeding birds. Although the SNRAMP proposes reducing the size of two other DPAs, no DPAs, other than the Lake Merced DPA, are proposed for closure at this time.

The SNRAMP does not propose to add new Natural Areas to its program, but rather outlines management activities within existing Natural Areas. The management actions of the SNRAMP are evaluated against the existing management actions as identified in the 1995 Management Plan and considering the existing physical conditions at the time of the Notice of Preparation of the EIR. Similar to the proposed project, the 1995 Management Plan outlines measures to maintain and enhance vegetation, wildlife, water quality, and control of erosion. The proposed SNRAMP, however, includes additional monitoring goals as well as design and aesthetic goals (Draft EIR pp. 86 to 87). The SNRAMP also includes a monitoring program to assess the success of restoration projects in achieving conservation and restoration goals, and proposes to employ an adaptive management approach in achieving those goals (Draft EIR pp. 90 and 94 to 96). It is reasonable to expect that with implementation of the identified monitoring plan, the survival and maintenance of newly planted vegetation would increase compared to existing conditions. Some successful restoration efforts include those implemented at Glen Canyon and Islais Creek, the oak woodlands at Golden Gate Park, Beacon Street at Billy Goat Hills, and Grandview Park, but there are others, as well.

The Draft EIR analyzes the environmental impacts of the proposed SNRAMP on aesthetic resources on Draft EIR pp. 189 to 199. With respect to scenic resources, the Draft EIR concludes that where nonnative vegetation is replaced with native vegetation that is more appropriate for the area's precipitation pattern, water availability, animal populations, and local ecosystems, new vegetation would be expected to thrive more successfully than invasive vegetation. The Draft EIR goes on to conclude that due to the relatively short maturation time, projects that involve the removal of trees and other vegetation with shrub, brush and grass cover would result in less-than-significant impacts to scenic resources. The Draft EIR also concludes that removal of nonnative trees and replacement with native trees would not be expected to result in a demonstrable adverse change to scenic resources (Draft EIR p. 195).

With respect to comments that suggest the scope of the SNRAMP should decrease in size, the purpose of this EIR is to evaluate the impacts of the project, as proposed by the project sponsor, as compared to baseline conditions. While an EIR can identify feasible mitigation measures that could minimize significant adverse impacts or identify alternatives that would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, the purpose of this EIR is not to recommend a different project. However, the impacts of a reduced project were evaluated in RTC Section 4.E, Alternatives, and specifically Response AL–13, p. 4-606. An alternative that would result in removal of Natural Areas from the NAP would not meet the mission of the NAP, which is to "preserve, restore and enhance the remnant Natural Areas and to promote environmental stewardship of these areas" (Draft EIR p. 77). Such an alternative would also not meet the following primary CEQA project objective:

- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity.

Any alternative that would substantially reduce the scope of the Natural Areas would not meet the basic CEQA project objective, and it is unclear, which if any, significant environmental effects such an alternative would reduce or eliminate.

Comment G-7 Prohibition on use of artificial turf

The response to Comment G-7 addresses all or part of the following individual comment:

Bartley-1-11

- Replacing natural play field areas with artificial turf is neither good for nature or humans. It has been clearly demonstrated that the long term impacts are overwhelmingly negative economically and environmentally. I don't at all understand why the city is still considering this. [Bartley-1-11]

Response G-7

This comment expresses the view that replacing natural play field areas with artificial turf is neither good for nature nor humans.

The SNRAMP does not propose the conversion of grass fields to artificial turf.

Comment G-8	**Co-existence of sensitive species and golf**

The response to Comment G-8 addresses all or part of the following individual comments:

Archer-1-01 Mansbach-1-02 PH-Harris-01
PH-Links-02

- Many, many people LOVE Sharp Park Golf Course. We love golf, and we love that we are able to play this excellent public course. We don't think that there must be golf or animals, rather a partnership that makes everyone and every creature happy. It is possible to maintain and care for the wonderful Sharp Park Golf Course without doing away with the animals who also reside there. As I understand it, the animals did not come to live at Sharp Park until there was Sharp Park. [Archer-1-01]
- I am aware that the continued existence of Sharp Park as a golf course faces opposition. I really don't understand why as the golf course and the wildlife can and do coexist. Certainly my planning background influences my thinking that competing land uses for a specific property can be amicably accommodated. [Mansbach-1-02]
- Generally the notion of sharing the property between species and golfers, uhm, we support that. [PH-Harris-01]
- And the habitat restoration that's in the works in the subject of this EIR is by no means incompatible with maintaining that golf course. [PH-Links-02]

Response G-8

These comments express the view that habitat, wildlife and golf can co-exist and are not incompatible. The comments do not relate to the adequacy or accuracy of the analysis contained in the Draft EIR. Comments concerning Sharp Park are also directed to Response PD-13, RTC p. 4-175.

4.A.2 CEQA Process

Comment G-9	**Need for a recirculated or subsequent project-specific Draft EIR**

The response to Comment G-9 addresses all or part of the following individual comments:

Baye-1-07 McAllister-1-02

- **4. Summary of CEQA deficiencies and recommendations for remedies.**

  The City should either recirculate the DEIR to address these issues, or it should prepare a subsequent project-specific DEIR for Sharp Park. I recommend as the most expedient and

efficient CEQA process the separation of the stand-alone Sharp Park project DEIR from an otherwise consistent programmatic DEIR. [Baye-1-07]

- I respectfully request that the document be corrected and recirculated with the correction of the error prominently displayed to readers. When the document has been corrected and recirculated, a new comment period should be announced of equal length to that first announced. [McAllister-1-02]

Response G-9

These comments request that either the Draft EIR should be recirculated or a subsequent project-specific Draft EIR should be prepared for Sharp Park to address the issues they raised in their comment letter, which include issues related to the conversion of wetlands to uplands for golf course purposes, mitigation for wetlands impacts, an alternative to dredging, impacts associated with dewatering, sediment testing data, impacts associated with acid soil sulfate conditions, and cumulative impacts associated with dredging, salinity stratification, seawater intrusion, and sea level rise. This commenter also requests that a Sharp Park Draft EIR be provided separately from the rest of the programmatic SNRAMP analysis. The error mentioned in the second comment (McAllister-1-02) relates to the fact that Draft EIR p. 2 incorrectly identified the environmentally superior alternative, although it was correctly identified beginning on Draft EIR p. 525.

The second comment appears to request recirculation due to an error in the summary chapter that identified the maximum restoration alternative as the environmentally superior alternative, which is contrary to the discussion in the Alternatives chapter, which states that the maintenance alternative is the environmental superior alternative. This error is being corrected as a text change, which is provide in Response AL-4, RTC p. 4-566, and Response G-10, RTC p. 4-50.

With respect to recirculation, CEQA Guidelines Section 15088.5 states that recirculation of an EIR prior to certification is only required when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR for public review. New information added to an EIR is not significant unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect. Significant new information can include (1) a new significant environmental impact; (2) a substantial increase in the severity of an environmental impact; (3) a feasible project alternative or mitigation measure, considerably different from others previously analyzed that would clearly lessen the significant environmental impacts of the project, but the project proponents decline to adopt it; or (4) the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Based on the comments received and the responses provided in this RTC document, there are no new significant impacts, substantial increases in the severity of an environmental impact, or identification of new alternatives or mitigation measures that are considerably different from those

previously analyzed (including those considered and fully evaluated in the EIR, rejected as infeasible pursuant to CEQA, or rejected from further analysis due to engineering, design, technological, or cost considerations). Further, as demonstrated in this RTC document, none of the comments received provide substantial evidence that the Draft EIR was fundamentally and basically inadequate, nor was meaningful public review and comment precluded. In fact, two separate comment periods were provided. Public agencies, organizations, and individuals were invited to provide written comments (letters, emails, and facsimiles) on the Draft EIR during the first public review comment period, which opened on August 31, 2011, and ended on October 31, 2011. In addition, the Planning Commission held a public hearing on the Draft EIR on October 6, 2011, and Commissioners, organizations, and individuals made oral comments at that hearing. A second public review comment period, for written comments, was provided from April 27, 2012, to June 11, 2012. A Public Notice of the additional comment period was sent to over 300 neighborhood organizations and individuals through direct mailing and was also posted in the following locations: SFRPD's McLaren Lodge, the Planning Department, and the San Francisco County Clerk's office. In total, the two public comment periods were open for 107 days, exceeding the 45-day public review period required by CEQA.

With respect to subsequent project-specific review for the Sharp Park restoration project, and consistent with CEQA Guidelines Section 15162, a Subsequent EIR can only be prepared after an EIR has been certified and only when one or more of the following conditions occur: (1) substantial changes are proposed in the project that require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) substantial changes occur with respect to the circumstances under which the project is undertaken that would require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted. None of these three circumstances has occurred with respect to the SNRAMP Draft EIR; therefore, a Subsequent EIR is not required.

Also, with respect to whether the restoration activities at Sharp Park should be evaluated in a stand-alone EIR, refer to Response PD-12, RTC p. 4-168.

Lastly, issues raised by the first commenter, beyond the request to recirculate the document or prepare a subsequent project-specific DEIR for Sharp Park, are provided in Response BI-25, RTC p. 4-424, Response BI-7, RTC p. 4-365, Response HY-5, RTC p. 4-501, and Response AL-11, RTC p. 4-600.

Comment G-10 Public outreach and Draft EIR public review process

The response to Comment G-10 addresses all or part of the following individual comments:

OPR-1-01	GGAS-1-04	NTC-2-01
SCBC-1-01	SFDOG-2-01	SFDOG-2-02
SFFA-1-01	SFFA-2-01	SFFA-3-24
WEI-2-01	WTPCC-1-10	WTPCC-1-11
Bowman-2-16	Gomez-1-03	Johns-1-02
McAllister-3-10	McAllister-3-11	Miller-E-2-01
Miller-N-2-01	Rehling-1-02	Risk-1-01
Shepard-A-1-04	Vittori-1-01	

- The review period closed on October 17, 2011, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately.

  This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. [OPR-1-01]

- One of the clear failures of the Recreation and Parks Department and the Natural Areas Program to date has been the inability to effectively communicate that native wildlife, plants and their ecosystems are valuable and extremely vulnerable assets to the quality of life in San Francisco. In communications stating opposition to the Natural Areas Program, some have argued that because San Francisco is a city, it is inherently "unnatural" and that native ecosystems do not deserve protection. Others seek to push more domestic pets, including off-leash dogs and feral cats, into these few, remnant areas. Golden Gate Audubon believes that the Project must include an outreach element to dispel false information about the NAP, promote the importance of stewardship of natural areas, and help build a political constituency to keep the NAP adequately funded and empowered to meet the other objectives. [GGAS-1-04]

- Thus, the CUMULATIVE effect on the stakeholder public is to be overwhelmed by the necessity to participate in all of these processes, thereby potentially diluting effective public participation. Unfortunately, the public is not well-represented in any of these situations because funding for public-serving non-profits is in the toilet.

  Thus, your determination is detrimental to the optimization of a robust public process for the Significant Natural Resource Areas Management Plan, the single most important conservation document in the City's history. [NTC-2-01]

- We have reviewed the Significant Natural Resource Areas Management Plan DEIR, a large and complex document covering 32 natural areas, including areas with ancillary complicating issues, such as Sharp Park. All of the signatories to this letter have long and extensive involvement with these lands and expert knowledge and familiarity with their management problems. We find discrepancies, even contradictions, in the DEIR. We

appreciate the great amount of work that went into preparing this document, particularly when its preparation coincided with that of other documents such as the America's Cup DEIR. We, too, are heavily involved in commenting on these issues, as well as on the proposed revision of the Recreation & Open Space Element of the General Plan, and we find that their adequate address is beyond our capabilities in the time allowed. We therefore request that we be given an additional two months to process the large volume of information and form thoughtful and useful comments. [SCBC-1-01]

- SFDOG is very concerned about poor outreach by the Planning Department and the Recreation and Park Department to the public about the NAP EIR. There was no mention of the NAP EIR on either the SF Recreation and Park Department website, nor on the Natural Areas Program website. Neither site had a link to the Planning Dept. website where the NAP EIR was located. We heard frequently from people who tried to find the NAP EIR to read it, couldn't find it on the Rec and Park website, and had no idea where else to look for it. In addition, there was no official notice posted in parks most affected by the NAP, for example, on Bernal Hill (where part of the DPA will be closed by NAP). [SFDOG-2-01]
- In addition, the Planning Commission's hearing on the NAP EIR on October 6 was another case of poor outreach. The Planning Department's website (where the EIR was posted) listed the hearing as beginning at 1:30 p.m. This start time was posted even on October 6th itself. The only way to find out that the hearing time had been changed was to look at the meeting agenda. While the original agenda that was posted had the 1:30 pm starting time, at some point the agenda was changed to reflect the noon starting time. I happened to check the agenda on Monday, October 4 and noticed the change. But many people did not. I was at the Commission meeting and the NAP EIR item was over largely by 1:30 pm, the original starting time. Many people showed up for the Planning Commission meeting just after 1:30 pm, intending to speak about the NAP EIR but, because the agenda item was already over, they were denied the chance to give oral public comment. It is important for decision makers and Commission members to *hear* public comment, not just read it, to hear the passion in people's voices as they speak. By changing the starting time of its October 6th meeting and not letting people know, the Commission essentially denied people the chance to give oral public comment on the NAP EIR. When the problems with the hearing time are combined with the poor outreach described above, it is clear that the Planning Department cannot continue with the FIR process. Planning should re-start the public comment process with better outreach to ensure the comment process is fair and accurately reflects the public's opinions. [SFDOG-2-02]
- Attached is a letter from the San Francisco Forest Alliance requesting that you amend your notice for the Draft DER for the SNRAMP. We have asked for a formal response by no later than Friday, given the short comment period just established. We would be happy to discuss our proposal for resolving our concerns about the previous notice by telephone this week if that would be helpful to you. We look forward to hearing from you.

1. Notice - What The Law Requires[1]

(a) CEQA

CEQA requires public involvement to ensure that environmental impacts are considered in governmental-decisionmaking *before* action is taken. Public agencies are required to have in place procedures that will ensure wide public involvement, both formal and informal, in order to receive and evaluate public reactions to environmental issues related to the agency's activities.[2] Notice must be given in sufficient time so that the public has notice of the full review period.[3]

CEQA's statutory and regulatory provisions set for the *minimum* notice requirements for government projects that may have an impact on the environment. CEQA provides that notice of a DEIR comment period can be accomplished through: (1) publication in the newspaper of largest circulation in the areas affected; (2) posting of notice on and off the site in the area where the project is to be located; (3) direct mailing to owners and occupants of parcels contiguous to the project parcel. In some cases, one form of notice may be sufficient, but in others, all three forms of notice may be required. In addition, other laws also impose additional notice requirements. In light of this and CEQA's goals of meaningful public participation, CEQA also provides that "the lead agency may also employ any other means of notification it desires to use."[4]

(b) Due Process

In instances where a project substantially affects constitutionally protected interests, due process requirements also must be met. In such cases, due process require that notice be "reasonably calculated to afford affected persons the realistic opportunity to protect their interests."[5] Such notice must "occur sufficiently prior to a final decision to permit a 'meaningful' predeprivation hearing to affected landowners."[6]

(c) San Francisco Forestry Ordinance

San Francisco's Urban Forestry Ordinance provides that before the City removes a tree, it must give 30 days' prior written notice to all interested San Francisco organizations and all owners and occupants of properties that abut, or are on or across from the block face where the affected tree is located. If any person appeals the notice, the City must hold a hearing to consider public testimony on the tree removal. Written notice of the date, time and place of the hearing must be posted on the affected tree, provided in a newspaper of general circulation, and sent to the objecting party, the owner of the property abutting the tree, and all interested organizations.[7]

(d) San Francisco Planning Code

The San Francisco Planning Code requires that neighboring property owners be. notified of projects that involve property demolition and alteration. Neighborhood notification is mailed to neighbors within 150 feet of the subject property and relevant neighborhood groups for a 30-day public review period.[8]

2. Why The Notice Procedures Followed For The DEIR Are Inadequate

We are aware that notice of the completion of the DEIR was published in October 2011 and more recently noticed again in late April, but we believe such notice is, in light of the facts of the proposed project, legally deficient.

The DEIR contemplates *major* changes to parks that are used daily by thousands of San Francisco residents, and yet, according to our own research, very few park users know that the City has systematic and wide-scale plans to actively and permanently alter the landscape, recreational features, public uses and flora and fauna of the parks they visit every day. In addition, adjacent and other nearby property occupants and owners have not been notified of completion of the DEIR, despite the fact that the project will have a significant impact on them and their property interests.

Thirty-one parks, including a total of over 2,700 acres, and representing (with the exception of Golden Gate Park and areas managed by the federal government) substantially *all* of the recreational space of San Francisco's more than 800,000 residents are, according to the DEIR, slated to undergo radical change in pursuit of the misguided utopian goal of returning these areas to their natural pre-colonial state.

The impacts of the proposed project are significant and too varied to list here, but include cutting down over 18,000 trees, closing or relocating over 54,000 feet of trails, increasing use of pesticides to kill "invasive" species and protect "native" plants, and diversion of City funds from other recreational programs (e.g., kids' educational activities) and improvements, such as renovation of neighborhood restrooms, playgrounds, and clubhouses. Such actions will impact not only park users, but also resident bird, animal and plant species.

The potential impact of the proposed project on neighboring property owners is nothing short of devastating. Owners who purchased homes in view of city parks stand to have their homes devalued by deforestation. Other owners, for example those abutting the west side of Mount Davidson, are likely to face significant drainage and erosion problems as a result of alterations to the landscape. For other owners, property values (and enjoyment of life in the City) may be decreased by the loss of neighborhood trails, trees, play areas and dog-accessible areas.

The City has done virtually nothing to inform residents near affected areas about the proposed project. By comparison, when UCSF developed plans to remove trees in Mount Sutro Forest, it notified affected neighborhoods with flyers detailing the proposed nature and timing of the work, and held a neighborhood meeting at which they took comment from interested parties.

While we appreciate that the City has made efforts to notify neighborhood groups of the proposed project, we do not believe that such groups adequately represent the interests of those who live and recreate in San Francisco. In this regard, it is important to remember that the resources that are to be altered as part of the project are in fact legally *owned* by San Francisco residents. The City is a mere *trustee* for these resources, on their behalf.

3. Correcting The Deficient DEIR Notice

We recommend and. request that the following steps be taken to correct the deficient

DEIR Notice:

1. Revise the notice mailed out on April 27th to include Table 5 (Summary of Natural Areas Management Plan) from page 114 of the DEIR,[9] a copy of which is enclosed with this letter.
2. Hold at least one public hearing on a date approximately halfway through the comment period, and include time and place for the hearing in the revised notice.
3. Mail the revised notice to property owners and occupants within 150 feet of parks impacted by DEIR, and all others who, prior to issuance of the new notice, express, or have in the past expressed, an interest in the DEIR.
4. Post notice at all affected park trail and road entrances and exits, and in other highly visible locations such as at playgrounds, and near restrooms and dog run areas.
5. Extend the comment period to 60 days after the notice will have been accomplished pursuant to 3 and 4 above.

We would like to discuss these requests with you at your earliest convenience, especially in light of the fact that under the April 27th notice, the period for comments is set to expire on June 11th. We would like a written commitment from the City by May 18th that it will comply with the steps outlined above.

We would be happy to meet with you to discuss these steps further or discuss them by telephone or email. [SFFA-1-01]

- Thank you again for your prompt response, which our group has now reviewed. We appreciate your sending information about the steps the City has undertaken to attempt compliance with CEQA's notice-and-comment procedures; however, we continue to believe that the City's actions to date have been inadequate.

  In that regard, we would appreciate receiving a further response to our letter addressing the deficiencies we identified under California law other than CEQA, including due process requirements under state and federal law, as well as the San Francisco Forestry Ordinance and the Planning Department's neighborhood notification requirements. Specifically, we would like to understand the City's position that posting in and near the affected parks (rather than at McLaren Lodge, where most park users may not visit) and mailing notice to adjacent and other nearby property owners is not required for this project.

  Since these issues were part of our original letter, and especially in light of the fact that the current DEIR notice period expires soon, we respectfully request that you respond today.

  We greatly appreciate your responsiveness in this regard. [SFFA-2-01]

- The public review and comment process was further compromised by the last minute decision to hold the public hearing by the Planning Commission earlier than originally announced. The public hearing was originally announced to begin at1:30pm on October 6th. Shortly before the hearing, the starting time was moved up to noon.

The public was further confused about the timing of their opportunity to speak to the Commission about the DEIR by the placement of the item on the agenda. The DEIR for the SNRAMP was item number 13 on an agenda with 19 items. The public had no way of knowing when the 13th item would be heard. Many naturally assumed that it would not be at the beginning of the hearing. They were wrong.

The public comment period on the DEIR for the SNRAMP was completed by 2 pm. Many people came to the hearing, hoping to speak, only to find that they had missed the opportunity to do so.

A few people arrived in time to speak, but didn't arrive in time to hear the staff of the Planning Department acknowledge the mistake about the "Environmentally Superior Alternative." Therefore, they wasted their public comment by focusing on an error that the Planning Department had made a commitment to correct. No one showed them the courtesy of telling them during the hearing that the error would be corrected.

There are many neighbors of the so-called "natural areas" who have been following this issue for 15 years. They were deeply committed to speaking and they were deprived of the opportunity to do so by the change in the time of the hearing.

3. The public was not adequately informed of the extension of the deadline for comment

The President of the Planning Commission requested at the public hearing on October 6th that the deadline for written public comments be extended to October 31st. No effort was made to inform the public of this extension of the deadline. The Planning Department was asked (in writing) to inform any member of the public that had been informed of the original deadline of October 17th of this extension. That request was refused.

Such refusal to provide the public with notification of the extension of the deadline will further compromise the public review process.

4. The public was not adequately informed of the re-opening of the public comment period

The San Francisco Forest Alliance learned (from a neighborhood association) that the public comment on the DEIR was reopened on April 27, 2012, about one week after the notice was mailed. SFFA immediately requested that this public notice be distributed more widely to the neighbors of the natural areas and posted in the natural areas. This request was refused.

According to the mailing list that was used to distribute the notice of the reopening of the public comment period, the same neighborhood associations that were notified of the first public comment period were notified again. The second public comment period was not more widely distributed than the first. The organizations that had an opportunity to comment in October 2011were essentially given a second opportunity to comment. This is preferential treatment that will further jeopardize the fairness of the public process.

The reopening of the public comment period was another opportunity for the DEIR to be corrected. The incorrect statement on page 2 of the DEIR stating that the Maximum Restoration Alternative is the Environmentally Superior Alternative was not corrected when the public comment period was reopened. That incorrect statement was simply redistributed

and reposted to the Planning Department website. Once again, the refusal to correct this statement will prejudice the public comment.

Conclusion

- **Announce another public hearing along with the corrected DEIR**
- **Announce another deadline for written public comments that is at least as long as the original period**
- **Distribute the public notice regarding the new public comment period to the neighbors of the natural areas and post the public notice in the natural areas.**

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters. [SFFA-3-24]

- The Wild Equity Institute and the undersigned San Francisco-based organizations (collectively "Conservation Organizations") request that the San Francisco Planning Department reopen the public comment period for the Draft Environmental Impact Report (DEIR) of the Significant Natural Resource Areas Management Plan (SNRAMP), Case Number 2005.0912E.

  Yet we recently discovered that the City re-opened the public comment period for the SNRAMP DEIR on or about April 30, 2012, and through June 11, 2012. *Astonishingly, none of the Conservation Organizations were notified of San Francisco's decision to reopen the public comment period.*

  "Public participation is an essential part of the CEQA process" Cal. Code Regs. tit. 14, § 15201. The City of San Francisco has recognized this, stating that Public participation, both formal and informal, shall be encouraged at all stages of review, and written comments shall be accepted at any time up to the conclusion of the public comment period. The undersigned believe public notice of the reopened comment period was insufficient to properly inform all stakeholders. Perhaps the City's intent was to only give specific interest groups notice that had not commented during the previous comment period, and therefore the Conservation Organizations were not notified. But any opening of a CEQA comment period should be broadly publicized, and at bare minimum, should be publicized to those organizations and individuals who previously commented and requested notice pursuant to § 21092(b)(3) of the California Public Resources Code.

  Therefore we respectfully request the Planning Department reopen the comment period for the Draft EIR for another 4-6 weeks. Please inform us of the dates during which the comment period will be reopened as soon as possible.

  § 21092(b)(3) of the California Public Resources Code requires that "notice [of the public comment period] … shall be given to the last known name and address of all organizations and individuals who have previously requested notice." We reiterate our request that the Planning Department provide the Conservation Organizations with notice of all future CEQA proceedings involving Sharp Park and/ or Sharp Park Golf Course, and all future

CEQA proceedings involving the SNRAMP, the City's Natural Areas, and/or the Natural Areas Program. The requested notices should be mailed to the following address: [WEI-2-01]

- WTPCC opposes NAP in part because of the poor job NAP has done to inform park neighbors and neighborhood associations about its plans. Neighbors who live immediately adjacent to Mt. Davidson, for example, have said they were never given any official notice of NAP's plans for the park, especially its plans to cut down 1,600 trees. Established neighborhood associations, including many WTPCC members, have not been contacted by NAP. Many have said they never heard anything about the DEIR. Indeed, the Planning Department offered a tacit acknowledgement of this lack of public outreach when it re-opened public comment on the Draft DEIR last month. [WTPCC-1-10]
- NAP did not contact park neighbors and users or neighborhood associations to find out what they wanted in the natural areas in their neighborhood parks when NAP staff were developing their plans. During the plan development process, citywide NAP advocacy groups were contacted for input on what NAP should do in the parks, yet the people who live adjacent to or who regularly use the parks (that is, those who will be most impacted by any NAP restrictions) were ignored. The only input most people had was whatever they could say during a one-minute public comment at a Recreation and Park Commission meeting after the plans were already developed. The parks belong to the people of San Francisco, not to NAP staff. All park neighbors and users (not just those known to support NAP) must be involved in discussions about what to do in natural areas. Without this level of public outreach and engagement, NAP's plans lose support and credibility.

  Even when people have explained their concerns to NAP staff, it seems to fall on deaf ears. At a 2002 meeting of the Golden Gate Heights Neighborhood Association (GGHNA), members complained about NAP's removal of iceplant at the neighborhood's Grandview Park. Grandview is the only remaining sand dune in San Francisco (other than at the beaches), but it is completely surrounded by homes, some of which have backyards that abut the park. Over the years, neighbors and park staff had planted iceplant at Grandview because it was the only plant that seemed able to hold the sand in place. When NAP took control of the park, it began to remove the iceplant because it was non-native. At the GGHNA meeting, several park neighbors complained that the iceplant removal had caused sand to drift into and cover their backyards, damaging their property. Lisa Wayne, the head of NAP who had been invited to respond to the neighbors' concerns, responded that NAP had no responsibility for property damage outside park boundaries caused by its removal of erosion-controlling plants. When the SNRAMP was released several years later, it called for "scattered, open sand" at Grandview Park. Over the years, GGHNA has repeatedly submitted public comments asking NAP to remove the goal of "scattered, open sand" at Grandview, yet it remains in NAP's plans. [WTPCC-1-11]
- RPD has also made almost no effort to proactively inform the general public of this significant project that changes the land use of highly valued parks from neighborhood parks to "sensitive habitat." This change of the land use to conservation will significantly change the visitors' experience. As identified by SFFA, few residents are aware of the

proposed plan even though the plan with impact the more than 60% of people that say they use trails in SF parks. [Bowman-2-16]

- **2. Lack of communication by NAP**

  We read the Miraloma Park monthly newsletter, the Westside Observer local paper, along with the SF Chronicle, etc. But only recently did we become aware of the NAP plan for drastic tree removal in our backyard. They have not communicated their plans to our neighborhood. As homeowners whose property is adjacent to Mt. Davidson Park, we should have received personal notification of such drastic measures. If a home or business in our area plans major changes, they are required to notify residents within specific parameters. Why doesn't NAP have to notify us of their intentions to destroy our backyard? [Gomez-1-03]

- The only notice I received of this plan was from my local community association. And that was only 4 weeks ago. Where was the public notice of this plan published? [Johns-1-02]

- The public hearing for the DEIR limited public comment. The public review and comment process was further compromised by the last minute decision to hold the public hearing by the Planning Commission earlier than originally announced. The public hearing was originally announced to begin at 1:30 pm on October 6th. Shortly before the hearing, the starting time was moved up to noon.

  The public was further confused about the timing of their opportunity to speak to the Commission about the DEIR by the placement of the item on the agenda. The DEIR for the SNRAMP was item number 13 on an agenda with 19 items. The public had no way of knowing when the 13th item would be heard. Many naturally assumed that it would not be at the beginning of the hearing. They were wrong.

  The public comment period on the DEIR for the SNRAMP was completed by 2 pm. Many people came to the hearing, hoping to speak, only to find that they had missed the opportunity to do so.

  A few people arrived in time to speak, but didn't arrive in time to hear the staff of the Planning Department acknowledge the mistake about the "Environmentally Superior Alternative." Therefore, they wasted their public comment by focusing on an error that the Planning Department had made a commitment to correct. No one showed them the courtesy of telling them during the hearing that the error would be corrected.

  There are many neighbors of the so-called "natural areas" who have been following this issue for 15 years. They were deeply committed to speaking and they were deprived of the opportunity to do so by the change in the time of the hearing.

  Conclusion

  The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

  - Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"

- Distribute the corrected DEIR in the same manner as the original was distributed
- Announce another public hearing along with the corrected DEIR
- Announce another deadline for written public comments that is at least as long as the original period

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters. [McAllister-3-10]

- The public was not adequately informed of the extension of the deadline for comment

The President of the Planning Commission requested at the public hearing on October 6th that the deadline for written public comments be extended to October 31st. No effort was made to inform the public of this extension of the deadline. I asked (in writing) the Planning Department to inform any member of the public that had been informed of the original deadline of October 17th of this extension. That request was refused.

I have been following the destructive native plant restorations in the San Francisco Bay Area for 15 years. I have therefore received several EIRs and EISs for public comment. When there were extensions of the comment deadline, I received written notification of that extension. Based on that experience, I believe it is standard practice to notify members of the public who have expressed an interest in an EIR/EIS of an extension of deadlines.

Such refusal to provide the public with notification of the extension of the deadline will further compromise the public review process.

Conclusion

The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

- Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"
- Distribute the corrected DEIR in the same manner as the original was distributed
- Announce another public hearing along with the corrected DEIR
- Announce another deadline for written public comments that is at least as long as the original period

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters. [McAllister-3-11]

- Given that we have limited time before the current comment period expires, we would like to focus the City's attention on the big picture. The bottom line is that the City has failed to - address our due process concerns. Our review of City requirements was meant to be illustrative, not exhaustive, and to emphasize that where significant private property interests are at stake (e.g., where construction or tree removal is planned on neighboring properties), notice to affected residents is required. This notice is required not only by local law, but also as a matter of constitutional law. In our initial letter, we offered examples of

concrete ways in which San Francisco property owners will be impacted by the City's proposed project. There may be other impacts not detailed in our letter. For multiple legal reasons, we believe the City is obligated, in light of the magnitude of the project and the severity of the impacts, to notify city residents (especially affected property owners and park users) about the project with sufficient time to allow them to be involved in decision making.

We understand from your recent responses that you are unwilling to: (1) modify the April 27th notice to more clearly set forth the impacts of the proposed project; (2) notify property owners within 150 feet of affected parks; (2) post notice in and near the affected parks; (4) hold a public hearing on the project; or (5) or extend the notice period beyond June 11th.

We believe your response is deficient and we are considering our political and legal options in this regard. In the meantime, we would like to request that the City provide us with a list of property addresses located within 150 feet of affected parks, so that we can attempt to contact such property owners ourselves prior to expiration of the current notice period. We also would like to request that the City allow members of the SFFA to post the City's notice of the project in and near affected parks. [Miller-E-2-01]

- In meetings with several individuals and one group of friends, I learned that none of them had heard of NAP's plans either by direct contact or by public means; i.e. Newspapers or television.

  It seems too important and far-reaching a plan to be carried out without general public input. I hope we will be able to be well-informed before action is taken and irreversible harm is done to our environment. [Miller-N-2-01]

- One other thing: I live in Miraloma Park, just opposite the Stanford Reservoir which is just below Mt. Davidson Park. I should have been notified about NAP's plans and, specifically, about the methods that NAP would take to impose its extremist vision on my neighborhood and others in the city. Therefore, I also want to bring your attention to that failure to properly inform the public, especially those living in areas most affected by NAP's plans. [Rehling-1-02]

- So it came as quite a shock to us to learn that the San Francisco Recreation and Parks Department plans to remove large numbers of trees from the forested side of the mountain.

  We were first informed of those plans in February 2012 on a walk led by local historian Jacquie Proctor. It was most disconcerting for us to be told that the NAP plan has been under consideration since 1997, was finalized in 2006, and that the plan's DEIR is currently under review. Even though we were the ones who would be most affected by those plans, the Recreation and Parks Department has never organized any community informational meetings in our neighborhood or posted any signs on the main forest trail entrances to notify us of those plans. [Risk-1-01]

- NAP has forged ahead with developing this plan and with few exceptions, excluded citizen involvement. None of the neighborhood organizations west of twin peaks have ever been asked to host a presentation by NAP of their plans, even though Mt Davidson is in our backyard. On the other hand, we were asked to host presentations of RPD bonds in 2008 and

currently for the 2012 bond. So each time RPD needs money, they come to us asking for help. They do not involve us in planning for how to spend the money. Please reject the NAP plan and DEIR and demand that RPD be accountable to the citizens of our city and provide needed services.

NAP did finally make a presentation on at the West of Twin Peaks Central Council in May, 2012 of the NAP plan, but only after repeated calls to RPD. After reading the plan and listening to the NAP presentation I voted to oppose the plan and ask for you to do the same. [Shepard-A-1-04]

- I did restoration as a professional and a volunteer for 20 years. I ran a crew with the California Conservation Corps and the National Park Service doing habitat restoration all over the Bay Area. I worked on Bernal Hill, McLaren Park, Glen Canyon, and Sharp Park as a volunteer and community member. Unfortunately, what I have seen has saddened me; I think we've betrayed the principles of integration and inclusion that we started out with. Over time the restoration movement has become exclusionary, pushing the community out of the parks.

  This process is a perfect example of community exclusion. I go to Bernal Heights, Glen Park, Stern Grove, Pine Lake, and McLaren Park with my dogs several times a week. There are no official notices anywhere inviting public review. When advocacy groups place notices on the bulletin boards, they've been torn down.

  Please pay attention to the numerous efforts we have made over the years to make the Natural Areas Program more integrated with city life. I've attached a summary written by Sally Stephens of SFDog. She states, better than I could, the numerous attempts by the public to make this process fair and inclusive. I attended many of these meetings, and I have come out with a much more jaded view of the democratic process.

  The saddest part is that we could do habitat restoration right. We could easily integrate restoration with existing park uses. [Vittori-1-01]

Response G-10

Some comments request extension of the public comment period, suggest that the Draft EIR be recirculated with revisions, express concerns regarding the posted timing of the public hearing on the Draft EIR, and express dissatisfaction with notification for the extension of the public comment period.

These comments acknowledge the public review period for the Draft EIR, state dissatisfaction with the public outreach process, or express concern that the Planning Department did not adequately notice the availability of the Draft EIR in accordance with CEQA requirements and noticing requirements identified in the San Francisco Forestry Ordinance and Public Works Code.

The commenters question the adequacy of the public outreach and communication process for the SNRAMP.

Public Outreach and Notification Process

The development of the SNRAMP has occurred over 10 years, beginning in 1995, and consisted of numerous and extensive meetings with involvement of over 3,000 individuals. In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city. Outreach also included sending fliers to neighborhood groups and residents within 300 feet of all Natural Areas, the Mayor's Office of Neighborhood Groups, SFRPD's list of neighborhood groups, and other interested parties. Announcements were also posted at all Natural Area sites. An online survey was available for individuals and members of the public who were unable to attend in person. Feedback was received from approximately 2,700 members of the public and recommendations were received from three independent scientists. Further, several task forces, committees, and/or working groups were convened as part of this process, including the Natural Areas Program Citizen Advisory Committee, an ad hoc group that made recommendations on how to revise the plan, a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and the Sharp Park Working Group. In addition, revisions to the Sharp Park Restoration Plan were also made in response to input from scientists and regulatory agencies, which resulted in additional restoration areas and, as a result, additional impacts to the golf course. A detailed timeline of SFRPD's outreach and planning process is provided on the SFRPD's website at http://sfrecpark.org/parks-open-spaces/natural-areas-program/significant-natural-resource-areas-management-plan/.

The Planning Department's public outreach and notification process for the Draft EIR was conducted in accordance with CEQA and the CEQA Guidelines. The noticing requirements identified by commenters in the Planning Code apply to projects that are subject to various Planning Department approvals, including a conditional use or variance granted either administratively or by the Planning Commission, and are, therefore, not applicable to public review of the Draft EIR for the proposed SNRAMP. With respect to other noticing requirements, Draft EIR p. 157 acknowledges that tree removal activities must comply with the Urban Forestry Ordinance (contained in Article 16 of the Public Works Code), if the removal of a street tree or significant tree is proposed by SFRPD during implementation of the SNRAMP. As also stated on Draft EIR p. 157, no landmark trees are proposed for removal under the SNRAMP.

If removal of a tree is proposed and the Urban Forestry Ordinance applies (i.e., street tree, significant tree, or landmark tree), certain noticing requirements would apply, which are described in detail in Response LU-4, RTC p. 4-216; however, these requirements are not applicable to the noticing requirements for circulation of a Draft EIR under CEQA. Circulation of a Draft EIR, or certification of a Draft EIR for that matter, does not constitute project approval of any kind nor does it allow for tree removal activities. Implementation of the SNRAMP, if approved, and completion of the CEQA process for this Draft EIR, will comply with all applicable noticing requirements.

Refer also to Response G-3, RTC p. 4-19, for a discussion of the independent scientific review that was conducted for the 2005 Draft SNRAMP.

Public Review Period

RTC Section 1.B, Environmental Review Process, p. 1-2, describes the environmental review process including the public review period of the Draft EIR, which is also summarized in this response. CEQA Guidelines Section 15105 prescribes that the minimum public review period for a Draft EIR submitted to the State Clearinghouse for review by State agencies shall be 45 days. Two separate public comment periods were provided for the SNRAMP Draft EIR. Public agencies, organizations, and individuals were invited to provide written comments (letters, emails, and facsimiles) on the SNRAMP Draft EIR during the first public review comment period, which opened on August 31, 2011, and was originally scheduled to end on October 17, 2011. On August 31, 2011, the Planning Department distributed a notice of availability of the Draft EIR, published notification of its availability in newspapers of general circulation in San Francisco (*San Francisco Chronicle*) and in Pacifica (*Pacifica Tribune*), and posted the notice on the Department's website and at the SFRPD's McLaren Lodge. As previously mentioned, the original public comment period was set to close on October 17, 2011, but was extended by the Planning Commission at its October 6, 2011, hearing on the Draft EIR to October 31, 2011, providing a 61-day comment period. Further, the Planning Commission held a public hearing on the Draft EIR on October 6, 2011, during which Commissioners, organizations, and individuals were invited to provide oral comments.

While not standard practice, at the request of the SFRPD, the Planning Department reopened public comment on the Draft EIR. A second 46-day public review comment period was provided from April 27, 2012, to June 11, 2012, during which written comments were also invited. A Public Notice of the additional comment period was sent to over 300 neighborhood organizations and individuals through direct mailing and was also posted in the following locations: SFRPD's McLaren Lodge, the Planning Department, and the San Francisco County Clerk's office. In total, the two public comment periods were open for 107 days, exceeding the 45-day public review period required by CEQA. The Public Notice for the second public review period also was published in the *Pacifica Tribune* and the *San Francisco Chronicle* on May 9, 2012. A link to this notice is provided on both the Planning Department's and the SFRPD's websites. The Draft EIR has been accessible on the Planning Department's website, as the CEQA lead agency, since its publication. Given the two public review periods, totaling 107 days and spanning over a period from August 2011 through June 2012, an additional public review period is not required.

As stated by the comment(s), CEQA Guidelines Section 15087(a) requires that notice of publication of a Draft EIR must be provided by at least one of the follow procedures: (1) publication at least one time by the public agency in a newspaper of general circulation, (2) posting of the notice by the public agency on and off-site in the area where the project is located, or (3) Direct mailing to nearby owners and occupants. As described above, the Planning Department has substantially complied

with these noticing requirements and additional notification as suggested by the commenter(s) is not required.

On July 23, 2012, Wild Equity Institute (WEI) requested that the public comment period be reopened for a third time, citing that they were not aware of the second public review period. While a third public review period was not provided, and it appears that WEI may not have been directly notified by the Planning Department of the second public review period, responses to the July 23, 2012, letter from WEI, which was received after the close of the second public review period, are provided in this RTC document. In addition, responses to all written comments received during the two public review periods and oral comments provided during the public hearing are provided in this RTC document as well.

Public Hearing

The Planning Department held a public hearing on October 6, 2011, to receive oral comments on the Draft EIR. With regards to notification of the public hearing, the Draft EIR Notice of Availability (NOA), containing public hearing information, was distributed weeks in advance of the final Planning Commission calendar, which was and is typically not available until the week before the hearing; the NOA clearly states to call the week of the hearing for a more specific time and provides a phone number. The NOA specifically stated that:

> A public hearing on this Draft EIR and other matters has been scheduled by the City Planning Commission for October 6, 2011, in Room 400, City Hall, 1 Dr. Carlton B. Goodlett Place, beginning at 1:30 p.m. or later. (Call 558-6422 the week of the hearing for a recorded message giving a more specific time.)

This information is typically included in the Planning Department notices of availability of draft EIRs because Planning Commission hearings are subject to change. While the Planning Commission meeting time posted on the City's webpage may not have accurately reflected the actual start time, the meeting item for public comment on the Draft EIR was still open at the time of the originally posted start time, giving members of the public the opportunity for timely receipt of oral public comments (Attachment C, Draft EIR Hearing Transcript).

Environmentally Superior Alternative

These comments are correct that Draft EIR p. 2 incorrectly identifies the Maximum Restoration Alternative as the Environmentally Superior Alternative. A detailed discussion of the environmentally superior alternative can be found on Draft EIR pp. 524 to 526.

As also discussed in RTC Response AL-10, RTC p. 4-595, the text on Draft EIR p. 2 (line 8) has been changed as follows:

> The ~~Maximum Restoration~~ Maintenance Alternative is the Environmentally Superior Alternative.

Comment G-11 Draft EIR is adequate, accurate, and complete

The response to Comment G-11 addresses all or part of the following individual comments:

City of Pacifica-1-01, CAAONC-1-01, FOW-GGP-1-01, MGSG-1-02, Sierra Club-1-03, Bowling-1-01, Campbell-C-1-01, Campbell-C-1-02, Crouch-1-01, Gerrie-1-01, Hayes-1-01, Holzman-1-02, Holzman-1-03, Kesel-1-01, Kushner-1-01, Langille-1-04, Moseley-1-01, Rafferty-1-02, Rosenthal-1-01, Swenerton-1-02, Wilson-1-01, PH-Skain-02

- Based on staff research the City Council determined that the report addressed the concerns raised and that the concerns will be alleviated by the actions proposed to be included as a part of the SNRAMP. The City of Pacifica appreciates the work that San Francisco put into the DEIR, particularly in addressing the concerns that had been raised regarding management plan work proposed for Sharp Park. [City of Pacifica-1-01]
- We believe that the Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan. It considers a broad range of potential impacts to our City' resources and proposes feasible mitigation measures to address impacts where possible. The EIR looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Resources. [CAAONC-1-01]
- We of "Friends of Oak Woodlands – Golden Gate Park" (FOW-GGP) fully support the DEIR for SNRAMP as an adequate, accurate, and comprehensive review of the Plan. [FOW-GGP-1-01]
- The Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan.

  Considers a broad range of potential impacts to our City's resources.

  Proposes mitigation measures to address impacts where possible.

  Has been based on detailed studies and scientific experts.

  Consistent with several directives, including the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan.

  Looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Areas. [MGSG-1-02]
- The primary objective of the Management Plan, for the Sharp Park natural area, as for the other areas, is the protection of biological resources. However, in its analysis, the DEIR defines the project as that of protecting biological resources while maintaining an 18 link golf course.

The goals and objectives of the project need to be clarified, and the portions of the project related to reconstructing the golf course should either be removed from the DEIR, or the scope of the project needs to be broadened to include both elements. [Sierra Club-1-03]

- I support the Significant Natural Resource Area Management Plan because so much thought, research, and preparation has gone into it. I believe that the Draft Environmental Impact Report for the Natural Areas Management Plan is an adequate, accurate, and complete review of the plan based on detailed studies by scientific experts. It proposes mitigation measures to address any possible adverse effects, and it is consistent with several directives, including the Recreation and Open Space Element, the Public Utilities Commission's water-saving mandates, and the City's Sustainability Plan. It looks at alternatives and discusses the potential effects for both the natural and recreational amenities of the City's Natural Areas as well as potential effects on the City's resources. I believe that implementation of the Plan will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. The Plan is the most cost-effective method for managing our resources and protecting these areas for future generations. It provides clear direction to the City on how to prioritize management and restoration of our Natural Areas, and it presents an innovative way to safeguard our City's Natural Areas. This is very important to me, all San Franciscans, and for future generations of San Franciscans. As you know, the mission of the plan is to provide guidelines and amenities for passive recreational uses compatible with natural resources, to identify the causes of adverse effects on habitats, to enhance biological diversity, and to maintain populations of sensitive species. It also aims to inventory the biological resources in our Natural Areas to provide background information for planning, restoration, and management activities; to develop a Geographic Information System database, containing baseline information for each of the Natural Areas; and finally, to provide guidelines for educational, research, and stewardship programs. These are all commendable goals and attainable with the Significant Natural Resource Area Management Plan to guide us. [Bowling-1-01]
- I reviewed the DEIR and feel it is an accurate and complete review of the SNRAMP. The plan reflects years of research and community input, incorporating scientific studies and expert opinions. The plan provides guidance for prioritizing restoration and management, enhancing biodiversity while maintaining populations of sensitive species. [Campbell-C-1-01]
- The DEIR considers a broad range of potential impacts to San Francisco's natural resources while providing guidelines for passive recreational uses compatible with natural resources. In addition, it proposes mitigation measures to address impacts where possible. [Campbell-C-1-02]
- Thank you so much for working towards a reasonable and balanced EIR on SF parkland. I am a pet owner & am being bombed by emails from pet owners and groups (mostly SF Dog) who are trying to stir dog owners up without helping people understand what is being done & why. You guys have a tough job, thanks for sticking with it. Unfortunately most of the

input I am sure you are getting is the result of groups like SF Dog getting people stirred up. [Crouch-1-01]

- I urge the Planning to adopt the SNRAMP DEIR. The report was to analyze the environmental impacts of the NAP. It has done that mostly very well.

  It has laid out a compromised approach to Rec & Parks natural areas land management. It is not enough to achieve sustainability at all sites but is doable.

  This is a compromised plan and is not extreme or radical. [Gerrie-1-01]

- The Draft Environmental Impact Report for SNRAMP has received a more than adequate and therefore accurate and complete review of the plan. It has considered the total range of potential impacts to our City's open space and uses and how to manage them for sustainability! [Hayes-1-01]

- I feel that the Draft EIR is adequate, accurate and complete and urge you to certify the document without further delay. The Natural Areas Program's mission is to maintain and enhance natural areas in San Francisco and the plan and creators of the Natural Areas Management Plan spent a great deal of time in discussions with the scientific community and citizens of San Francisco to create a plan that best served the citizenry and the critical need of maintaining and enhancing natural areas. The EIR reviewing this management plan considers a broad range of potential impacts to our City's resources and proposes mitigation measures to address impacts where possible to lessen any perceived impacts and recognizes that some impacts may be unavoidable. [Holzman-1-02]

- I believe the EIR accurately depicts the majority of potential impacts that could occur with plan implementation as less than significant and in need of no significant changes to the plan. The management plan in creating the recommended actions considered alternatives and attempted to achieve the greatest good with the least amount of negative impact and I believe this was accomplished and the DEIR attests to that. The initial management plan was based on detailed studies and scientific experts and is consistent with several directives, including the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan. [Holzman-1-03]

- My comments pertain to the DEIR for the Natural Areas Management Plan (SNRAMP). The DEIR for SNRAMP is an accurate, adequate, and complete review of the plan. It considers a range of potential impacts to City resources and proposes mitigations where possible. This DIER is based on sound science and expert opinions. The DEIR is consistent with the City's Sustainability Plan as well as other directives. Furthermore, the DIER addresses potential impacts for natural and recreational amenities in San Francisco's Natural Areas. [Kesel-1-01]

- With respect to the description of the twenty-two natural areas in San Francisco, the DEIR is accurate, thorough and complete. [Kushner-1-01]

- The SNRAMP DEIR, with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan. [Langille-1-04]

- I am writing to give my support to the Draft EIR for the Natural Areas Program. I believe the findings are adequate, accurate and complete and should be accepted by the San Francisco Planning Department. [Moseley-1-01]
- The Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan. Our group looks forward to our ongoing work parties to improve Fairmont Park. [Rafferty-1-02]
- After reading the report in detail, I believe the DEIR to be adequate, accurate, and complete. It is not a radical plan and lays out a reasonable, conservative approach to natural resources management, and considers a broad range of potential impacts to our City's resources. The report should be accepted for the following reasons. It proposes mitigation measures to address impacts where possible. It is based on detailed studies and scientific experts. It is consistent with several directives: the Recreation and Open Space Element (ROSE), the Public Utilities Commission (SFPUC) water saving mandates, and the City's Sustainability Plan. It also looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Areas, which are in dire need of the protection this management plan addresses. [Rosenthal-1-01]
- I believe that the SNRAP DEIR is an adequate, accurate and complete review of the plan is based on detailed, comprehensive research and sound scientific studies conducted by experts. [Swenerton-1-02]
- The Natural Areas Plan goals are excellent. - The SNRAMP DEIR, with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan. [Wilson-1-01]
- The San Francisco portion of the report is thorough, accurate, and adequate.

  In its treatment of the 22 natural areas located in San Francisco, the report does an admirable job analyzing the environmental impacts of the Proposed Project, as well as alternatives. In general, the portions of DEIR analyzing the programmatic portions of the plan and routine maintenance are thorough, accurate, and adequate.

  I do want to -- specifically to comment on the great work that staff did in preparing this and work done by all the consultants on it. [PH-Skain-02]

Response G-11

These comments generally express support that the environmental analysis contained in the Draft EIR is adequate, accurate, and complete. However, one comment requests that the portions of the project related to reconstructing the golf course should either be removed from the Draft EIR, or the scope of the project needs to be broadened to include both elements.

The limited modifications to the golf course are included in the project description of the SNRAMP Draft EIR. With respect to the golf course modifications, as stated in Draft EIR Chapter III, Project Description, p. 102:

> "An upland and wetland habitat corridor between the lagoon and the pond would be constructed with upland features designed to support the San Francisco garter snake; this action would necessitate permanently closing Hole 12 of the Sharp Park Golf Course. Sediment basins would be installed in two locations, one where Sanchez Creek enters a culvert to pass under Highway 1 and the other at the northern boundary of Sharp Park; the former sediment basin would be developed on about half an acre of the golf course (primarily upland Monterey pine habitat), and the latter sediment basin would be expanded onto about half an acre of ruderal and upland Monterey pine habitat."

Draft EIR Chapter III, Project Description, p. 103, goes on to state that:

> "Creating, restoring, and enhancing California red-legged frog and San Francisco garter snake habitat at Laguna Salada would also involve a reconfiguration of some holes of Sharp Park Golf Course and converting a portion of the area currently occupied by the course to Natural Area. Approximately 13 acres of the golf course would be modified to create important upland habitat adjacent to the wetlands for the endangered San Francisco garter snake, to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded, and to allow for creation of new wetlands to compensate for those filled during restoration. In order to create a habitat corridor between Horse Stable Pond and Laguna Salada, Holes 10 and 13 would be slightly shortened or narrowed, and the existing Hole 12 would be permanently closed. The habitat corridor would cover approximately six acres, bringing the total of modified area at the golf course to about 19 acres."

In addition, a new hole would be created near the rifle range/archery course either east or west of Highway 1, which is required by Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264. Therefore, the proposed project includes the Sharp Park Golf Course modifications. Furthermore, proposed restoration actions at Sharp Park are not inconsistent with either the CEQA objectives listed on p. 82 of the Draft EIR or the SNRAMP objectives and goals listed on p. 84 of the SNRAMP.

Comment G-12 Objectivity of the EIR

The response to Comment G-12 addresses all or part of the following individual comments:

Bowman-2-15	Gomez-1-05	Keating-1-03
Kessler-1-01	Kessler-2-01	Rehling-1-01
PH-Keating-01		

- In general, I found the DEIR to be biased towards promoting the SNRAMP proposals instead of impartially and scientifically presenting the environmental impacts of the program. It is troubling that RPD spent more than $1 million for the development of such a flawed SNRAMP and DEIR and that this was done with limited input from the general public who are unlikely to support the costly implementation or the significant changes to the use of 25%

of park land in SF. RPD continually misuses words like "invasive" and "noxious" instead of the more clearly understood "non-native plants" which misleads the public about the types of plants and trees to be removed. RPD also uses "nature" and "natural" and "habitat" which would be more correctly stated as "native plants." Using these marketing words or codes represents a deceptive tactic that undermines the value of the entire DIER public comment and review process, since the general public is not being made aware of the significance of what is actually planned. [Bowman-2-15]

- Take another look at this plan, obtain viewpoints from geology/ erosion experts outside of SF Park and Rec, and definitely outside of NAP. They are too invested in this plan moving forward to be open to alternatives. One might say - they can't see the forest for the trees! [Gomez-1-05]
- Moreover, I think you should take a close look at the question of whether the staff DEIS report reflects a bias in that it appears based on a series of assumptions all of which favor the natural areas program, rather than a balanced approach where some assumptions end up favoring the program and other assumptions end up favoring recreational access. The DEIS should be a careful balanced analysis rather than an advocacy piece to justify a particular conclusion. [Keating-1-03]
- The current Draft Environmental Report appears to be slanted toward "Native Plant" management, at the expense of other interests. [Kessler-1-01] [Kessler-2-01]
- What NAP plans to do is not sound environmental stewardship, as claimed, but a damaging course of action that could do lasting harm to beloved and much-used urban forests and other recreation areas within the city. The draft EIR minimizes and misleads, not addressing some critical concerns and misrepresenting others, without consideration of the full range of expert opinion and without sufficiently considering community, ecological, and property impacts. The draft EIR does not acknowledge how reduction of trails and of dog-friendly acreage will affect the community, nor does the EIR accurately represent the potential consequences of using toxic pesticides on the health of children. Of course, these pesticides also threaten wildlife directly, and that wildlife also is threatened by the other changes to habitat that the NAP plan includes. The draft EIR does not appropriately address legitimate concerns about erosion, loss of windbreak and shade, and aesthetic consequences of NAP's plans. The draft EIR seems too informed by the voices of NAP staffers protecting their office and their budget and not sufficiently informed by those outside of NAP, but familiar with the areas and issues under discussion. I hope that you will seek out more sources and listen to them objectively, while bearing in mind the well-being of all residents and the importance of managing our parkland in a balanced way. [Rehling-1-01]
- I think your highest duty and your highest benefit you can provide in society is making sure that the staff reports you're getting in the environmental impact reports are straight up. That's all I think you can really do is make -- because you got to rely on your --those reports, but make sure they're straight up, and I don't know the answer to that. I've heard a lot of things both ways. What I suggest generally in other areas I've been involved in are the two easiest ways to find out whether you're getting good, impartial analysis is, one, what are the

> presumptions that are being made, the unfounded presumptions? Everyone always makes unfounded presumptions. So to find out whether it's biased or not, find out whether they're all sort of in one favor. Do they make presumptions that always go in one favor, or are the presumptions balanced in valuing recreation versus natural restoration, in evaluating whether these restoration efforts will have adverse short term impacts regardless of the long term impacts? So you look at whether the presumptions all go one way. The second thing I think you look at is what's being considered and what's not being considered. Are they looking at the relevant issues? We have maybe, what, 100, 150 years of managing these parks in our city balancing these issues. I think if you're finding that they're making a radical departure in a general management strategy, you ought to have a heightened scrutiny then. [PH-Keating-01]

Response G-12

These comments express concern that the analysis in the Draft EIR is not objective.

As explained on Draft EIR p. 2, the San Francisco Planning Department has prepared this EIR in accordance with CEQA (California PRC Sections 21000–21177), the Guidelines for Implementation of the California Environmental Quality Act (CCR Title 14, Sections 15000–15387), and the requirements of San Francisco Administrative Code Chapter 31. The EIR identifies significant impacts of the proposed actions (including cumulative impacts), identifies feasible alternatives and mitigation measures that would that would avoid or substantially lessen significant impacts, and includes improvement measures to further reduce impacts identified as less than significant. The EIR reflects the independent judgment of the Planning Department.

One commenter indicated that the terms "invasive" and "noxious" have been misused and the more clearly understood term "non-native plants" should be used. As provided in Executive Order 13112, an "invasive species" is defined as a species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.[29] On the contrary, in North America, nonnative species are generally considered species that were not present in an ecosystem prior to European settlement.[30] A majority of nonnative species cause no harm, and some are even beneficial. In the SNRAMP, the SNRAMP Draft EIR, and this RTC document, every effort has been made to draw a distinction between invasive species (meaning those that could be harmful) and nonnative species (meaning those that are not harmful and introduced after European settlement). A noxious weed is any plant designated by a Federal, State, or county government as injurious to public health, agriculture, recreation, wildlife, or property.[31]

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29 www.invasivespeciesinfo.gov/docs/council/isacdef.pdf, accessed on September 14, 2015.

30 http://www.nps.gov/plants/alien/bkgd.htm, accessed on September 14, 2015.

31 http://www.blm.gov/wo/st/en/prog/more/weeds/weed_definition.print.html, accessed on September 14, 2015.

One commenter states that the EIR does not acknowledge the impacts of closing trails or dog friendly acreage on the community, the environmental impacts of using pesticides, or impacts on erosion, shade, loss of windbreaks, and aesthetics. The Draft EIR addresses impacts from pesticide use in Section V.I, Hazards and Hazardous Materials; wind, windthrow,[32] and shade effects in Section V.E, Wind and Shadow; and aesthetic impacts in Section V.C, Aesthetics. Erosion effects are addressed in the Initial Study (Draft EIR Appendix A). The commenter has not provided substantial evidence[33] that significant adverse environmental impacts other than those described in the EIR would occur nor does the commenter raise specific environmental issues about the adequacy or accuracy of the analysis contained in the EIR.

As discussed in Response G-5, RTC p. 4-31, social impacts of a proposed project are only considered significant if there are associated physical effects on the environment. Refer also to Response RE-13, RTC p. 4-347, for a discussion of the effect of the reduction of DPAs on other DPAs in terms of recreational capacity; refer to Response G-25, RTC p. 4-106, for a discussion of dog impacts related to erosion; refer to Response HZ-1, RTC p. 4-531, for a discussion of the use of pesticides in the Natural Areas; refer to Response AE-1, RTC p. 4-219, and Response AE-2, RTC p. 4-223, for a discussion of the aesthetic impacts related to tree removal, brush piles, and brown vegetation; and refer to Response WS-1, RTC p. 4-309, for a discussion of wind impacts related to tree removal.

Comment G-13	**Sharp Park analysis piecemealed regarding sea wall and golf course redesign**

The response to Comment G-13 addresses all or part of the following individual comments:

Sierra Club-1-10 WEI-1-04

- "Piecemeal" Planning Process for Sharp Park.

  It can reasonably be inferred from the DEIR that the project, as currently envisioned, involves, in addition to the Laguna Salada restoration, both the reconstruction of the golf course and reconstruction/fortification of the seawall. However, these elements of the project, as well as the analysis of the recycled water component to provide irrigation for the golf course, are all treated as independent "projects" for CEQA purposes. Especially as the proposed project in this DEIR will result in the radical transformation of the hydrology of

[32] As stated on Draft EIR page 244, windthrow is used to describe the effects of wind on a stand of trees. When the wind blows a tree over, this action is called windthrow.

[33] As defined in CEQA Guidelines Section 15384, "'Substantial evidence' as used in these guidelines means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence."

Laguna Salada into a below sea-level frog pond, it is improper to treat these items separately, as is currently the case. [Sierra Club-1-10]

- **The DEIR piecemeals the environmental assessment of Sharp Park by delaying assessment of the future of Sharp Park's sea wall and ignoring the existing alternatives' relationship to a long-term golf course redesign.**

  The DEIR recognizes that the future Sharp Park's sea wall is subject to considerable uncertainty. As explained in the ESA/PWA report, sea level rise induced by climate change, along with storm surges and erosion, all make it infeasible to retain a sea wall at Sharp Park as it is currently designed. Only two options are available to the City: armoring the sea wall at Sharp Park, or allowing the sea wall to revert over time to a naturally managed coastal system.

  Yet while these alternatives are acknowledged in the DEIR, the DEIR expressly delays consideration of these impacts to some unknown point in the future. Specifically, the DEIR states that while these alternatives have been considered by SFRPD, "those options are not proposed as part of the SNRAMP. Thus, they are not addressed in this EIR." DEIR p. 103. But the DEIR is intended to guide management at Sharp Park for the next 20 years – a timeframe in which meaningful impacts to the sea wall may occur according to the ESA/PWA report, and which if the City fails to address could irreversibly harm the endangered species at Sharp Park, the existing infrastructure at Sharp Park Golf Course, and the surrounding communities. By failing to consider this impact presently, the City is piecemealing the environmental review for its plan at Sharp Park to retain an 18-hole golf course at Sharp Park on a permanent (relevant to the SNRAMP timeline) basis.

  The DEIR makes this problem express on p. 527, where it states that full natural restoration alternatives at Sharp Park "have been rejected because they are not compatible with the existing and planned 18-hole layout of the historic golf course." (emphasis added) Yet the planned golf course is not part of the DEIR environmental assessment – this is classic piecemealing of project to avoid cumulative, long-term, or complete environmental analysis of a project proposal. This can only be remedied by segregating out the Sharp Park section of the DEIR and subjecting it to a full and thorough environmental review as required by CEQA. [WEI-1-04]

Response G-13

These comments express concern that the EIR "piecemeals" the analysis of the proposed actions at Sharp Park by not including potential proposals for the seawall, golf course, and recycled water projects. These comments address actions that are not proposed as part of the SNRAMP.

Draft EIR p. 103 acknowledges that options for addressing current and future conditions of the seawall have been considered, but those options are not proposed as part of the SNRAMP. Because a solution for the seawall has not been proposed, speculating on that solution or solutions is not appropriate for the CEQA analysis; therefore, evaluation of potential actions to address the effects of sea level rise on the seawall in the cumulative impact analysis is not appropriate at this time. Effects

of the proposed project in combination with SFPUC's recycled water and potential cumulative effects of sea level rise on Sharp Park project are addressed in the EIR's cumulative analysis (refer to Draft EIR p. 381). The Draft EIR concludes that over the long term, sea level rise could result in significant environmental effects but that the SNRAMP would not result in a cumulatively considerable contribution to sea level rise impacts.

While areas currently within the Sharp Park Golf Course are included as part of the Sharp Park wetland restoration project and will become part of the Natural Area at Sharp Park, these changes are appropriately addressed in the impact analyses for the project in the Draft EIR. Specifically, Hole 12 would be closed and restored as coastal scrub/grassland habitat to support the San Francisco garter snake. Sediment basins would be installed in two locations, one where Sanchez Creek enters a culvert to pass under Highway 1 and the other at the northern boundary of Sharp Park; the former sediment basin would be developed on about half an acre of the golf course (primarily upland Monterey pine habitat), and the latter sediment basin would be expanded onto about half an acre of ruderal and upland Monterey pine habitat. While other golf course modifications would occur, such as shortening holes, creating a new hole near the rifle range/archery course east of Highway 1, and raising fairways to prevent flooding and discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded, these areas would not become part of the Natural Areas at Sharp Park.

Approximately 13 acres of the golf course would be modified to create important upland habitat adjacent to the wetlands for the endangered San Francisco garter snake, to discourage frogs from depositing egg masses in locations where the resulting tadpoles may end up being stranded, and to allow for creation of new wetlands to compensate for those filled during restoration. In order to create a habitat corridor between Horse Stable Pond and Laguna Salada, Holes 10 and 13 would be slightly shortened or narrowed, and the existing Hole 12 would be permanently closed. The habitat corridor would cover approximately six acres, bringing the total of modified area at the golf course to about 19 acres.

The impact to Hole 12 of the golf course as a result of the wetland restoration project has been identified and evaluated, with a mitigation measure formulated to address the impact on the playability of the 18-hole golf course (refer to Draft EIR p. 261 and pp. 264 to 269). In response to the comment regarding the environmental assessment of the golf course in the Draft EIR, the environmental impacts of the mitigation measure that would require restoration of the playability of the golf course was analyzed in the Draft EIR on pp. 264 to 269. It was determined that the impacts of the mitigation measure could be reduced to a less-than-significant level if the replacement hole would be located west of Highway 1. Neither the wetland restoration project nor the mitigation measure proposes a wholesale redesign of the golf course. Draft EIR p. 527 acknowledges that SFRPD identified alternatives to the golf course layout; however, SFRPD has not proposed a wholesale redesign of the golf course. The text on Draft EIR p. 527 (first paragraph) has been changed for clarification, as follows:

As part of the Sharp Park Conceptual Restoration Alternatives Report, the SFRPD ~~proposed~~ identified restoration alternatives that would be compatible with either a nine-hole layout at the Sharp Park Golf Course or with removal of the golf course entirely. These alternatives have been rejected because they are not compatible with the existing and ~~planned~~ continued 18-hole layout of the historic golf course.

Comment G-14	**Historic Preservation Commission review of future project under the National Environmental Policy Act**

The response to Comment G-14 addresses all or part of the following individual comment:

HPC-1-05

- The HPC also commented that it is likely that future projects involving federal permitting or funding will be reviewed and commented on by the Commission as part of the National Environmental Policy Act (NEPA) process. [HPC-1-05]

Response G-14

This comment asserts that it is likely that future projects with a federal nexus will be reviewed and commented on by the HPC.

The comment addresses additional environmental review processes that would be required following the CEQA process and does not request changes to the text of the document.

4.A.3 Dog Play Areas

Comment G-15	**GGNRA Activities (Unrelated to the SNRAMP)**

The response to Comment G-15 addresses all or part of the following individual comments:

NPS-1-10 NPS-1-11 Fitzer-1-01
Fitzer-1-05

- General Comment (pg. 443): Please correct description of acreage open to dog walking at Funston; 200 acres is not a correct figure. Please contact Shirwin Smith of my staff at 561-4947 for a correct acreage figure. [NPS-1-10]
- General Comment: GGNRA is instituting a survey this fall to evaluate potential for redistribution onto other areas both within and outside the park resulting from implementation of the dog management plan and will share that those survey results with RPD. [NPS-1-11]
- Please support the Save the Off-Leash walking Areas in the GGNRA.

  Since our daughter graduated Lowell High School, we do not have a place to go to meet people and socialize. We have met many friends from our daily off leash dog walks at Ft. Funston. For us, it is our form of exercise, away to relieve the day's stress, our daily dose of fresh air. Our walks are as important to us as they are for our dogs. For me, it is a way to exercise and enjoy our beautiful city and the ocean air. I always take our out-of-town guests

for a walk and show off our beautiful city and the Fort. Our guests are always amazed at how lucky we are to have this spot to go to walk and run our dog Wanda.

Please tell the GGNRA to stop pushing its extreme proposal that will negatively impact so many of us who live in the Bay Area with our wonderful pet dogs. Our dog is a rescue. We don't know her breed, but we do know that her daily run is very important for her and for us.

Why is the GGNRA insisting on this extreme proposal that would eliminate a main form of recreation that takes place at these recreation areas? Doesn't the GGNRA have an obligation to respect the legislation that created these areas by managing them as urban recreation areas, not as pristine wilderness areas?

I understand that Congress could resolve this conflict by codifying the GGNRA's original 1979 Pet Policy as a Section Seven Special Regulation, and mandating that all properties added to the GGNRA after 1979 maintain historical recreational access.

The GGNRA dog management proposal has nothing to do with safety or the environment- it's part of a pattern of GGNRA bureaucracy that denies more and more and people/activities access to parks.

There so many more important issues that could use the time and money that is being spent on trying to close off-leash dog areas. Before our city and country goes to the dogs … leave well-enough alone and start focusing elsewhere.

Thanks for your attention to this matter. [Fitzer-1-01]

- Parts of Ft. Funston have already been shut off since we first started walking there in 1998. These closures have had a negative impact on the natural resources in the existing areas where we can walk. I not only think that Ft. Funston should remain an off-leash area, I also think the ares that were closed off should be opened up.

  Lastly, I would like to say that many dog-less people come to Funston just to be with and play with dogs. just yesterday, while walking our dog at Funston, I met a dog-less Dad who took his 2 small kids Ft. Funston so that his kids could see and pet the dogs there. They couldn't have a dog where they lived and his kids were thrilled to be able to be able to run with and pet the dogs. It also gave the Dad a chance to teach his kids how to behave with dogs, to ask, "May I pet your dog ? " and "May I feed your dog this treat ? " etc., [Fitzer-1-05]

Response G-15

These comments state that the Golden Gate National Recreation Area (GGNRA) is instituting a survey to evaluate the redistribution potential occurring from implementation of its Dog Management Plan and identifies information and data to be provided to SFRPD, and it also requests a minor change to the amount of available off-leash DPAs at Fort Funston. Additional comments state that many people without dogs visit Fort Funston and, as such, it should remain an off-leash area.

The GGNRA (including Fort Funston) is neither under the management of the SFRPD or under the jurisdiction of the San Francisco Recreation & Parks Commission, and it is also not part of the SNRAMP project. The decision to allow Fort Funston to remain an off-leash area is under the purview of the National Park Service.

As stated on p. 339 of the Supplemental EIS (Fall 2013)[34] for the GGNRA's Dog Management Plan, the National Park Service (NPS) conducted a survey in the summer of 2012, the GGNRA Dog Walking Satisfaction Visitor Study to evaluate the perception of and satisfaction with the current dog walking policies, and the potential for redistribution of use based on access changes resulting from implementation of a new dog management regulation for GGNRA. The survey was conducted to respond to public comments received on the Draft GGNRA Dog Management Plan/EIS. Of the approximately 7,000 individuals contacted for the survey, 897 responded. Respondents included 662 dog walkers, 20 commercial dog walkers, and 212 individuals who do not walk dogs at the park. General satisfaction with the visitor's park experience was captured in the survey using the following categories: "not at all satisfied," "slightly satisfied," "moderately satisfied," "very satisfied," and "completely satisfied." Of the dog walkers who responded to the survey, 431 individuals (64 percent) indicated that they were "not at all satisfied," "slightly satisfied," or "moderately satisfied," with on-leash dog walking opportunities at the park. These same respondents were then asked if they would go (inside or outside GGNRA) somewhere else as an alternative site. The five most popular San Francisco alternative sites for on-leash dog walking included Pine Lake/Stern Grove, Golden Gate Park (all areas), McLaren Park, and Alta Plaza. Regarding satisfaction of off-leash dog walking, 659 respondents (98 percent) stated they would be moderately satisfied or less if they were not able to walk their dogs off leash at the sites they frequent now. When asked if they would go somewhere else to walk dogs off leash, the five most popular alternative sites indicated by those respondents for off-leash dog walking included the four San Francisco park sites: Pine Lake/Stern Grove, Golden Gate Park (all areas), McLaren Park, and Alta Plaza. Of these four San Francisco park sites, the SNRAMP is proposing to reduce the size of the DPA in McLaren Park. The SNRAMP Draft EIR analyzes the effects of DPA closures proposed by the SNRAMP in combination with the GGNRA Dog Management Plan in the cumulative analysis of various environmental topics.

As requested, the text on Draft EIR p. 444 (line 6) has been changed as follows:

> Fort Funston, located approximately 8,000 feet (about 1.5 miles) from the existing Lake Merced DPA has approximately ~~200~~ 160 acres open for off-leash dog use.

[34] National Park Service, U.S. Department of the Interior, *Golden Gate National Recreation Area Draft Dog Management Plan/Supplemental Environmental Impact Statement*, Fall 2013. This document is available online at: http://parkplanning.nps.gov/document.cfm?parkID=303&projectID=11759&documentID=55416, accessed June 7, 2016.

Comment G-16	**Dog problems result from lack of monitoring, lack of enforcement of existing leash laws, and lack of responsibility from dog owners**

The response to Comment G-16 addresses all or part of the following individual comments:

GGAS-1-14	GGAS-1-15	GGAS-1-20
GGAS-1-27	Bartley-1-08	Griggs-1-01
Kushner-1-04	Pfister-1-07	

- The DEIR and the SNRAMP suffer from the larger problem endemic to San Francisco's management of dog-related activities. Though all city parks permit dogs only on-leash and off-leash in designated off-leash areas, non-compliance with leash requirements is rampant. Despite that dogs are regularly allowed to run off-leash throughout nearly every park in the city, off-leash dogs continue to oppose even reasonable restrictions on dogs in the few Natural Areas covered by this Project. [GGAS-1-14]

- In any event, any Dog Play Area in any Natural Area should be fully enclosed or otherwise well-marked. Enclosures provide dog owners with a clear explanation of where off-leash activity is appropriate. Enclosures also restrain dogs from activities that may result in significant, negative impacts on native wildlife and plants in the Natural Area. Finally, enclosures reduce conflicts with other park users and other dogs. [GGAS-1-15]

- Give the priorities of the Natural Areas Program, it is appropriate to prioritize protection of wetlands and creek channels above dog-related recreation. Staff should ensure effective implementation of this management measure by monitoring dog-related recreation in the area and enforcing leash requirements. A failure to enforce leash requirements will result in the ineffective implementation of this measure. [GGAS-1-20]

- While the DEIR does not identify any inconsistencies with the San Francisco Dog Policy, Golden Gate Audubon notes that San Francisco's failure to fully implement the Dog Policy does create ongoing and serious conflicts with the priorities of the NAP. (See DEIR, at 155-156) The lack of adequate enforcement of the Dog Policy, especially in sensitive areas where leashes are required or dogs are excluded, has perpetuated conflicts between different users of the park system in San Francisco and exacerbated impacts to local wildlife and plants. The DEIR should include provisions requiring active compliance monitoring and enforcement of the policy to ensure that the application of the Dog Policy is consistent with the NAP. [GGAS-1-27]

- It is time for the city to enforce existing dog owner laws including the requirement of licenses. These license fees pay for our understaffed and overwhelmed Animal Care and Control Department. Lack of enforcement is seen as a dereliction of duty from this citizen's point of view. [Bartley-1-08]

- The main problem is one of enforcement however. Dogs are already regulated by the rule either on leash or under voice control of owner. Obviously this is often not the case. It may require simply having officers or rangers on the ground watching over the beaches and parks in a more substantial manner. In all cases of my dog encounters, there has never been

anyone of authority nearby. I now carry pepper spray with me and will use it. I know of no other solution for the time being. [Griggs-1-01]

- "Dog activity in DPAs is an existing use, and the SNRAMP does not propose increasing this activity; however, closing or reducing DPAs under the SNRAMP could intensify dog use in the remaining DPAs. In addition, because resources to enforce leash laws are limited, dogs would likely continue to be let off leash in parts of Natural Areas outside of DPAs, even though that activity is prohibited. As a result, dogs may currently be impacting and may continue to impact protected plant species in or near DPAs. Pet owners may contribute to disturbance via trampling. As a result, implementation of the SNRAMP could have significant adverse impacts on these species." This conclusion is very odd and out of sorts with the intent of CEQA. A more appropriate conclusion would be the mitigation that the Recreation and Parks Department enforce leash laws more adequately. The department has a beefy Parks Patrol division that could certainly be used to enforce leash laws, with fines that strongly encourage compliance. [sfweekly.com – article attached] [Kushner-1-04]
- "The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off–leash in 19 designated areas." Off-leash dogs are an important threat to biological diversity in the parks. There needs to be more enforcement of the leash law to limit off-leash activity to the designated areas. [Pfister-1-07]

Response G-16

These comments request monitoring dog-related recreation in the parks and a stricter enforcement of leash laws.

Many parks, with or without DPAs, are experiencing a lack of compliance with existing leash and pooper scooper laws. The reasons for the lack of compliance include, but are not necessarily limited to (1) park users who are unwilling to be compliant, even when confronted by SFRPD staff or fellow park users; (2) a lack of SFRPD patrol resources to fully monitor all parks for compliance; and (3) park users who are not aware of leash and pooper scooper laws. Enforcement of the existing leash laws is an ongoing City responsibility that is beyond the sole management control of the NAP staff and the SNRAMP.

In the SFRPD Final Dog Policy (SFRPD 2002) (also referred to in this document as the "Dog Policy"), the SFRPD states that enforcement would necessitate a multi-agency effort to include the San Francisco Police Department (SFPD), the SFRPD, and Animal Care & Control (ACC); however, the SFRPD believes that the greatest voice for following established rules and policies will be from DPA partners and users.

Refer to Response PD-23, RTC p. 4-198, for a discussion of the SFRPD's policy and the Draft EIR's conclusion and mitigation measures for monitoring DPAs for impacts caused by dogs, as well as the various options available to prevent or reverse those impacts, and Response G-25, RTC p. 4-106, for a discussion of potential impacts of dogs on plants and wildlife.

Comment G-17 Impacts of people within Natural Areas

The response to Comment G-17 addresses all or part of the following individual comments:

CFDG-1-04	DogPACSF-1-05	SFDOG-2-06
Bartolotta-1-05	Brown-1-02	Chambers-1-02
Demetrious-1-04	Kelly-1-02	Naima-1-03
Vitulano-1-04		

- The NAP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. Do people in the natural areas with dogs cause significantly more impacts than people in the natural areas without dogs? Clearly a 200-pound person will have a much more significant impact on plants than a 20-pound dog. Because this was not evaluated in the EIR, the analyses presented in the NAP EIR are inadequate. If there is little difference in impacts, then the EIR cannot justify banning dogs from the natural areas. [CFDG-1-04] [DogPACSF-1-05] [SFDOG-2-06] [Bartolotta-1-05] [Brown-1-02] [Kelly-1-02]
- The EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. For example, a 200-pound man will have a much more significant impact on plants that he walks on than a 20-pound dog will have on any that it walks on. If there is little difference in the impacts, then the EIR cannot justify banning off-leash dogs from natural areas. [Chambers-1-02]
- To that end, I believe that erosion and similar effects are more pronounced with human activity, and I feel that channeling the traffic with more regularly maintained trails is a good way to change the causes of negative effects on the land. There grows from that a greater, more frequent presence and adjustments are more easily made at a smaller scale to foster the positive outcomes in natural areas health and maintenance before bad outcomes have caused critical damage. [Demetrious-1-04]
- the NAP EIR does not take into account the damage caused by people or children [Naima-1-03]
- I personally see much more damage from people without dogs - especially kids hanging out, breaking glass, littering, The EIR should identify which percentage of impacts are attributable to dogs versus humans. [Vitulano-1-04]

Response G-17

These comments express concern that the Draft EIR does not analyze the environmental impacts of humans versus that of dogs.

To clarify, the Draft EIR does not propose to close or reduce DPAs because of a potential environmental impact identified in the Draft EIR. Rather, the SFRPD has proposed, as part of the project, to close the Lake Merced DPA and to reduce the size of two other DPAs. The EIR, therefore,

analyzes the environmental impact of this action. The Draft EIR analyzes the impacts of closure and reduction of DPAs along with the potential for increased use by humans (visitors) and dogs.

The EIR concludes that the proposed closure and reduction of DPAs would not result in significant impacts to recreational resources (Impact RE-1 and Impact RE-4 on Draft EIR pp. 256 to 258 and 259 to 260). However, when combined with impacts resulting from the GGNRA Dog Management Plan, the EIR conservatively determines that the cumulative impact of these two projects could accelerate the physical deterioration of the remaining DPAs and in the Natural Areas, in general (Impact RE-7 on Draft EIR pp. 261 to 262; Impact RE-7 was further clarified and expanded in Response RE-2, RTC p. 4-313). With respect to increased use of the Natural Areas by visitors, the EIR finds impacts to recreational resources to be less than significant (Impact RE-1, Impact RE-4, and Impact RE-7). Refer also to Response RE-13, RTC p. 4-347, for a discussion of the effect of the reduction of DPAs on other DPAs in terms of recreational capacity.

With regard to biological resources, the EIR finds that impacts to protected species, their habitat and sensitive natural communities (including wetlands and riparian habitat resulting from increased visitors), and use of the Natural Areas by dogs would be significant, but would be reduced to less than significant with implementation of Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298. The EIR also concludes that cumulative biological impacts resulting from the proposed project in combination with the GGNRA Dog Management Plan could be potentially significant and unavoidable (Draft EIR pp. 345 to 346). The Initial Study found erosion-related impacts to be less than significant (Initial Study pp. 111 to 118).

Increased use of the Natural Areas is discussed throughout the Draft EIR, including, but not necessarily limited to, Draft EIR pp. 256 through 259 ("Increased Use of Neighborhood and Regional Parks"); Draft EIR pp. 261 through 263 (cumulative recreational impacts caused by increased use); Draft EIR p. 292 ("Projects implemented under the SNRAMP can be categorized as either routine maintenance or programmatic projects involving large-scale weed removal, large-scale erosion control projects, trail modification, or other projects involving an increased use of an area"); Draft EIR p. 294 ("Operational impacts associated with the SNRAMP include increased foot traffic in areas of new trail creation"); Draft EIR p. 443 ("Implementation of the proposed project could result in a minor increase in vehicle trips from Natural Areas Program staff vehicles and visitors due to increased use of the Natural Areas"); and Draft EIR p. 444 ("The Natural Areas could experience increased use because of the improved trail system").

Other impacts related to dog use are addressed throughout this RTC document, including, but not necessarily limited to, Response BI-9, Contamination from dog urine, RTC p. 4-383; Response G-24, Data on disturbance to breeding birds at Lake Merced dog play area, RTC p. 4-95; Response G-26, Social impacts of dog ownership and reduced dog play areas, RTC p. 4-114; and Response RE-13, Effect of the reduction of DPAs on other DPAs in terms of recreational capacity, RTC p. 4-347.

Therefore, the Draft EIR appropriately analyzes the environmental impacts of the proposed SNRAMP, its potential to increase visitor use and dog use, and identifies mitigation measures where such effects could result in significant environmental impacts. The comments do not present substantial evidence that the analysis in the Draft EIR is inadequate or inaccurate.

Comment G-18 Disagree that dog walkers should be limited to seven dogs

The response to Comment G-18 addresses all or part of the following individual comment:

Tondelli-1-01

- I am writing to you as a concerned professional dog walker and resident of San Francisco. I strongly feel that the new proposed legislation restricting professional dog walkers to a maximum of seven dogs is simply disadvantageous for dogs, responsible dog owners, professional dog walkers, and the city of San Francisco. Dog walkers provide an invaluable service that many dog owners rely on to keep their dog well exercised, sociable and mannered. Furthermore, professional dog walkers help keep parks and recreation areas clean and maintained. I am not in opposition of regulating professional dog walking; in fact I support it as the industry is growing and regulation is long overdue. However limited the number of dogs to seven simply is not financially sustainable for myself and other professionals in this industry. The loss in income from losing one full time client is approximately $6,500 per year, which is a significant portion of my income. I feel that I speak for all dog walkers in the city of San Francisco when I say that there is nothing I would love more than to continue providing this necessary service in a professional manner, however this proposed legislation is something that I may not be able to overcome financially. I believe the most beneficial course of action is to follow the recommendation of the Commission of Animal Control and Welfare of San Francisco. The ACC proposes that professional dog walkers should be limited to eight dogs and adhere to strict, professional business practices including a thorough permit process, education and accountability. Eight dogs is a very reasonable limit that a professional dog walker can certain handle with professionalism and attentive care, and also is more financially sustainable. Please consider revising the proposed legislation to concede with the eight dog limit recommendation from the San Francisco ACC. I truly feel that this is the most beneficial to all parties who participate in dog walking services, including other park users. [Tondelli-1-01]

Response G-18

This comment expresses the opinion that the new legislation restricting professional dog walkers to a maximum of seven dogs is disadvantageous for dogs, responsible dog owners, professional dog walkers, and the City of San Francisco. The comment addresses an issue that has been legislated by the City, but is not within the scope of the SNRAMP. The SNRAMP does not propose limits to the number of dogs a dog walker can walk.

Comment G-19	**Support for maintaining or expanding amount of dog play areas/Opposition to reducing DPAs**

The response to Comment G-19 addresses all or part of the following individual comments:

DB-1-01, SFDOG-2-04, SFSPCA-1-01, Adams-L-1-01, Ahlberg-1-01, Beberman-1-01, Browning-1-01, Browning-2-01, Browning-3-01, Buffa-1-02, Butler-1-01, Carrington-1-01, Cech-1-01, Cerf-1-02, Chase-1-01, Chasnoff-1-01, Corvan-1-01, D'Antonio-1-01, Demetrious-1-02, Devine-1-01, DeWitt-1-01, Donovan-1-04, Dotz-1-01, Emanuel-1-02, Emanuel-2-02, Fasman-1-02, Form Letter-1-07, Form Letter-1-08, Form Letter-1-11, Form Letter-1-12, Form Letter-1-13, Form Letter-1-14, Form Letter-1-15, Form Letter-1-17, Form Letter-1-18, Form Letter-1-21, Form Letter-1-28, Form Letter-1-31, Form Letter-1-32, Form Letter-1-33, Form Letter-1-35, Form Letter-1-37, Form Letter-1-38, Form Letter-1-39, Form Letter-1-40, Form Letter-1-47, Form Letter-1-49, Form Letter-1-52, Form Letter-1-53, Gachowski-1-01, Garnett-1-01, Gordon-1-02, Greenberg-1-01, Grim-1-01, Hammer-1-01, Hartnett-1-01, Hershkowitz-1-01, Hochschild-1-01, Hooker-1-02, Huebsch-1-02, Hull-1-01, Jake-1-02, Karpa-1-01, Keats-1-01, Kenealy-1-01, Kind-1-01, Kovinsky-1-01, Lee-P-1-01, Litehiser-1-03, Lundeen-1-01, Lynch-1-01, Madar-1-01, McCalla-1-01, Miller-J-1-01, Miller-N-1-01, Minsuk-1-02, Monagle-1-01, Mundy-1-01, Norton-1-01, O'Neill-1-01, Olliphant-1-01, Perrins-1-02, Perry-J-1-01, Popoff-1-01, Pruitt-1-03, Quinn-1-02, Raffaelli-1-01, Randt-1-01, Reque-1-01, Rodriguez-1-01, Roman-1-01, Salamone-1-01, Schlund-1-01, Scott-1-03, Sebastian-1-01, Sharp-1-01, Simons-1-01, Skippy-1-01, Smith-1-03, Stevenson-1-01, Stewart-M-1-01, Sutch-1-01, Vitulano-1-01, VonErb-1-01, Werger-1-01, Woo-1-01, Zendarski-1-01, PH-Pittin-01

- Dog Walkers and dog owners are the biggest reason McLaren Park is now a safe please to take your dogs and kids. Drug dealers and other undesirable people felt uncomfortable using the park and stayed away because of the dogs.

In my opinion, McLaren Park was designated a "dog park" and should remain so. All the other dog parks should remain without change to preserve the sanity. [DB-1-01]

- Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill. [SFDOG-2-04]]
- decreasing or eliminating off-leash play areas is not fair to the responsible residents who choose to bring their dogs with them to public parks, and doing so would greatly decrease their quality of life. [SFSPCA-1-01]
- I am completely against the elimination or reduction of city dog parks by San Francisco Department of Parks and Recreation. Dogs and their owners need MORE space for off-leash recreation, not less. Returning parks to their natural, original state should NOT be the goal of a parks and recreation department of a major metropolis. Many needs must be balanced and it is unfair of you to ignore the needs of 150,000 dogs and their owners who reside in San Francisco, especially since a major federal agency (GGNRA) is trying to eliminate off leash recreation from a major part of their land. I urge you to abandon your Natural Areas Program and let people go to nearby natural areas like Big Basin, Yosemite, or Muir Woods, for example, if they are looking for an experience in nature that they can't find in a city. But please, don't try to make San Francisco into Yosemite. [Adams-L-1-01]
- I am writing to express my deep concern over the above-referenced plan, which threatens to reduce and even eliminate many of the city's dog-play areas. As a person who struggles with severe depression and bipolar disorder, being able to spend time with my dog outdoors and seeing her run free contributes to my regime of mental health. This may sound trite, and I realize that it's difficult to understand mental disorders, but finding ANY way to smile is a big challenge for people like us. My dog is my 100% true companion, and she is sensitive to my moods and patterns. By keeping a "smile" on her face, she keeps a smile on mine. [Ahlberg-1-01]
- If you are forced to restrict dogs from certain areas, I request that you add an equal or greater amount of acreage adjacent to the DPA. I also ask that dogs be permitted to play in the reservoir at McLaren.

  Dogs play a vital role in the life of the city and ours does in our family. The exercise and joy she brings would be challenged if we lost access to those areas, especially McLaren. [Beberman-1-01]
- I am writing you today to beg you to reconsider the plan to eliminate or reduce off-leash dog areas in the city. These areas are so important to the mental and physical health of our dogs and our people. Please don't let this flawed report by the NAP convince you to take such drastic measures. Please be the voice of reason. You must listen to the howling of the dogs and the people! [Browning-1-01]
- I implore you to reconsider the NAP EIR plan. I have 3 dogs, all of them rescued, and I the off-leash areas in the bay area are crucial to their well-being. I take them to Ft. Funston,

Bernal Hill, McLaren Park, Alamo Square Park, Glen Park, Dolores Park, Alta Plaza Park, Golden Gate Park, Esprit Park, McKinley Park and Stern Grove. I am diligent about picking up after my dogs, and about making sure the dogs are not destroying the vegetation. I pick up after other people's dogs when I see it has been left there. Even if you don't care about dogs, you must recognize that eliminating these areas will have a SIGNIFICANT negative impact on the people who live with these dogs. Please do not let this happen. [Browning-2-01]

- PLEASE, PLEASE, PLEASE don't do this! The NAP EIR seems to be biased speculation; how can you drastically reduce the off-leash dog areas for thousands of dogs based on speculation? Please consider the impact of this plan on the citizens and the remaining dog parks. DO NOT DO THIS! I am begging you! [Browning-3-01]
- I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco. Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas. [Buffa-1-02] [Cerf-1-02] [Hooker-1-02] [Minsuk-1-02]
- We are opposed to the elimination of off-leash dog walking as proposed in the NAP EIR.

  We have walked our dogs off-leash since 1989 without incident or without harming the natural habitat of many of the parks, including Glen Park, Bernal Heights, McLaren Park, as well as the GGNRA Beach areas – Fort Funston, Crissy Field & Ocean Beach.

  We walk our dogs as our way of enjoying the parklands. As taxpayers, we are opposed to NAP's attempts to stop us from exercising and enjoying the parks, especially since there is no proof that dogs off-leash cause harm to plants & wildlife.

  Those of us who walk dogs are a community and it is a diverse & fun community where we get to interact with people from all backgrounds and form bonds & friendships. DPA closures would severely impact this and for no clear reason! [Butler-1-01]
- I am a San Francisco resident of many years standing now and for a long time have also lived with and roamed with a dog. I wish to go on record against the proposed restrictions. First, if one were to look at old photographs of this City there were sand hills and rather barren landscape in many of the areas now being proposed for "restoration." This city needs to respond to the needs of its current residents and not turn its back on us. [Carrington-1-01]
- I'm writing to voice my concerns over closing and reducing public access areas where I can exercise with my dogs. We need more areas not less, that's why there's pressure on the few areas we can go. [Cech-1-01]

- I'm not a resident of SF, but a frequent visitor. I don't quite understand why SF is looking to drastically restrict off leash access for dogs in the park lands. SF has some wonderful extremely open lands that have been preserved. To consider these "natural" areas is a bit over stating the reality. They are open space, but have long since been transformed from wilderness as a result the urbanization around the area. You could consider this to be a shame, but actually its part of the history of the city. I don't believe anyone in New York City is hoping to return natural habitat back to central park. I think some restriction to offleash dog access is reasonable. For example, if you have an athletic field, its annoying to have offleash dogs to start chasing balls when a soccer team is playing - and of course, nobody wants to step in dog poop in a picnic area. If SF Parks wants to make ON leash access to dogs a general policy, then please set aside generous, fenced, off lease areas. People who use dog park areas tend to be frequent users of the park, and even become a sub community. If you foster this sense of community among the users of off lease dog areas, you'll find the community will police and pick up after itself. This is my observation as a participant in a few informal dog play areas. [Chase-1-01]

- I am writing to express my utter dismay that the city would consider eliminating our ability to bring dogs to several of the city's parks. I walk my dog many times a week at Bernal Hill. It is full of people walking their dogs, and one of the only nearby areas where dogs can run off leash. With all the problems facing our city, I think it is insane to make it harder for dogs, which there are more of than children in San Francisco, to have an opportunity to run and exercise, not to mention the enormous physical and mental health benefits to their owners of that exercise as well. Part of why I felt okay about raising a dog in the city is that I thought I could count on there being off leash facilities near my home where both I and my dog could get exercise. Your potential actions threaten that and I see no good justification for prioritizing some return of some plants over the use of the parks by residents and their pets. [Chasnoff-1-01]

- I am a long time resident of San Francisco. I am writing to express my deep concern about the proposed cuts to off-leash dog walking areas in the City. If off-leash areas are restricted it will mean more dogs, squeezed in to less space. This could lead to increased aggression and will negatively impact the environment.

  One of the things I love most about San Francisco is how dog friendly it is. Dogs are an integral part of many families in the City. They help ensure that families get out and exercise, and provide much valued company for many elderly residents. Dogs give us so much, please don't take away their space. [Corvan-1-01]

- I have lived in San Francisco for all of my 61 years and have always been a responsible dog owner. I live right next to McLaren park where I can let my "well behaved" dogs run free for a little bit each day. I am very respectful of those that are afraid of dogs and put their leashes on. The neighborhood I live in (ma Ct.) has a person with two huge pit bulls and they are stuck on a 6 x 6 deck at all times. In all the years I have lived here I have only seen them out for a walk once and that's pretty pitiful to do to dogs. Having said that, she is the same person that calls the cops on my dogs if I try to play ball with them in the cul-de-sac, therefore their only play time is in the park. Time & money would be better spent on

something "important" and not leashing up our dogs. I live in the last house and the lot next to me is completely vacant. This city has gotten to be so dreadful with all the rules and regulations. Please don't make me leash my dogs for the 15 minutes they get to be free. [D'Antonio-1-01]

- I can understand, then, the urgency in maintaining a level of integrity to these areas in the urban milieu. The effects of human activity and traffic is doubtless a prominent issue. In that regard, what concerns me is the closure of dog play areas. I am not convinced this is the best option. One reason why is that so many DPA's are in or adjacent to natural areas, and I'm afraid it would set a precedent which would be overly restrictive to the dog/human population. [Demetrious-1-02]
- Your recommended closures and limits on off leash dog areas is unfair & unwarranted in this economic struggle. These areas are large enough to have both natural areas for dogs to run in and places where natural habitats and endangered species can keep a foothold. Try putting some attention to the needs of the elderly, children & homeless. There are so many more important issues that really impact the quality of life of our citizens.

  As a founder of Greenpeace SF, a lifelong member of Sierra Club, Audubon Society, Nature Conservatory, CA Native Plant Society and many others, I have a good understanding & appreciation for the needed balance between use, & destruction of ecosystems. Please do not take away these places in our Bay Area where families and furry friends can run free, feel the sunshine on their faces, get exercise & feel proud that our government officials can understand and support what it means to go take a walk in the park. [Devine-1-01]
- I am writing about the plans to eliminate dog play areas that are adjacent to NAP areas. I have two large dogs who need exercise (ie running off leash on a regular basis) and I need the exercise I get when taking them for walks in recreational dog play areas. I have been walking my one dog in Bernal Hill for years, and he and I both love it. We are respectful of the plants and stay on the trails where they exist, and I feel like dogs are an important part of the area, so many people from San Francisco go there and seem really happy, enjoying the view, and letting their dogs get the exercise of running, which they cannot do on leashes.

  Native plants are important, and I am myself a native plant lover, however I do not see restricting dog access as the solution to the problem of establishing native plants in San Francisco. [DeWitt-1-01]
- I implore you to keep these spaces available for all San Franciscans and their dogs. [Donovan-1-04]
- I writing to register my profound objection to the closure of any part of Bernal Hill to off-leash dog recreation. I have been a homeowner living 2 blocks from Bernal Hill park since 1994 and have been a dog owner for all but 2 of those years. For all of those years I have been using the hill to exercise my dog and myself.

  I am also a passionate environmentalist. I am constantly delighted to see the variety of native wildlife found on the hill and have seen no evidence that it is impacted by the presence of off leash dogs. I regularly witness the presence of ground mammals such as squirrels, raccoons

and possum (its a beautiful walk at night). There is a thriving raptor community that hunts on the hill. We even had a coyote living on the hill one year. None of these species would be presnt if of leash dogs were a problem.

I appreciate the need to protect our native wild lands, but the continued closure of parkland to off leash dog exercise does not address the genuine human damage caused by pesticide use, urban crowding, off road biking, etc. Dogs have become a scapegoat. And should these closures go into effect who is going to enforce them? The city and county of San Francisco does not have the resources to manage the regulations already on the books. Why burden the government with additional, meaningless regulatory responsibility. [Dotz-1-01]

- However, any program implemented should not reduce or eliminate current recreation access in any way. Specifically, I object to the proposed reduction of dog play areas at McLaren Park, Bernal Hill and Lake Merced, especially in consideration of the proposal by the Golden Gate National Recreation Area proposal to ban people with dogs at most of the recreation areas it manages in San Francisco. [Emanuel-1-02] [Emanuel-2-02]
- I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco. Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas. San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city. [Fasman-1-02]
- I think dogs should be of leash because they should have the right to they have feelings and thoughts like us [Form Letter-1-07]
- I can't throw a ball with my dog on a leash!! And I'm responsible enough to pick up after her?? Much like other dog owners! [Form Letter-1-08]
- When you (GGNRA) were asking for my support, you were saying that you would protect my open space areas from development, that you (GGNRA) would protect my right too continue to recreate in the ways that I have since my birth. Dog walking is my only source of recreation/excersize. You (GGNRA) are adding to my mistrust of government. Stop The Lies! [Form Letter-1-11]
- Well exercised dogs are less stressed and better behaved in public. This is also better for public safety. [Form Letter-1-12]
- I am 100% for off leash not fair to our dogs of SF CA [Form Letter-1-13]
- Dogs need open space also! [Form Letter-1-14]

- I use city parks and would like them to stay off-leash [Form Letter-1-15]
- Dogs off leash are better socialized! [Form Letter-1-17]
- We need off leash areas for our dogs to play! [Form Letter-1-18]
- I walk in city parks. Taking away access for my dog and I impacts my ability to have the health benefits and quality of life living in this area. This is a huge social outlet for me. [Form Letter-1-21]
- Most dogs are not disruptive. To curtail their activities, i.e. keeping them on the leash actually creates more behavioral problems with canines … [Form Letter-1-28]
- These proposed closures will negatively impact my life. I might have to move away from SF if implemented. [Form Letter-1-31]
- Please keep Golden Gate Park oak woodland safe for dogs and legal off leash. [Form Letter-1-32]
- Please don't take it away! [Form Letter-1-33]
- Keep parks for everyone, it's what make this livable! [Form Letter-1-35]
- As a disabled person I am concerned with the loss of accessible opportunities for me and my dog. [Form Letter-1-37]
- Pls keep off leash available. [Form Letter-1-38]
- We need open spaces for BOTH dogs and people to spend time. DON'T take the parks away from the animals & people. [Form Letter-1-39]
- Keep off leash available *PLEASE*!!! [Form Letter-1-40]
- For our generation, keep dog areas open [Form Letter-1-47]
- Dogs are better dogs with off leash time. [Form Letter-1-49]
- I am a responsible dog owner & pick up/clean up after my dog. I appreciate the environment as much as my dog & if it weren't for off-leash parks, we would not have a place to run & exercise freely. Please, keep parks off leash & I will keep it clean. Thank you. [Form Letter-1-52]
- Keep them open! [Form Letter-1-53]
- To hear that the areas to walk dogs off leash are planned to be reduced leads me to wonder if the plan was really thought through to the impact it would have. I would like to know if the it was taken into consideration that people who walk their dogs off leash actually use a park more than people who do not walk a dog off leash? On any given day, no matter the weather, you will find a person walking their dog off leash, whereas a person who is walking for exercise will opt to walk at a mall or on a treadmill. So by restricting off leash dog walking you really are restricting an individuals right to exercise. [Gachowski-1-01]
- I am sad to hear that there are people that wish to change this and i believe that they don't understand how important and how vital off leash recreation is for the well-being of dogs

and their families. My family is so much happier and alive when we can walk our dogs at places like Fort Funston and Stern Grove. Off-leash recreation has my full support. Please let me know if I can provide any additional information. [Garnett-1-01]

- I am a dogowner and dogwalker, and I use the off-leash dogwalking areas in Bernal Hill and McLaren Park on a daily basis. I recognize the importance of native plant preservation, but I don't feel that it's appropriate to prioritize these projects in urban parks at the expense of these tremendously popular off-leash dogwalking areas. I feel that the first and foremost mission of urban parks should be to promote recreational opportunities for the citizens of San Francisco, and, since so many of us enjoy exercising with our dogs, off-leash dogwalking areas should at the very least be maintained in their current state. Additionally, given that citizens of San Francisco currently have no means of proposing new off-leash areas in parks, the reduction of current dog recreation areas would increase use of remaining areas, possibly to the point of negatively impacting them. [Gordon-1-02]
- I wanted to submit my comments regarding the elimination of close to 80% of dog play areas. I live in San Francisco and am a responsible dog owner. It makes it increasingly difficult to remain a responsible dog owner if the city continues to eliminate dog play areas. I believe most dog owners agree that our pets are like parts of our family and residents of San Francisco love living here. Please keep our dog play areas available so we can continue to love both our family pets and living in San Francisco.

  I understand the desire to keep the habitat natural and not have dogs ruin that. In fact I support it. But eliminating the dog play areas is not the way to do it. I bet if you ask the dog owner community that uses these dog play areas they will be more than willing to help encourage the growth of natural plants in any way possible. Whether it be enforcing the boundaries of the dog play areas or contributing to the cause financially. Please help us keep our dog play areas available to us. [Greenberg-1-01]
- As a San Francisco resident and dog owner for 16 years I'm appalled at the proposed changes to off leash dog play areas in SF parks based on NAPs EIR. They don't seem to have any hard facts that dogs, indeed, cause erosion and harm to natural areas. In my own experiences at Fort Funston I've seen massive dune damage done by teenagers and their parents "sledding" down the dunes. With a growing number of families adding dogs to their households any reduction of outdoor off-leash play areas would be negatively impactful on the spaces that do remain. I regularly use Glen Diamond park, Bernal Hill, Holly Park, MacLaren Park and Fort Funston to walk with my dogs and often observe dog owners picking up trash and performing plant maintenance. The negative impact of reducing available off leash play areas would be detrimental for EVERYONE …. [Grim-1-01]
- I am a dog owner and a dog lover, as are thousands and thousands of others in SF. The plan by the Natural Areas Program Plan is seriously flawed and must be stopped. There is no proof that dogs are destroying the natural areas. Don't allow these anti-dog people to ruin it for thousands of people and their dogs. We need to be able to continue taking our dogs to Ft. Funston, and Bernal Hill, and McLaren Park and all the other off-leash areas. Dogs are an important part of our society. Please listen to the dog owners. Thank you. [Hammer-1-01]

- As a resident of SF, and owner of a dog, I think of SF as a dog friendly city. Your wanting to restrict off leash areas is ridiculous. You should be looking to increase off leash areas. [Hartnett-1-01]
- I understand this is a "hot-button" issue for so many folks on both sides. I understand both arguments and seek a healthy compromise. Your leadership is crucial. First, don't forget the montre of all responsible politicians – if it is not broke, don't fix it. Second, if there are serious issues and concerns requiring some action, let's think of ways to address specific problems, including perhaps: 1) better fencing of our parks; 2) City-provided doggy poop bags; and 3) Park and Rec lead clean-up days in which the dog owners could be put to work to keep the parks in nice condition. [Hershkowitz-1-01]
- As a lifelong San Francisco resident with both a young child and a dog, I'm writing in support of maintaining the current off-leash areas. While it's wonderful that areas are being restored, let's allow all San Franciscans the opportunity to enjoy our parks. There are already very limited areas allowing dogs off-leash so would be great if they could be maintained at current levels. My mother, Christie Hochschild joins me in voicing our support for off-leash areas as well. [Hochschild-1-01]
- I request that you drop your plan to close the parks to dogs for habitat restoration. There are many, many dog owners in San Francisco. I believe that dog owners will vote their interests and there is no reason to assume that the SF Planning Department is beyond the influence of the will of the voters. [Huebsch-1-02]
- I am dismayed to learn that these dog walking areas are being considered for closure or reduction in size. Why would any urban city seek to discourage the health of its families? [Hull-1-01]
- The NARMP EIR acknowledges that the NARMP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's desire to cut off-leash access by 90%, will have a disastrous cumulative impact on remaining off-leash areas in city parks and on recreation - however, the EIR does not analyze what that cumulative impact will be. This is a huge deficiency in the NARMP EIR! [Jake-1-02]
- My off-leash times with my dog are virtually the only times I ever use the GGNRA. Please let us keep the R in GGNRA. [Karpa-1-01]
- Ten times the space allotted to dog play is already restricted for people with dogs; in other words, we have use of one-tenth the space. If you dare to take even more space away, people with dogs may rise up to demand true representation of our actual real demographics by City employees rather than tolerating the way some City employees seem to represent only the interests of a small minority who unrealistically want to simulate wilderness in the middle of a major urban center at the expense of local people and their dogs.

  Although many of us pay taxes for public schools and do not begrudge a penny of it, all we need is open space for people and our canine family members. [Keats-1-01]
- Please do what you can to preserve or expand off-leash dog walking space in San Francisco parks. I don't own a dog, but my children and I like seeing dogs roaming freely in our parks

and support the rights of our dog-owning neighbors to enjoy our parks while letting dogs be dogs. [Kenealy-1-01]

- I am very much opposed to the NAP that would close the Lake Merced dog play area and reduce off-leash dog recreation on Bernal Hill and in McLaren Park. I believe enough land has been set aside for the preservation of native plants within our urban environment. These are areas where residents of San Francisco, myself included, regularly walk with their dogs and their children. [Kind-1-01]
- Open offleash is already so limited and busy. Please don't curb access. [Kovinsky-1-01]
- I am writing you in regarding on some of the public parks closures to dogs environmental impact report (EIR). I am asking you do not take away this beautiful city San Francisco provides to people and dogs. Dogs need places to run just like people need open space for outdoor activities. Dogs do not ask anything from human and they do not have voice. Let them have what nature can provide to them. [Lee-P-1-01]
- I have a dog and use many of the parks listed in the EIR report for dog play recreation. McLaren Park is my favorite park for off leash recreation. The park is large and has ample trails and areas for dog walkers. The park has struggled for years with perceptions of isolation and unsafe conditions. The introduction of large numbers of dog walkers in the past decade has increased park safety-- more people, more eyes on the trials-- has seen a big increase in people feeling comfortable walking alone in the park. This is also backed up by crime statistics. [Litehiser-1-03]
- Dog parks add to a community and as a friend of mine Amy Breeze once said "dogs make people more human." I have seen this over and over again and have experienced this myself. In a world when it seems most people are texting, talking on their smart phone or have head phones on and do not interact with each other, in dog parks you will see just the opposite. We are a little more "human" when we are at the dog park and educating park users and having guidelines for dog parks makes a difference, just take a look at Point Isabel across the bay the largest off leash dog park in the nation managed by East Bay Regional Parks District. [Lundeen-1-01]
- Hey this dog stuff is way crazy…I am opposed to this for many good reasons. Live and let live… [Lynch-1-01]
- Please preserve the few off-leash areas left in the city for our pets – it's important to us! [Madar-1-01]
- I implore you to not support a plan that will reduce the amount of off leash dog areas in this city and it's surroundings. When you consider the sheer number of active dog owners in the bay area you quickly realize that the existing off leash open space areas are already at a minimum. One visit to Fort Funston or Crissy Field on any given weekend day (or week day, for that matter) will give you an idea of the massive volume of dogs that enjoy it. Reducing these types of areas will force other areas to become dangerously crowded. Another group of people who will be severely impacted are the dog walkers. What do you think will happen to these professionals when their "office" is reduced so drastically? I speak from experience

when I say that the number of ill mannered dogs and, hence, ill mannered dog owners, are the minority. And I wish for there to be consequences for those folks. Perhaps the threat of fines could be introduced to discourage bad behavior (people who let their dogs out of their site, bring overly aggressive dogs, do not pick up their dogs waste, etc). [McCalla-1-01]

- I want to add my voice to the objection of closing all DPAs in Management Areas 1 and 2. If they, and those spaces like them, SF will become an even more difficult place to live in. The desirability of living in this city is closely tied to the ability to escape with my dog in not only 'non-urban' spaces but the variety of environments to do so. In my experience, those people that respect the non-dog people, environment, and picking up after their dogs are the vast majority. Like in any group, there are careless people (with kids, cars, bikes, etc) and education is an ongoing process! [Miller-J–1–01]
- In reference to the Natural Areas Program desire to limit or deny the presence of people with dogs, I am very concerned that any group would wish to deny another group's right to freedom of recreation. We have co-existed peacefully. We, the dog owners, do not wish to deny the NAP their rights, and I sincerely hope that we can both peacefully continue to enjoy our rights as we have in the past. [Miller-N-1-01]
- It will bring such great sadness to so many people and families to have these areas closed off to people and their dogs. So much of the world has been walled off in my 70-year lifetime. We need to be able to walk, hike and take our dogs with us so we can still feel our relationship to the Earth. These are almost sacred places for us, and our lives will greatly impoverished without them. [Monagle-1-01]
- I am in favor of expanding and opening new dog off leash play areas. [Mundy-1-01]
- As a concerned citizen and owner of a well-trained dog (puppy 1&2, SFSPCA animal assisted therapy, SFSPCA agility 1&2) it is of vital importance that we maintain the status quo of current off-leash dog areas in San Francisco. By reducing the current size and/ or number of off-leash dog play areas, 1) the potential to introduce crowding (an environment where dogs can often get aggressive) and/ or 2) Force owners to utilize marginal areas which could end up causing more degradation of NAP areas; grows. [Norton-1-01]
- First, as always, this plan would seriously restrict off-leash dog-walking areas available. I am a 64-year old woman who walks daily in McLaren Park with my two dogs. It is a matter of health and well being for us all that we can walk up and down hill for considerable distances. My doctor is always pleased to hear that I am getting this regular exercise-my dogs are inspiration, companion and, should it be necessary, protector. To deny them access to the wonderful open space we now enjoy in McLaren Park would be to deny me an important avenue for maintaining my health. I am sure this is true for many people throughout San Francisco. [O'Neill-1-01]
- I needn't tell you about the positive impacts dogs have on our community. Dog owners make our city's parks safer (e.g. look at the history of Dolores Park). I'm writing to encourage you to think through alternatives to closing off leash dog runs, particularly given that the draft environmental impact statement by the Golden Gate National Recreation Area has

already shown no direct link between dog walking and any environmental damage in GGNRA lands. [Olliphant-1-01]

- I am a dog owner and resident of San Francisco for the past 11 years. I appreciate the recreational space we have in the city to exercise my dog and to feel these health benefits myself, especially at Bernal Hill. We adopted our dog from the San Francisco SPCA and by nature of her herding breed she is a high energy dog that requires considerable running daily. We see this exercise as maintaining her good health and is the secret to her behavioral well-being. Like most residents in this city we do not have our own garden and completely rely on the recreational space of parks for exercise for canine companion. If the dog play areas described in the The Natural Areas Program are to be eliminated in San Francisco city parks, where will we go with our dogs? And will this be a continuing trend where we will loose more areas in the future? The reality is that San Francisco is a city of dogs, and dog lovers who are largely responsible contributing citizens. Please consider alternative areas to our recreational space to grow more native plants. Together we can support both efforts. [Perrins-1-02]
- I am opposed to the closure of the DPA on Bernal Hill, McLaren, and Lake Merced.

  We have lived in Bernal Heights for 13 years, just a block from the Hill down Wool Street. We have three dogs and two kids, and our entire family relies on access to this incomparable recreation space. It is integral to our urban quality of life.

  With more dogs than children currently living in San Francisco, we need to find ways to encourage healthy, sustainable use of our open spaces, not restrict dogs to more confined sites. A whole host of problems will come of that kind of crowding.

  Please keep Bernal, McLaren, and Lake Merced open to dogs and people. [Perry-J-1-01]
- One of the joys of living in San Francisco is the availability of so many dog-friendly areas, both on and off leash. Since we live in the western part of the city, most of our walks take place there. It's a huge concern to me that so many dog play areas are being threatened by the Rec and Park Department's proposed Natural Areas Program. I have been a member of the years of both the Sierra Club and the League of Conservation voters, so I am very aware of the impact on the environment of various activities. However, I don't believe that restricting off-leash recreation in this urban setting and replacing it with "natural" flora is the best decision. [Popoff-1-01]
- The EIR's arguments to remove off leash dog areas are not solid and ignore the actual usage of these areas by the city's inhabitants. The EIR's analysis is incomplete and bases many arguments on "potential" negative impacts not on data. Who is present in the parks in sunshine and inclement weather 365 days a year? People with dogs are. With the health department's focus on obesity, how can a plan like this that limits access to recreation areas be accepted? People often acquire dogs to get them out into nature, get them exercising and get them socializing. It's scientific fact that dogs help reduce stress and blood pressure in people. Shouldn't we try to improve life where we live instead of reduce its quality? The SPCA argues that dogs need off leash areas to keep aggression down in dogs. The dog

community in San Francisco is well known and provides great sense of belonging and community to many neighborhoods. To repeat a statistic I'm sure you know, there are more dogs in San Francisco than children. This reflects the importance of dogs in the lives of the city's inhabitants, voters, tax payers or however you want to describe us. EIR's are to take into consideration the impact on the communities that surround the areas in question and this one does not. I ask how can a dog chase a ball on a leash? I have suffered from mobility issues over the past year due to injuries (as do many of our dog owning residents, especially the elderly or disabled, a large dog owning population in my observation), and if I had not had access to areas where my dog could run free, the situation would have been inhumane. While I could get around enough to pick up their waste, providing the necessary exercise was medically not recommended or possible. [Pruitt-1-03]

- Also, do not restrict off leash access for dogs. Exclusion is not going to solve any problem. History shows, however, it always does. San Francisco is a tolerant, inclusive city, which is what makes this city feel more European than most. Go to London, off leash is the norm at all the wonderful parks. The experience increases the inhabitation of the parks, which are beautiful, and the gross of people and spread of dogs makes them safe and lovely. Restricting off leash access is simply discriminatory. Look at who is out there walking dogs. The majority are older people. Notice the sense of community this builds. These people are out getting exercise, meeting people, building community. Please, take actions that strengthen unity and community rather than tear it apart. [Quinn-1-02]

- I oppose, in the strongest terms, any expansion of the Natural Areas program at the expense of existing off-leash areas. Areas which are off-leash areas are multi-use; I see other people who are not dog owners using the park, and we all co-exist nicely. Designating the off-leash areas as Natural Areas would affect more people than just the dog owners.

  It is disturbing to me that there is no way to propose new dog play areas, should any curtailment occur, and in any case the approval process is sure to take years and leave dog owners who own dogs now without recourse. [Raffaelli-1-01]

- I'm a pet/dog owner in the city of San Francisco, and I understand that there are park areas that may be closing soon--or are up to discussion regarding closure. I won't be able to attend the meeting on October 6, but I want to note my support for dog parks in the city: both on-leash and off-leash areas (for dogs under voice command); the GGNRA's newest policy amendments to reduce spaces for dogs has been very disconcerting as a pet owner. Places like Muir beach and other notable spots in the Bay Area may soon become off limits. [Randt-1-01]

- I urge the city not to further restrict the areas where dogs are allowed to run free. Far and away the majority of dogs are pleasant and friendly. A few dogs have been badly trained, but they can be (slowly) removed from the parks. And some people just don't like dogs, or are worried about small children. These folks can easily avoid the free dog areas, there's a lot more park space just for people. I'm not a dog owner/guardian, but I do like dogs. [Reque-1-01]

- I am a responsible dog owner. I represent 99% of all dog owners. There is only a small percentage that gives us a bad name, as in any area. If my dog can't run around free, I don't know how I would be able to consume her energy? Dogs need to RUN freely! Secondly, these walks are as much for my dog's health as they are for mine.

  Please let's keep our parks for all, dogs and people. [Rodriguez-1-01]

- Please support off-leash dog walking in the GGNRA and NOT limit current areas. I walk my dog daily, yes daily rain or shine, in either Crissy Field or Land's End. We enjoy walking together off-leash. My dog is trained to remain nearby and to respond to my recall. I pick up her waste and we keep to the trails. The NAP EIR does not convince me putting dogs on leash will have a favorable impact nor does off-leash walking have any unfavorable impact. In addition, I've observed much unfavorable impact by people using these areas such as walking through native plants without regard as well as other negative items such as loud music or leaving behind trash. It seems that there are many negative aspects attributed to off-leash dog walking and dog owners that simply are not true or untested. Confining all dogs to smaller off-leash areas will not be tenable. There simply does not seem to be enough land devoted to be able to accommodate all the dogs in the city during reasonable used times. Off-leash space is needed and some workable manner can be accommodated. [Roman-1-01]

- I am sure that you have heard all of the comments from hundreds of dog owners in Sf but here is just one more. I adopted my dog over six years ago during a time when both of my parents were quite ill and ultimately passed away. The breaks that my dog and I took at Fort Funston and Chrissey Field beach walk together for a run off leash was liberating for both of us and quite literally helped us to remain strong for my parents. Please help us not lose this most magnificent gift to allow us all to be free. I do understand with a great gift comes great responsibility to be good custodians of the land which I am. I will also continue to be vigilant and outspoken to those that I see breaking the rules. Please help us to save this gift for the 99% who do a good job instead of removing it for the 1% who are just not careful people. [Salamone-1-01]

- NAP reduces the amount of space available for off-leash dog recreation. The dog population is increasing, so this is a clear step in the wrong direction [Schlund-1-01]

- Native Areas are off-limits to people, dogs, and almost any type of recreation. The new proposal could close up to 80% of the legal off-leash space in SF city parks. Added to the new dog management proposal by the GGNRA, the limits on dogs would be severe and unwarranted considering the number of people who wish to walk their dogs in city parks and pay to maintain those parks. [Scott-1-03]

- Please save current off leash areas for dogs. Also add more since there is not enough. There are many dog owners that follow rules and there have been more & more places posted in neighborhood parks: No Dogs Allowed. [Sebastian-1-01]

- As a dog owner and frequent visitor of dog park areas I would like to request that you reconsider the closure of any such spaces. The dog park space my dog utilizes is an integral part of his socialization. [Sharp-1-01]

- It's so important that those of us who share this beautiful part of the world remember the word "share." Dogs and dog people are part of a community of extremely varied interests. For decades, San Francisco has worked to balance and blend those interests – not just informally but under the law. The city's Natural Resource Areas Management Plan could tip that balance away from the needs of the city's responsible guardians and their dogs and undermine their quality of life. [Simons-1-01]
- I am a dog owner and not only should we keep, but we should expand, our dog parks. [Skippy-1-01]
- In my own small back yard, I grow native plants, never use pesticides or fertilizer, allow certain weeds to grow just because of butterflies, let bushes get overgrown for birds, try to grow sunflowers for bees etc. I would like to see more of this type of thing encouraged for the backyards of San Francisco, but I am very much opposed to closing areas where people now go with dogs or with their children (or both!) to devote to more native plant areas. [Smith-1-03]
- I wish to submit my strong objection to the proposal to limit off lease areas in the San Francisco.

  Please have more consideration for the benefits derived from people being able to keep and exercise animals. This seems a little far fetched to me that animals could have such a negative effect on the environment as to want to ban their being able to run loose entirely. The worst fights I have witnessed were in enclosed dog parks like the one in Golden Gate Park. It makes big dogs predatory, small dogs fearful and owners with dogs that are problems tend to bring their dogs to enclosed areas. [Stevenson-1-01]
- Please don't take away dog play space from me (and my dog, Otis!).

  Actually, it'd be useful if you could first explain what the problem is re: Dog Play Areas … I've never heard of anybody saying anything but terrific things about them. Why are people chipping away at these? They're aware that we have more dogs than just about anything else in SF, right?

  Dog Play Areas make San Francisco an amazing place to live. Please, keep them all – or expand them. But don't turn this magnificent city into Brisbane by deleting them. [Stewart-M-1-01]
- I'm writing to ensure that off leash areas for dogs are included in the voices about how we should manage our natural resources in San Francisco. It should be clear that green areas area crucial to a sociable and healthy city. San Francisco benefits greatly from not only allowing it's citizens to be dog owners, but to increase the health of pets and the owners. Many dog owners receive their exercise by walking around with dogs and many of our citizens who can't easily make it out of the house due to anxiety or other issues are coaxed from the house and encouraged to walk more and longer. This effect can't be duplicated by on-leash walks. Even breeds that are smaller and normally are considered lap dogs benefit from a long run and impart their health on their owners. Well exercised dogs are happier, healthier and exhibit a positive impact on the people of a city and their social and mental

health. By having legal places for dogs to run you encourage owners to be more proactive about registration and shots through the calming hand of social pressure. Making off-leash illegal or squeezing it into the shadows this will result in more people who are law-abiding citizens today becoming a concern for enforcement later. Please keep our off-leash areas safe – they are in the city's best interests. [Sutch-1-01]

- I'm writing to express concern regarding the proposal to reduce access for me and my dog for recreation activities and spiritual well-being - the two main uses for me in SF's parks. Hiking with my dog is a main source of exercise for me - it keeps me active and allows me to enjoy nature. I especially enjoy observing the changes that occur with the seasons, such as the many varied mushrooms that sprout up after the rains in the Winter, and the flowering trees in the Spring. I frequent McLaren Park and Bernal Hill, as well as Golden Gate Park and several other parks. [Vitulano-1-01]
- It is ridiculous that your org. keeps attempting to close parks and open state and federal land to dogs and their owners. Some time ago SF govt. put section 8 units all over the city opening up the way to theft, property and civilian harm. We only have our trusted dogs to assist us in protecting ourselves from harm. Dogs, like people, must exercise to remain healthy. If there are no places in the city with wide open spaces to run and play and eliminate then we, the owners, will be forced to use our neighbors lawns and other private property to achieve this function. If you expect the voters in the bay area to vote in improvements for fire and police and parks in general then STOP this outrage against the people of the Bay Area and San Francisco in particular. It is high time that the needs of, We the People, are considered by our elected and appointed officials. Look at what is happening all over America as well as in San Francisco and Oakland. The people are tired of all this oppression and REVOLT is going to be the only answer to situations like this. LEAVE OFF LEASH AREAS ALONE AND CREATE MORE SPACES FOR US, THE DOGS AND THEIR OWNERS, TO OCCUPY. [VonErb-1-01]
- Hello- I was working late last night and was not able to get an email to you ….I am a sf voter/homeowner/business owner and am completely against the nap plan to take over off leash dog areas- there are more dogs than children in San Francisco and the dogs need a place to go. Especially with all that is happening with the ggnra, it boggles my mind to think that the city would ok this action. What's even more distressing is that most dog owners don't realize that it's happening. I take my dogs to Mcclaren park and bernal hill regularly and those offleash dog areas need to remain as such. I am disheartened that this issue is a constant battle. I would think that the city would realize how many dogs are here and how important they are to their owners - who by the way, are the residents and voters of San Francisco. [Werger-1-01]
- I writing to express my opposition to the GGNRA Draft Dog Management Plan. We need place to take our dogs for off leash dog walk. It's vital for our health and our dogs health. Most of the parks-city, state, federal-are either on leash only or does not allow dogs at all. Off leash area is so limited and few. We need those spaces. Please do not take away these spaces but instead expand it. There are 4 millions perfectly adoptable pets being killed in shelters each year. We need to encourage caring people to adopt these pets and we need to give them

a place form the to enjoy time with their dogs off leash. Imagine having to live on leash all your life. You wouldn't want that for yourself. Why make our dogs? Please please leave our off leash areas alone. [Woo-1-01]

- Please realize that dog walking is a wonderful form of exercise both physically and mentally. This is true for both me and Winston. As I would never propose closing parks to people due to the small percentage of people who vandalize and litter, let's not close the parks to off-leash due to a small percentage of irresponsible dog owners. The majority of dog owners are good stewards of the parks of San Francisco and are responsible, caring people.

  I think it is interesting to hear arguments of how dogs have a negative impact on the parks when the facts listed in their own reports prove otherwise. The beauty of urban parks are the diversification of activities that take place nearly every day.

  Please do not be swayed by the small minority of narrow minded individuals who do not understand the true pleasures of urban living! [Zendarski-1-01]

- I don't think that this applies to the National Areas Program. As a senior, whose primary – okay, whose only exercise is walking with my dog, I feel that the increased removal of our shared open space is – by the Natural Areas Program, which is a single purpose exclusionary program, will drive more and more local residents into increasingly smaller areas for exercise, access, and enjoyment of our San Francisco landscape.

  I oppose this unfettered increase of the Natural Areas Program into more and more of San Francisco's parkland and open space, and I ask that you all, as members of the planning commission, recognize that this program removes shared space from the community on the basis of sharply and scientifically contested assumptions about what is native or natural and makes equally unfounded assumptions about what actions, such as walking with one's pooch, can or cannot occur in our shared and all-too-limited San Francisco open spaces.

  Please oppose any expansion of this program. [PH-Pittin-01]

Response G-19

These comments all express support for maintaining, rather than reducing or closing, DPAs within City parklands. Some commenters also question whether dogs cause damage to Natural Areas. One commenter expressed opposition to the GGNRA Draft Dog Management Plan. Comments related to opposition of the proposed project and opposition to the GGNRA Draft Dog Management Plan do not relate to the adequacy or accuracy of the Draft EIR. These comments will be considered by decision makers as part of their decision to approve, modify, or disapprove the proposed project; however, that consideration is carried out independent of the environmental review process.

Currently, dogs are permitted, on leash, at all SFRPD parks, including the Natural Areas. In fact, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city.

In terms of off-leash dog use, the project proposed by the SFRPD—which is evaluated in this EIR—includes the conversion of 19.3 acres of off-leash DPAs within the Natural Areas to on-leash areas (refer to Draft EIR p. 257) in order to maintain and restore native habitats, while protecting areas of high conservation value. Eighty percent of off-leash areas would remain within the Natural Areas, with more on-leash and off-leash areas provided throughout the city, as further described in Response RE-13, RTC p. 4-347, and Response PD-19, RTC p. 4-189. Both of these responses also provide a discussion as to why each of the DPAs would be reduced in size or closed. Response RE-13, RTC p. 4-347, also summarizes the impacts of the reduction in DPAs on other DPAs in terms of recreational capacity, as well as a summary of the project-related and cumulative recreational impacts identified in the Draft EIR. Refer to Response G-25, RTC p. 4-106, for a discussion of the impacts caused by dogs to Natural Areas.

Cumulative impacts due to management of DPAs in City parks are addressed on Draft EIR pp. 261 to 262. The Draft EIR concludes that the potential effect of combined reductions in off-leash areas proposed by the GGNRA and the SFRPD could result in a significant and unavoidable cumulative impact on recreational resources. This determination assumes future implementation of the proposed GGNRA Dog Management Plan.[35]

To avoid the disturbance of breeding birds at Lake Merced, Management Action LM-7a (on SNRAMP p. 6.1-18) states that the SFRPD and the Dog Advisory Committee should consider relocating the DPA to a different location, and in the meantime, this DPA can remain open, but impacts should be monitored. However, following completion of the final Draft SNRAMP, and during preparation of the Draft EIR, the SFRPD determined that due to ongoing disturbance of breeding birds, this five-acre DPA should be closed rather than monitored (Draft EIR p. 136). Therefore, the text provided in the ninth bullet on Draft EIR p. 136 has been changed as follows:

- LM-7a—Relocate the DPA to a different area to avoid disturbing breeding birds in the current location; (Note: The SFRPD determined following completion of the final draft SNRAMP that, due to ongoing disturbance of breeding birds, this DPA should be closed, rather than monitored. This DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011). ~~Due to the San Francisco~~

[35] The GGNRA Draft Dog Management Plan/Supplemental Environmental Impact Statement (SEIS), which contained six alternatives, was released in September 2013. Subsequently, in February 2016, the Proposed Rule for Dog Management in the GGNRA was released for a 60-day comment period. On February 24, 2016, the Proposed Rule for Dog Management in the GGNRA opened for a 60-day public comment period on www.regulations.gov (RIN 1024-AE16). The comment period was later extended to 90 days and ended on May 25, 2016. All substantive comments on both the SEIS and Proposed Rule will be documented and responded to by NPS in a Final Environmental Impact Statement FEIS. These comments, along with relevant data, expert opinions, and other facts accumulated during the SEIS and Proposed Rule stages, will be evaluated by NPS to determine whether the proposed solution will help accomplish the goals and solve the problems identified in the SEIS before moving forward with a Final Environmental Impact Statement, Record of Decision, and Final Rule. While no specific alternative has been selected, it is reasonable to assume that a reduction in off-leash dog play areas would occur as a result of implementation of one of the Plan's alternatives.

~~moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed.~~ Restoration of the site would continue, following removal of the DPA.)

At Bernal Hill and McLaren Park, the remaining off-leash portions of the DPA would be limited to flat and less-steep areas. At Bernal Hill, 15 acres of the 21-acre DPA would remain and at McLaren Park 53.4 acres of the 61.7-acre DPA would remain.

Refer also to Response G-1, RTC p. 4-13, which provides dog count data, indicating which DPAs are the most and least used.

Comment G-20 Support for reduced dog play areas as proposed in the SNRAMP

The response to Comment G-20 addresses all or part of the following individual comments:

Garbutt-1-01	Hasbrouck-1-01	Joyce-1-01
Kathie-1-01	Lock-1-01	Masud-1-01
Radetsky-1-01	Walker-1-01	

- I am writing to show my approval of the proposed reduction of DPAs in city parks. I find myself regularly pestered and often harassed by aggressive dogs. The less I see of them the better. [Garbutt-1-01]
- I strongly urge you to make elimination of off-lease "dog play areas" the preferred alternative or, as the next-best alternative, to reduce the amount of public space dedicated to this use as much as possible. Off-leash dogs pose a danger that (1) deprives other members of the public of use of these areas, and (2) cannot be mitigated by training of dogs or other rules.

  San Francisco is one of the densest cities, with the least public space per capita, in the country. Choosing to dedicate space to off-leash dog play, when that denies the use of that space to other would-be users, is an inappropriate use of public land and resources.

  The City and County needs to consider the needs of people first, and pets second. There may be fewer play areas for dogs in the city than dog-owners would like, but dogs don't belong in the city, people do, and there are certainly too few outdoor play areas for people!

  Please, give me back the opportunity to enjoy Bernal Hill without risk of dog assault by eliminating (or reducing as much as possible) the off-leash dog play areas there and throughout San Francisco. [Hasbrouck-1-01]
- Please consider at least closing the un-fenced dog run areas. Both myself and my dog have been attacked when walking near a dog run area and the owners don't have control over their dogs - or worse, as in my case - the owners don't care if their dog attacks someone. [Joyce-1-01]
- I enthusiastically support limiting access of dogs in Natural Resource Areas so that these areas can be enjoyed by people who do not want dogs and dog mess all over their parks. Thank you. [Kathie-1-01]

- I am sickened by the fact that there are so many people out there who believe that the needs of their pets trump the health, safety and welfare of human beings. In addition to fines, confiscation and euthanasia of offending animals, I believe that the pet owners should undergo psychiatric counseling to straighten out their misconceptions that the welfare of pets takes precedence over that of human beings. POWER TO THE PEOPLE! [Lock-1-01]
- I'd like to express my support for additional restrictions on DPAs and off-leash dog access. [Masud-1-01]
- I used to love walking on Bernal Hill, but I have had too many encounters with aggressive dogs with irresponsible owners, and no longer walk on Bernal Hill. I read on SFGate that the city is considering reducing or eliminating off-leash dog play on Bernal Hill. Please, please take this step. The city needs to consider the needs of people first, and animals second. There may be fewer play areas for dogs in the city than dog-owners would like, but dogs don't belong in the city, people do, and there are certainly too few outdoor play areas for people! [Radetsky-1-01]
- I'd like to add my voice to those of us who feel that dogs are overrunning our public spaces. Everywhere I go there are dogs running around, often off-leash, urinating and defecating everywhere, and the owners frequently don't clean up after them. I can't take my children to the beach because people simply let their dogs run wild. I take them to the park and I'm having to constantly hover over them to make sure they don't fall into a big steaming pile or run afoul of some aggressive off-leash dog.

  I want to let my kids run free and play, but I really can't. Instead, they end up in the fenced-in playgrounds while the dogs run free in the tall grass.

  Please add my support to the idea of more public spaces that are simply off-limits to dogs, regardless of leash status, and to the idea of stricter enforcement of existing leash laws. [Walker-1-01]

Response G-20

These comments express support for reduced off-leash DPAs as a part of the proposed project evaluated in the Draft EIR and are not comments on the adequacy or accuracy of the Draft EIR.

Comment G-21	**No dog group advisory involvement for the Natural Areas Program**

The response to Comment G-21 addresses all or part of the following individual comments:

Emanuel-1-05 Emanuel-2-05

- It is troubling that there appears to be no representation of people with dogs in an advisory capacity for the NAP. There are many dog groups that are qualified and representative of diverse communities and geographies within the city that would serve well, similar to the other partner groups that participate in this city program. [Emanuel-1-05] [Emanuel-2-05]

Response G-21

This comment suggests that there is no representation of people with dogs in an advisory capacity for the NAP.

The comment is not a comment on the adequacy or accuracy of the Draft EIR, but a response has been voluntarily provided. As discussed in Response G-3, RTC p. 4-19, the development of the SNRAMP has occurred over about 10 years, beginning in 1995 and culminating in a 2005 Draft SNRAMP, which was distributed to scientists and regulatory agencies for review and ultimately became the 2006 Final Draft SNRAMP. During development of the 2005 Draft SNRAMP, numerous meetings were held with the Park Recreation and Open Space Advisory Committee (PROSAC), the Recreation & Park Commission, other governmental bodies and organizations, and over 3,000 individuals, including considerable participation from dog owners. In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city, and outreach also included neighborhood groups and residents within 300 feet of all Natural Areas. An online survey was also available for individuals and members of the public who were unable to attend in person. Feedback was received from approximately 2,700 members of the public and recommendations were received from three independent scientists. Further, several task forces, committees, and/or working groups were convened as part of this process, including the Natural Areas Program Citizen Advisory Committee, a separate ad hoc group that made recommendations on how to revise the plan, a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and the Sharp Park Working Group. In addition, revisions to the Sharp Park Restoration Plan were also made in response to input from scientists and regulatory agencies, which resulted in additional restoration areas and, as a result, additional impacts to the golf course. Response G-3, RTC p. 4-19, also describes the independent scientific review that was conducted for the 2005 Draft SNRAMP. Also, the Recreation & Park Commission, which is the policy-making body for all department activities, provides an opportunity for public comment at all hearings. There is not a separate NAP advisory body.

Comment G-22	**Recreation and Park Department process for closing dog play areas**

The response to Comment G-22 addresses all or part of the following individual comment:

NPS-1-04

- Pg. 33, 301: It would be helpful to provide further details on what the process would be to document adverse affects in DPA's and what the order of steps would be to address impacts, especially prior to a decision to discontinue a DPA. n. [NPS-1-04]

Response G-22

This comment requests further details on the process to document adverse effects in DPAs and to discontinue a DPA.

The process of identifying conditions that require modification or closure of a DPA would be conducted in accordance with the SFRPD Dog Policy (available at http://sfrecpark.org/wp-content/uploads/Final_Dog_Policy_2002.pdf). Dog Policy Section 6.2 describes how to modify or eliminate a DPA, stating that "If, after evaluation by the Advisory Committee, relevant park groups, and RPD, a DPA is determined to be flawed in nature, potential solutions will be developed and implemented. In essence, if an unfenced DPA fails to confine uses, hard barriers may be implemented. If adequate alternatives cannot be identified, or are deemed ineffective, RPD reserves the right to discontinue the DPA in question." This process is also identified in Mitigation Measure M-BI-1a of the Draft EIR, which requires evaluation and monitoring of DPAs for adverse effects to biological resources and various actions protect biological resources in accordance with the SFRPD Dog Policy.

The comment seeks additional information and does not raise any specific environmental issues about the adequacy or accuracy of the Draft EIR.

Comment G-23 Prohibition on new dog play areas

The response to Comment G-23 addresses all or part of the following individual comments:

NPS-1-05 DogPACSF-1-10 SFDOG-2-11
Brown-1-07

- Pg. 105, 110,262: Further explanation is needed as to why no more DPAs may be planned. Since direction on this point dates to 2006, we suggest that this decision be revisited within RPD areas especially given SF concerns regarding impacts on existing SF DPAs due to GGNRA draft dog management plan. Proposed reductions in SF DPAs could increase pressure and impact on remaining dog areas. [NPS-1-05]
- The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones because of a temporary halt on new designations is absurd. Any analysis of alternatives that does not include this possible mitigation is incorrect and inadequate. [DogPACSF-1-10]
- The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones is absurd. Any analysis of alternatives that does not include this possible mitigation is inadequate. [SFDOG-2-11] [Brown-1-07]

Response G-23

These comments express concern that the Draft EIR did not consider opening new DPAs to replace closed ones and request a further explanation as to why additional DPAs are not being planned.

The Draft EIR conservatively characterized the direction from the Recreation & Park Commission concerning establishment of new DPAs as a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas. This direction was presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the

Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. In order to make this clear in the Draft EIR, the text provided in the fifth bullet on Draft EIR p. 110 has been changed as follows:

- GR-8b—Match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas;

  (Note: ~~An underlying assumption of this EIR is that there would be no new DPAs because there is~~ The Draft EIR conservatively characterized the direction from the Recreation ~~and~~ & Park Commission concerning establishment of new DPAs as ~~not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered~~ a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas ~~in that no new DPAs are reasonably foreseeable~~. This direction was ~~announced~~ presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. ~~Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.~~)

A more detailed discussion of the cumulative recreational impacts associated with the closure or reduction in size of DPAs is provided in Response RE-2, RTC p. 4-313.

As part of the CEQA process, each lead agency that seeks to increase or decrease on-leash or off-leash DPAs within the city or its environs would be required to include other nearby projects within their cumulative analysis, as was done for this project in considering the GGNRA Dog Management Plan.

In terms of evaluating an alternative that would allow DPAs in the future, in accordance with CEQA Guidelines Section 15126.6, an EIR need not evaluate every conceivable alternative to a proposed project; rather the EIR alternatives analysis must describe a reasonable range of alternatives that would feasibly obtain most of the basic project objectives and would avoid or substantially lessen the significant environmental impacts of the project. An alternative that assumes additional DPAs, given the fact that no new or improved DPAs are proposed or envisioned in the Natural Areas and the fact that the CEQA objectives do not seek to increase off-leash DPAs, would not be considered within a reasonable range of alternatives; therefore, it was not analyzed in the Draft EIR. In fact, Draft EIR p. 461 states that "[n]o new DPAs would be created under any of the project alternatives …" However, the Draft EIR identifies four alternatives to the proposed project: the Maximum Restoration Alternative, the Maximum Recreation Alternative, the Maintenance Alternative, and the No Project Alternative (the last of which is required under CEQA Guidelines Section 15126.6). The findings of the alternatives analysis is provided on Draft EIR pp. 461 to 527.

Under the No Project, Maximum Recreation, and Maintenance alternatives, no changes to DPAs would occur. Thus the EIR evaluates a reasonable range of alternatives that would avoid the significant environmental impacts associated with reduction of DPAs as proposed in the SNRAMP.

Refer to Response RE-13, RTC p. 4-347, for a discussion of the reduction of DPAs and the potential impact on recreational capacity.

Comment G-24 Data on disturbance to breeding birds at Lake Merced dog play area

The response to Comment G-24 addresses all or part of the following individual comment:

NPS-1-06

- Lake Merced DPA (pg. 136, 305-306): It would be helpful to our dog management planning for NPS to receive the report of data gathered (# of dogs/incidences of disturbance) on disturbance to breeding birds at Lake Merced DPA that led to the proposal to close this DPA. [NPS-1-06]

Response G-24

This comment requests a report of data on disturbance to breeding birds at the Lake Merced DPA as a result of dogs.

The response below provides the requested data to the extent possible. While data has not been collected on the number of dog incidences and/or disturbances, either at Lake Merced or in other Natural Areas, data has been collected on the number of dogs and owners that visit the Natural Areas (refer to Response G-1, RTC p. 4-13, for that data). In addition, research has been conducted on the impacts of dogs on Natural Areas (refer to Response G-25, RTC p. 4-106).

With respect to Lake Merced, in particular, and based on NAP staff observations, this DPA is home to breeding white-crowned sparrows. As stated on p. 6.1-18 of the SNRAMP, the existing off-leash DPA at the Mesa (MA-1c and MA-2b) is located in a restored dune habitat that supports nesting white-crowned sparrow, which is declining in number in San Francisco, and includes sensitive plant species and some of the only raptor foraging habitat at Lake Merced. The remainder of Lake Merced is an on-leash park and Natural Area. To avoid the disturbance of breeding birds at Lake Merced, Management Action LM-7a (on SNRAMP p. 6.1-18) recommends relocating the DPA to a different area. However, following completion of the final Draft SNRAMP, and during preparation of the Draft EIR, the SFRPD determined that due to ongoing disturbance of breeding birds, this five-acre DPA should be closed rather than relocated (Draft EIR p. 136). Refer to Response G-19, RTC p. 4-88, for a more detailed discussion of the plans for the Lake Merced DPA.

Comment G-25 Analysis of dog impacts related to plants, wildlife, and erosion

The response to Comment G-25 addresses all or part of the following individual comments:

CFDG-1-01	CFDG-1-02	CFDG-1-03
DogPACSF-1-03	DogPACSF-1-04	GGAS-1-16
SFDOG-1-03	SFDOG-2-03	SFDOG-2-05
Armanini-1-03	Bartley-1-07	Bartolotta-1-01
Bartolotta-1-02	Bartolotta-1-03	Bartolotta-1-04
Bowman-1-07	Bowman-1-08	Brown-1-01
Browne-1-02	Browne-1-03	Buckley-1-02
Butler-1-02	Chambers-1-01	Donovan-1-02
Dougherty-1-01	Emanuel-1-04	Emanuel-2-04
Fitzer-1-03	Form Letter-1-01	Form Letter-1-44
Gachowski-1-02	Garber-1-05	Gavin-1-01
Ghosh-1-02	Hull-1-03	Ingle-1-01
Jake-1-01	Kelly-1-01	King-1-01
Mace-1-01	Mills-1-02	Moyer-1-01
Nelson-1-01	Pittin-1-01	Popoff-1-02
Strasbaugh-1-01	Shepard-J-1-01	Summer-1-01
Winquist-1-01	Yip-1-01	PH-Stephens-03

- There is no evidence in this EIR to substantiate claims that dogs have an impact on plants or wildlife in natural areas. The EIR must be based on solid, documented impacts, and there is no evidence cited to justify closing or reducing the size of any Dog Play Area (DPA). [CFDG-1-01]
- There are a number of places in this EIR that state that dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred. And continues to state: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." The analysis in this EIR based on this speculation is inadequate. [CFDG-1-02]
- In a few places, the NAP EIR says: Observations indicate dogs are impacting erosion, or natural communities, yet it offers no information on these "observations." Who made them? Were they done in a scientifically and objective way? EIRs should be based on solid, scientific data, not on anecdotal "observations." Any conclusions based on this information is again, inadequate. [CFDG-1-03]
- The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts." [DogPACSF-1-03]

- The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate. In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by "observers" biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is this the case here as well? We do not know, since the NAP EIR provides no information about them. Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If not, their analyses cannot be trusted and are inadequate. [DogPACSF-1-04]
- Overall, the DEIR would be improved by a greater discussion of the environmental impacts of dogs on the Natural Areas. Because the stated priorities of the NAP, the protection of biodiversity and other natural values should be prioritized over dog-related recreation and other similar activities. Even where biodiversity is prioritized (in this small amount of San Francisco's total park acreage), there should be ample opportunities for responsible dog owners and other visitors to full enjoy the Natural Areas. [GGAS-1-16]
- The NAP EIR repeatedly says dogs MAY have an impact, but there is no evidence cited in the EIR that dogs are now or ever have done so. EIR's must be based on documented impacts, not hypothetical conjectures. Specific proof of impacts, not just claims of "observations" with no details, must be added to the NAP EIR. [SFDOG-1-03]
- The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. In its comment on the Initial Study, SFDOG noted that there is no scientific consensus that dogs have any impact on plants and wildlife, including nesting birds, in city parks and listed scientific citations for research that showed no impacts from dogs. There is no indication in the NAP EIR that those studies were included, since the NAP EIR accepts the premise, without any evidence to support the premise, that dogs cause impacts. There was no acknowledgment that studies that show otherwise were ever considered in the NAP EIR. In addition, our comment on the Initial Study warned about considering studies that claim impacts from "free-roaming" dogs, since that means dogs that are running without any human control (for example, a dog that accidentally got loose without its owners knowing so there was no human in the park to handle or control the

dog). Off-leash dogs are NOT free-roaming, since they come to parks WITH humans who can control their behavior and activities. There is no indication in the NAP EIR that this warning was heeded, since we don't know what research the EIR used to back its premise that dogs cause impacts. An EIR should be based on scientific evidence, and there is little presented here to justify any claims of impacts. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is incorrect and inadequate.

The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472,473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there is no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? [SFDOG-2-03]

- In our comment on the Initial Study, SFDOG pointed out the EIR should re-analyze any data provided by NAP staff, especially data not published in a peer-reviewed journal, to ensure that conclusions against dogs are actually supported by the data. Because no data - only the word "observations" – is included in the NAP EIR, we don't know if there was any analysis of the observations to ensure they say what NAP staff claim they do. This is not just paranoia. In May 2006, Point Reyes National Seashore (PRNS) management claimed that an oyster farm in Drakes Bay was harming marine wildlife and causing significant negative impacts on the environment and, therefore, should be closed. A PRNS report stated that the oyster farm workers disturbed seals, causing a huge decline in seal population, and that sediment from oyster feces was harming eelgrass beds. Therefore, the oyster farm did not belong in a national seashore. Corey Goodman, a microbiologist at UC Berkeley, member of the National Academy of Sciences, and a former Chair of the National Research Council's Board of Life Sciences, analyzed the raw data used in the studies cited by PRNS staff and found that the data did not support nearly every negative impact claimed.

  Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If an EIR is based on anecdotal evidence, its analysis cannot be trusted and is inadequate. [SFDOG-2-05]

- As with the GGNRA Environmental Impact Statement of 2011, rational for the Significant Natural Resource Areas Management Plan (NAP; http://sfmea.sfplanning.org/2005.1912E DEIR.pdt) is based largely on allegations, with no substantive scientific studies or third party peer review provided as evidence. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at Mclaren Park or Bernal Hill. Also, the NAP EIR does not take into

account scientific studies that show off-leash dogs have little impact on plants or wildlife, including nesting birds when declaring that dogs have negative impacts (http://www.sfdog.org/content/do-dogs-bother-birds). These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts." [Armanini-1-03]

- Dog impacts on the more environmentally sensitive areas such as wetlands and waterways need to be more fully addressed. I am a strong advocate for official dog play areas but these play areas should be situated well away from the most significant natural areas. A clear delineation of all dog play areas needs to be maintained in any case. [Bartley-1-07]
- The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, no for the reductions in the DPAs at McLaren Park and Bernal Hill. [Bartolotta-1-01]
- The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and impacts. [Bartolotta-1-02]
- The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate. [Bartolotta-1-03]
- In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by observers biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is this the case here as well? We do not know, since the NAP EIR provides no information about them. Again EIRs should be based on solid, scientific data, and definitely no on anecdotal observations. If not, their analyses cannot be trusted and are inadequate. [Bartolotta-1-04]
- This plan seems to give NAP free-will to exclude people with dogs based on "observations" and "mays" than can be used arbitrarily. For example, the claim is that dogs are causing

erosion at Lake Merced and thus dog play areas should be closed. In truth, dog have almost no impact on Lake Merced because few dogs use the area. The fact that a dog play area is there is almost hidden, and the dog play area signage is non-existent in the park; in fact, all the signs I see around the park indicate dogs on-leash only. While the area isn't currently being used, the NAP will assure that it can never become a dog play area. [Bowman-1-07]

- As another example, the city has attempted to exclude people and dogs from the lagoon at Sharp Park, where people have gone for generations. In Issue SP-8, NAP claims dogs "may" have an impact on the SF Garter Snake and the California Red Legged Frog and that is sufficient to exclude people with dogs. However, there is no concrete evidence that dogs are having any impact on either species or their populations, even at these sites. Collectors seem to be the biggest known impact at the site. [Bowman-1-08]
- The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

  The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts."

  The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

  In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs?

  Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If not, their analyses cannot be trusted and are inadequate. [Brown-1-01]
- For example, I witnessed some of the people "studying impacts by people with dogs." I even spoke with them. They were not conducting studies based on solid, rigorous science. They weren't even scientists! Having walked up there for the last 15 years, I could have given you more accurate information, based on long-term observations. For instance, the main culprits

to ground erosion are rainwater, gophers, and certain species of invasive plants. I have watched, over time, the impact these have had on the hill, and it has been significant. Many of the Bernal residents spend time every year pulling these damaging plants. I have pulled entire sections and am happy to have seen no return, even after five years, at no cost to the city! [Browne-1-02]

- When I first started walking on the hill with my dogs, I'd run into the same neighbors at the same hours everyday. Now that more people in the city have discovered the hill, it has become a popular place for many. In fact, many users are refugees from various city parks that only allowed on-leash recreation for there dogs. They were **told** they could find off-leash walking on Bernal Hill. And so they came. And it's a wonderful refuge in this city. As far as the impact of people walking their dogs, the majority stay on the paved road or the designated paths. We don't have a problem of dogs digging that I have seen in other parks. Dogs are having a minimal impact on this area. The new signs that have been placed at the beginning of the park have been helpful in explaining how to use the park in these sustainable ways. Most our willing to comply. In other words, this community has been using this hill in a responsible and sustainable way for many years, with very little intervention. [Browne-1-03]
- The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate. [Buckley-1-02] [Form Letter-1-01]
- After reviewing the NAP EIR, we find that no evidence is offered that dogs do have a negative impact on the plants and wildlife in the natural areas. Where is the evidence? [Butler-1-02]
- The NAP EIR provides no evidence to prove claims that dogs have an impact on plants or wildlife in natural areas. EIRs must be based on solid, documented impacts, and there is no evidence cited to justify closing or reducing the size of any DPA. The NAP EIR repeatedly says: Dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred. Unsubstantiated claims cannot be made in an EIR. The NAP EIR goes on to say: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." Analysis in the EIR based on this speculation is incorrect and inadequate. [Chambers-1-01]
- The EIR is lacking in many respects. It states that dogs "may" be impacting plants and wildlife yet provides no evidence to support this claim, and it fails to mention scientific studies provided to the planning department that show little impacts on plants and wildlife by dogs. The EIR mentions "observations" that indicate the impact of dogs, but nowhere has any data to back up these "observations." Lacking such scientific evidence it is an incomplete EIR. [Donovan-1-02]

- I live and vote in SF, am dog owner, and enjoy the public parks with my dog, neighbors and friends. I am a member of SFDOG. I fully support UC Professor Arthur Shapiro's analysis of the NAP EIR.

  In addition, the NAP EIR offers no concrete evidence that dogs negatively impact plants or wildlife. Use of the term "may" in the report reveals the weakness and inadequacy of the report. [Dougherty-1-01]

- Moreover, the SFNAP EIR does not provide scientific evidence that dogs have an impact on plants and wildlife in natural areas. Therefore, it is my belief there is no justification for excluding people with off-leash dogs from natural areas. [Emanuel-1-04] [Emanuel-2-04]

- I understand that the GGNRA has a recreation first mandate with long practiced mixed-use activities (surfing, hiking, dog walking, horseback riding, hang-gliding, kite surfing, jogging, biking, festivals and events)

  People, dogs, wildlife and plants successfully co-exist in GGNRA - dogs have little negative impact on natural resources and bird life. [Fitzer-1-03]

- Plants and dogs can co-exist. One of the reasons we chose to purchase a house in SF and create a life here is because it is a very dog friendly city. Losing the spaces will change that for us! [Form Letter-1-44]

- The impact of an off leash animal is no different than that of a wild animal (which we do have even in San Francisco). And how can you really determine that such erosion or impact is due to an off leash animal? And do you really think by restricting off leash dog walking that it will just go away? Have you thought about the impact on the little areas left for people to walk their dog off leash? We will not go away, nor will we stop walking our dogs off leash. By limiting the areas in which we do so only begs for more erosion problems due to the high usage of the limited areas available. [Gachowski-1-02]

- It is true for this EIR, as it was for the GGNRA DEIR that there are very few scientific studies on the effect of dogs on wildlife. Some studies, in fact, show that the presence of dogs increases the presence of wildlife. [Garber-1-05]

- I'm also a dog owner (a reasonably minded one) who enjoys the hill daily. For this reason I've been continually annoyed by the incorrect conclusion by the "Significant Areas" people that dogs are a major factor in the erosion of Bernal Hill. [Gavin-1-01]

- The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate. [Ghosh-1-02] [Yip-1-01]

- The NAP environmental impact report makes allegations of dog damages with no substantiating scientific study. Are these the same people who freely approve the use of Garlon in areas heavily used by dogs and small children? I feel this shows a disregard for

scientific evidence and study. I feel this shows that this organization is untrustworthy and does not deserve our public support. [Hull-1-03]

- I am a dedicated environmentalist and have been a member of Nature Conservancy, Greenpeace, Wilderness Society, and other environmental organizations for many years. Yet I see no reason to ban off leash dog walking in the dog play areas at Lake Merced, McLaren Park, Bernal Hill areas. In the years I have been enjoying these areas with my dogs, I have never seen any problems caused by dogs.

  The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate. To deny many people the joy of walking their dogs off leash because of unsubstantiated data is poor administration to say the least. [Ingle-1-01]

- The NARMP EIR doesn't offer evidence to support its claims that dogs have an impact on plants and wildlife in natural areas. The NARMP EIR doesn't take into account scientific studies that show off leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. The NARMP EIR states that dogs MAY be impacting protected plant species or wildlife, but offers no scientific evidence these possible impacts are actually occurring or ever have occurred. In a number of places, the NARMP EIR says that someone's observation is that dogs impact erosion, or cause plant damage, etc., yet the EIR offers no supporting information on these "observations." EIRs should obviously be based on solid, scientific data, not on someone's anecdotal "observations." Further, if there are negative impacts by usage, the NARMP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. [Jake-1-01]

- The NAP EIR repeatedly says: Dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred. Unsubstantiated claims cannot be made in an EIR. The NAP EIR goes on to say: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." Analysis in the EIR based on this speculation is incorrect and inadequate. [Kelly-1-01]

- I am writing to offer my brief comments on the changes being proposed by the recent NAP EIR as the relate to Dog Play Areas. I have lived directly across the street from McLaren park for over 6 years, and have walked my dog in that DPA nearly daily for that period. I have seen absolutely no visible deterioration of the natural resources of McLaren. (And in fact, the park has bece ome safer over the years due to the presence of so many dogs and their walkers & owners.)

The changes proposed appear to have been made based on a series of assumptions of how dogs MAY be impacting natural areas, but the" data" provided is spotty, inconclusive, and in some portions of the report, flat-out incorrect. The lack of scientific method or quantifiable results is disturbing, and certainly shouldn't provide a basis for making such sweeping changes that will negatively impact so many citizens.

McLaren Park in particular remains one of only places in the city where dogs and their owners can exercise together over great distances, while co-existing peacefully with the natural inhabitants of the park, as well as other human users. I urge you to reconsider the proposed changes being made, and allow our already limited DPAs to remain as they are. [King-1-01]

- It seems, however, that City officials have decided that dogs destroy native plants around here. I walk my dog everyday around these parks, and I am here to tell you that that is simply not true. Responsible dog owners (and we are the majority of dog owners) don't let there animals off trails, or on native grasses or other plants. Just because you love your dog does not make you an enemy to the environment. It is also my observation that irresponsible dog owners are irresponsible people in general. They are irresponsible parents, and citizens. These people let their children, and their own actions do way more damage to the environment than any dog could do. Are you also going to ban children form the parks because they cause environmental damage? [Mace-1-01]
- The EIR's arguments to remove off leash dog areas are not solid and ignore the actual usage of these areas by the city's inhabitants. The EIR's analysis is incomplete and bases many arguments on "potential" negative impacts not on actuality. Who is present in the parks in sunshine and inclement weather 365 days a year? People with dogs are. [Mills-1-02]
- I am a SF resident, and I have two small dogs, which were both rescued from shelters. I walk daily with my two dogs on Bernal Hill, after I finish work. My dogs are well behaved, under voice command, and I pick up after my dogs. In addition to this being my main form of exercise, there is also a social aspect to walking on the hill, and I have made many wonderful friends and acquaintances by walking my dogs. I adamantly oppose any change in the off-leash area in this park for the following reasons:

  1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate. [Moyer-1-01]
- I am writing in regard to the NAP EIR and the potential impact on offleash dog areas. I am a dog owner, live and vote in San Francisco, and enjoy the public parks with my dog, neighbors and friends.

  I am a member of SFDOG. I fully support UC Professor Arthur Shapiro's analysis of the NAP EIR. In addition, the NAP EIR offers no concrete evidence that dogs negatively impact plants

or wildlife. Use of the term "may" in the report reveals the weakness and inadequacy of the report. [Nelson-1-01]

- Thank you for the opportunity to comment on the Natural Areas Program EIR.

  Errors and assumptions in the EIR demonstrate that there is a basic lack of research underlying this EIR, and this is not a basis for going forward with the plan.

  For example, assumptions are made regarding the impact of dogs, whereby it is stated that "Dogs may be impacting plants or wildlife," while there is no evidence given or reference made to any studies which state that such impacts *are* being made or felt. These hypotheticals are then used as fact, and the EIR then seeks to remove dogs' *continuing* impact, while the initial impact has never been demonstrated or justified by statistical, scientific, or other reasonable basis. The City cannot truncate a primary form of recreation, walking in our local parks and open spaces with our off-leash dogs, on the basis of hypotheticals and unproven assumptions.

  Dogs are generally regarded as nuisances in this EIR, and I find this position to be a very big problem indeed. The parks and the Dog Play Areas already created were established based on proven need. Indeed, there were to be more DPAs created after Rec and Park studied the issue, following the sunsetting of the Dog Advisory Committee (DAC). Rec and Park has never made this study, and has never come out with a plan for more off-leash areas. The NAP EIR seems to have been written in a vacuum, without consideration of the recreational requirements being met by already established DPAs, or the need for more space for off-leash and other forms of recreation. San Franciscans need more space for recreation, not less. [Pittin-1-01]

- The NAP EIR does not show evidence proving that dogs have an adverse impact on wildlife in natural areas, nor does it take into account studies that show dogs have little or no impact on plants and wildlife. [Popoff-1-02]

- There are so many things wrong with the NAP EIR that one hardly knows where to begin. Let's start with the lack of scientific evidence, just some unknown person(s) observations. The fact that the EIR repeatedly says that dogs "MAY" harm native plant gardens without proof or evidence of any kind is an excellent start. Well, they "MAY" be beneficial too.

  I urge you to reject this EIR and send them back to the drawing board to incorporate scientific evidence and to evaluate the impact to other parks when they close all these dog play areas, not just to people with dogs but all people. [Shepard-J-1-01]

- I am a District 9 homeowner residing at 286 Hamilton St., San Francisco. I am also an 11 year dog volunteer with the San Francisco SPCA. I am outraged that you would consider the huge cuts you proposing for dog play areas in San Francisco. First of all, a reminder: a draft environmental-impact statement by the Golden Gate National Recreation Area has already shown no direct link between dog walking and any environmental damage in GGNRA lands. Second, what do you think is going to happen when you cut these DPAs? There will be more pressure on the surviving DPAs because more dogs will be visiting fewer areas. Is

that your ultimate goal? To force dog owners and walkers out of parks altogether? Or, as you put it - is THIS the "environmental superior alternative"? [Strasbaugh-1-01]

- This email is in response to the NAP EIR, which is an inadequate plan that requires additional work. Buena Vista is my neighborhood park, which I have been walking in for the past 8 years with my dog. The NAP EIR will restrict my and my neighbor's access to this park, as well as a number of others.

  It's important that the EIR be based on solid scientific evidence, which is not the case here. The NAP EIR asserts a number of times that dogs may be impacting plants or wildlife but does not offering any evidence, past or present, while ignoring scientific studies that show the contrary. Ignoring scientific studies that do not agree with the plan while not providing any evidence of its own is not acceptable. [Summer-1-01]

- I am writing to comment on the NAP EIR. While I recognize the importance of native plants to the Bay Area, the NAP EIR is inadequate and additional work must be done. I frequently walk in Buena Vista and Bernal Hill par ks with my dog, both of which I've visited for the past 8 years, and this plan will adversely affect the public's access to those areas, among many others.

  An EIR needs to be based on solid scientific evidence. However, the NAP EIR repeatedly states that dogs may be impacting plants or wildlife without offering evidence of any impacts, past or present. It also ignores scientific studies that show off leash dogs to have little impact on plants and wildlife. [Winquist-1-01]

- The NAP EIR reportedly – repeatedly says dogs may have an impact, but there's no evidence cited in the EIR that dogs are now or ever have done so. EIRs must be based on documented impacts, not hypothetical conjectures. Specific proof of impacts, not just claims of observations with no details given, must be added to the EIR. [PH-Stephens-03]

Response G-25

These comments question whether dogs could impact plants or wildlife and request scientific evidence.

The purpose of the EIR is to analyze the impacts of the proposed project, including the SNRAMP's proposal to reduce and close DPAs, converting them from off-leash to on-leash areas. The DPA modifications identified as part of the proposed project and evaluated in the Draft EIR are those known and anticipated at the time of document production. The project would close the Lake Merced DPA and reduce the acreage of the Bernal Hill and McLaren Park DPAs. No other direct or indirect DPA modifications are foreseen as a result of SNRAMP implementation, beyond what was disclosed and analyzed in the Draft EIR. Refer also to Response RE-3, RTC p. 4-319, and Response RE-13, RTC p. 4-347, for a discussion of the cumulative impacts of the reduction in DPAs within the SFRPD property and the GGNRA. The need for and scope of those DPA modifications were made independently by SFRPD and are not a result of this EIR analysis.

The purpose of an EIR is to disclose the environmental consequences of the project as described by the project proponent. As such, it is beyond the scope of the Draft EIR to justify or document the validity of the proposed management objectives and actions concerning off-leash dog use. As required by CEQA, the EIR analyzes the potential environmental impacts of closing and/or reducing DPAs in Impact RE-1, Draft EIR pp. 257 and 258, and concludes that because the Lake Merced DPA is not heavily used and the Bernal Hill and McLaren Park DPA reductions represent a small portion of otherwise large DPAs, the potential increase in users of other DPAs would not be substantial enough to result in the physical deterioration of recreational facilities. This impact was determined to be less than significant. The EIR concludes, however, that an increase in dog use could result in significant impacts to biological resources, specifically protected plants and special-status bird species (Impact BI-1 and Impact BI-2 on pp. 298 and 305 to 306, respectively). The EIR identifies Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, Draft EIR p. 298, which calls for the SFRPD to continue to evaluate the impacts of DPAs and, where substantial adverse impacts to special-status species are confirmed, SFRPD shall take actions to protect those species. The mitigation measure specifically allows for DPAs within the Natural Areas to continue to be evaluated in accordance with the SFRPD's Dog Policy and be monitored for adverse effects to biological resources. If substantial adverse impacts to protected species are confirmed, the SFRPD shall take actions to protect those species, which may include installing signs, fencing, or protections including, but not limited to, decommissioning DPAs, in accordance with the SFRPD Dog Policy.

The conversion of the DPA at Lake Merced (to on-leash dog areas) is proposed to protect sensitive dune scrub habitat, special-status species, and breeding white-crowned sparrows within the DPA. The reduction in size of the DPAs at McLaren Park and Bernal Hill would be located in areas that contain sensitive wildlife and habitat and are also characterized by steep slopes, not conducive to dog use. The remaining 75.9 acres of off-leash DPAs are less vulnerable to erosion and other impacts from off-leash dog use. In total, the project would convert approximately 20 percent of the existing DPAs within the Natural Areas to on-leash dog areas, leaving 80 percent available for off-leash dog use.

Adverse impacts resulting from dog use is widely accepted by natural resource management professionals, and it is well supported in the scientific literature that dogs, particularly off-leash, can adversely affect wildlife and sensitive habitats. The SFRPD has documented the impacts of dog use in Natural Areas, which includes digging, soil disruption, weed growth, trampling, soil exposure, and plant loss.[36] Further, an article titled "Four-legged Friend or Foe? Dog Walking Displaces Native

[36] Lisa Wayne, San Francisco Recreation and Park Department, "Observations of Impacts of Dog Use in Natural Areas," memorandum to Lisa Beyer, Karen Mauney-Brodeck, and Jessica Range, March 12, 2012.

Birds from Natural Areas"[37] concluded that dog walking in woodland areas leads to a 35 percent reduction in bird diversity and a 41 percent reduction in abundance, both in areas where dog walking is common and where dogs are prohibited. In addition, BioOne, a nonprofit online aggregation of core research in the biological, ecological, and environmental sciences, published an article titled "The Effects of Dogs on Wildlife Communities,"[38] concluding that "regulating the activity of dogs in Natural Areas may be of particular importance when conservation goals include the management of species that may perceive dogs as predators."

In the Purpose and Need section of the Golden Gate National Recreation Area Draft Dog Management Plan/Supplemental Environmental Impact Statement,[39] in a sub-section titled "Dogs and Natural Resources" (pp. 32 to 34), the NPS provides a summary of the literature review that was conducted to determine the potential for adverse impacts from dogs or dog use on wildlife, wildlife diseases, and vegetation (including soils). In summary, the NPS determined that dogs can disturb wildlife species, with birds exhibiting a higher sensitivity than other species, and can also damage plant communities. This information was used to develop the NPS's proposed dog management regulations.

Based on the evidence provided in this response, supported by other technical studies evaluating the impacts of dogs on Natural Areas and parks in other cities and counties for the purposes of controlling unrestricted dog use, the proposed management actions to reduce off-leash dog use in certain areas that support sensitive species and habitats would likely have a beneficial effect on biological resources.[40] The Draft EIR concluded that other management actions, including the removal of invasive trees and vegetation, along with the habitat improvements, would similarly result in a beneficial impact on plants and wildlife, including aquatic species (Draft EIR pp. 296, 304, 307, 311, 312, 321, 323, 325, 329, 331, 333, 336, 338, 341, 343, and 346). In addition, Impact BI-1, on Draft EIR p. 298, states that dogs may currently be impacting and may continue to impact protected

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37 Peter B. Banks and Jessica V. Bryant, Four-legged Friend or Foe? Dog Walking Displaces Native Birds From Natural Areas, *Biology Letters* 3, 611–613, 2007.

38 Benjamin E. Lenth, Richard L. Knight, and Mark E Brennan, The Effects of Dogs on Wildlife Communities, *Natural Areas Journal* 28:218–227, 2008.

39 National Park Service, U.S. Department of the Interior, *Golden Gate National Recreation Area Draft Dog Management Plan/Supplemental Environmental Impact Statement*, Fall 2013. This document is available online at: http://parkplanning.nps.gov/document.cfm?parkID=303&projectID=11759&documentID=55416, accessed June 7, 2016.

40 Policies for keeping dogs on-leash occur in other parks to protect wildlife. For example, the Portland Parks and Recreation Department has issued Policy 3.07 (Dogs in Natural Area Parks Policy), which states that dogs are not permitted off-leash in Natural Area parks. The policy goes on to state that "[m]any studies have documented the effects of domestic dogs on wildlife. As dogs are recognized as predators by wildlife, their presence may stress wildlife and reduce breeding success. Visiting dogs can transmit diseases to wild populations or pick up diseases carried by wildlife. Uncollected dog feces can result in fertilization which may favor invasive plant species. Dogs can also contribute to the spread of undesirable species through seeds in their fur."

plant species in or near DPAs, and Impact BI-2, on Draft EIR p. 306, similarly says that dogs may currently be impacting and may continue to impact protected or nesting birds within the DPA (referring to the Lake Merced DPA).

It is the intent of the SNRAMP to provide distance between the DPAs and sensitive plants, habitats, or wildlife in order to maintain or improve these sensitive plant and wildlife areas.

Regarding the comment that the intensity of use and the erosion potential may increase in areas that continue to allow off-leash use as a result of closing/reducing DPAs, this effect is addressed under Impact RE-7, the text of which has been clarified and expanded in Response RE-2, RTC p. 4-313. Impact RE-7 concludes that the proposed DPA closures under the SNRAMP in combination with the future implementation of the proposed GGNRA Dog Management Plan could accelerate the physical deterioration of the remaining DPAs, resulting in a potentially significant cumulative impact. The EIR adequately identified this as a significant cumulative impact, as further discussed in Response RE-2, RTC p. 4-313. Other impacts related to dog use are addressed throughout this RTC document, including, but not limited to, Response BI-9, Contamination from dog urine, RTC p. 4-383; Response G-24, Data on disturbance to breeding birds at Lake Merced dog play area, RTC p. 4-95; Response G-26, Social impacts of dog ownership and reduce dog play areas, RTC p. 4-114; and Response RE-13, Effect of the reduction of DPAs on other DPAs in terms of recreational capacity, RTC p. 4-347.

Comment G-26 Social impacts of dog ownership and dog play access restrictions

The response to Comment G-26 addresses all or part of the following individual comments:

CFDG-1-10	CFDG-1-12	DogPACSF-1-14
DogPACSF-1-17	SFDOG-1-04	SFDOG-2-14
SFDOG-2-16	SFDOG-2-17	Bartolotta-1-13
Bartolotta-1-15	Brown-1-11	Brown-1-13
Brown-1-14	Browne-1-01	Buckley-1-01
Dougherty-1-02	Dougherty-1-04	Enzi-1-02
Fitzer-1-06	Form Letter-1-03	Ghosh-1-04
Jake-1-03	Jake-1-05	Kelly-1-05
Moyer-1-03	Nelson-1-02	Nelson-1-04
Yip-1-03	PH-Stephens-04	PH-Stephens-05

- The EIR refers to dogs as "nuisances." It does not consider the positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. These must be included in the analysis of different alternatives. People walk in McLaren Park and on Bernal Hill because they are large enough to take long walks with your dog. Most other DPAs are much smaller and do not offer the same walking experience. This EIR assumes all DPAs are interchangeable. They are not. This must be corrected. [CFDG-1-10]

- This EIR does not consider any impacts on the social community of people who walk with dogs in areas NAP wants to close. This is especially important if 80% of off-leash space is closed. These are significant impacts and must be evaluated and considered. [CFDG-1-12]
- The NAP EIR refers to dogs as "nuisances." The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are closed. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections. [DogPACSF-1-14] [SFDOG-2-14] [Brown-1-11]
- The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting. [DogPACSF-1-17]
- As such, the EIR must consider the impact of those closures on the human and urban environments, not just the natural environment. Throughout the EIR, dogs are described solely as "nuisances." The EIR does not consider any benefits of dogs and off-leash dog walking to people and communities. The NAP EIR must consider impacts on the physical and emotional health of people who can no longer walk their dogs in closed DPAs, and on the sense of neighborhood and park community that will be impacted if DPAs are closed or significantly reduced. Yet it does not. [SFDOG-1-04]
- The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most common and most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic

class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks is closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate. [SFDOG-2-16]

- The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting. [SFDOG-2-17] [Brown-1-14]
- The NAP EIR refers to dogs as "nuisances." The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are closed. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections. [Bartolotta-1-13]
- The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the DPAs and portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in

today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks is closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate. [Bartolotta-1-15] [Jake-1-05]

- The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park.

  Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate. [Brown-1-13]

- My family and I have been walking our dogs on Bernal Hill for as long as we've lived here. The proposals in the NAP EIR would drastically impact our use and enjoyment of this area. I have read the NAP EIR and believe it's assessments and suggestions are faulty, to say the least. [Browne-1-01]

- The NAP EIR defines dogs as "nuisances." The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks. [Buckley-1-01] [Ghosh-1-04]

- The NAP EIR's analysis of the impact on dog play areas is inadequate. The NAP EIR's definition of dogs as a "nuisance" discloses its bias against dogs and ignores the scientifically proven benefits that dogs bring to society and nature as an integral part of the environment. Dogs serve humans and nature in numerous, beneficial ways. [Dougherty-1-02]

- Finally, the NAP EIR would have a negative impact on San Francisco's economy with the loss of jobs (e.g., professional dog walkers), more dogs being surrendered to the city shelter for lack of adequate venues for off-leash exercise, and loss of international status as a dog friendly tourist destination. [Dougherty-1-04]

- Please know that many of us do not see any value in these type of programs. Unless we are all going away and taking our cars and two centuries of urban planning with us, it seems more sensible for the parks to be maintained for the use and enjoyment of ALL of the people who pay for their upkeep and maintenance. This includes children, runners, classes, sportspeople, dogs and their people, sunbathers, gardeners and bicyclists.

  NAP is an attempt to undermine this great and successful social experiment by useless prohibitions on the citizens' enjoyment of what they have paid for. The benefits of this program are ill considered. Please do not continue down this garden path. [Enzi-1-02]

- More and more I have been reading articles in various national newspapers about the important role animals, and dogs, in particular, play in the lives of people. This is certainly true for our dog and I suspect for all dog owners. [Fitzer-1-06]
- The NARMP EIR refers to dogs as "nuisances," an extremely biased position that fails to consider any positive aspects of dog walking, including the physical and mental health benefits to having a dog, which has been rigorously studied and proven. [Jake-1-03]
- The NAP EIR refers to dogs as "nuisances." It does not consider the positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. These must be included in the analysis of different alternatives. People walk in McLaren Park and on Bernal Hill because they are large enough to take long walks with your dog. Most other DPAs are much smaller and do not offer the same walking experience. The NAP EIR assumes all DPAs are interchangeable. They are not. This must be corrected. [Kelly-1-05]
- 3) The NAP EIR defines dogs as "nuisances." The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks. [Moyer-1-03]
- The NAP EIR's analysis of the impact on dog play areas is inadequate. The NAP EIR's definition of dogs as a "nuisance" discloses its bias against dogs and ignores the scientifically proven benefits that dogs bring to society and nature as an integral part of the environment. Dogs serve humans and nature in numerous, beneficial ways. [Nelson-1-02]
- Finally, the NAP EIR would have a negative impact on San Francisco's economy with the loss of jobs (e.g., professional dog walkers), more dogs being surrendered to the city shelter for lack of adequate venues for offleash exercise, and loss of international status as a dog friendly tourist destination. [Nelson-1-04]
- I think the NAP EIR is inadequate and that additional work must be done:

  The NAP EIR defines dogs as "nuisances." The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks. [Form Letter-1-03] [Yip-1-03]
- Give us unbiased proven factors or don't kick us out. NAP has become a way to get rid of DPA's and city parks since the only real remedy from the alleged impacts from dogs is closure of the DPA. As such, the EIR must consider the impact of those closures on the human and urban environments, not the just the natural environment. [PH-Stephens-04]
- Throughout the EIR, dogs are described solely as nuisances. The EIR does not consider any benefits of dogs and off-leash dog walking to people and communities. The NAP EIR must consider impacts of a physical and emotional health of people who can no longer walk their

dogs in closed DPAs, and on the sense of neighborhood and park community that will be impacted if DPAs are closed or significantly reduced. Yet it does not. [PH-Stephens-05]

Response G-26

These comments express concern that the Draft EIR needs to analyze a variety of social and/or economic impacts related to the conversion of off-leash DPAs to on-leash areas and that the Draft EIR's language exhibits a bias against dogs and DPAs.

As defined under CEQA Guidelines Section 15382, "significant effect on the environment" means a substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Consistent with CEQA Guidelines Section 15064(e), an economic or social change, such as the physical and mental health effects of people who walk their dogs, the benefits that dogs bring to society, the potential loss of dog-walking jobs, or impacts associated with dogs being surrendered to a dog shelter, by itself shall not be considered a significant effect on the environment. However, where a physical change in the environment is caused by an economic or social impact of a project, that physical change may be regarded as a significant impact on the environment in the same manner as any other physical change caused by the project. The social effects described in the comments above would not result in a substantial or potentially substantial adverse change to the physical environment.

In addition, economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment. If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether they physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect. In this case, the analogous example would be if the proposed actions in the SNRAMP, including the reduction and closure of DPAs, would cause the overcrowding of other DPAs, leading to an adverse effect on people, the overcrowding of other DPAs could be regarded as a significant effect. As indicated in Response RE-13, p. 4-347, it is unlikely that DPAs within and outside of the Natural Areas would experience increased use to the point of physical deterioration or accelerated deterioration from the loss of 19.3 acres distributed among three DPAs; the remaining six DPAs (Bernal Hill, Buena Vista Park, Corona Heights, Golden Gate Park Oak Woodlands, McLaren Park, and Pine Lake) would have 75.9 acres available for off-leash use. Further, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland and additional park acreage is available at other parks throughout the city for on-leash dog use. Therefore, there is opportunity for both off-leash and on-leash dog use within the Natural Areas and other city parks, and no overcrowding of DPAs as a result of this change is anticipated.

Comments about the relative merits of the proposed project will be considered by decision makers as part of their decision to approve, modify, or disapprove the proposed project. That consideration is carried out independent of the environmental review process.

One of the commenters states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." For purposes of environmental impact analysis under CEQA, the term "existing character" is taken to mean the character of the physical and land use features within the area affected by a proposed project. The Draft EIR concludes that because the proposed actions in the SNRAMP would not result in changes in land use, there would be no substantial impact on the existing character of the Natural Areas (Draft EIR p. 181).

In addition, the comment that the SNRAMP proposes to close 80 percent of the off-leash dog space in City parks is incorrect. The SNRAMP proposes to close one DPA (the Lake Merced DPA, approximately five acres) and reduce the DPA acreage in two other Natural Areas (Bernal Hill and McLaren Park) for a total conversion of 19.3 acres of DPAs to on-leash dog areas. Approximately 75.9 acres of off-leash play areas would remain (or 80 percent) and, in all parks under SFRPD control, dogs are welcome on leash; therefore, the proposed project is not expected to negatively impact the health and welfare of dogs, dog owners, dog walkers, or cause dogs to be surrendered to a dog shelter. Also, with respect to the loss of dog-walking jobs or dogs being surrendered to a dog shelter, the commenter did not provide substantial evidence to support this assertion.

As discussed on Draft EIR p. 257, the DPA at Lake Merced is not heavily used and the reduction of off-leash areas on the steep portion of Bernal Hill along with the closure McLaren Park would represent a portion (20.3%) of the existing DPA acreage in the Natural Areas and does not account for DPAs outside of Natural Areas but within other City parks. The DPAs at Buena Vista Park, McLaren Park, and Golden Gate Park Oak Woodlands are proposed for monitoring. It would be speculative, at this point, to determine the acreage of DPAs that could be reduced or eliminated based on future monitoring reports. Should those DPAs be recommended for closure based on results from monitoring reports, additional environmental review may be required at that time. In addition, on-leash dogs would be allowed continued access to all Natural Areas.

Also refer to Response LU-3, RTC pp. 4-215, for a discussion of the existing character of the Natural Areas Response G-19, RTC p. 4-88, and Response RE-13, RTC p. 4-347, for a discussion of available parkland within the city for both on-leash dog walking and off-leash DPAs.

4.B PROJECT DESCRIPTION [PD]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter III, Project Description.

4.B.1 Support for the Project

Comment PD-1 General support for the project

The response to Comment PD-1 addresses all or part of the following individual comments:

NPS-1-13	BAAQMD-1-01	CAAONC-1-02
CBD-1-01	FOW-GGP-1-02	GGAS-1-05
GGAS-1-06	GGAS-1-08	GGAS-1-19
GGAS-1-23	GGAS-1-24	GLS-1-01
MGSG-1-01	Sierra Club-1-05	Sierra Club-1-06
Sierra Club-1-07	Bartley-1-01	Bartley-1-02
Bors-1-01	Cabada-1-01	Campbell-C-1-03
Creely-1-01	Flasher-1-01	Hatch-1-01
Holzman-1-01	Holzman-1-04	Kass-1-01
Kesel-1-02	Langille-1-03	Murphy-D-1-01
Rafferty-1-01	Rogers-1-01	Swenerton-1-01
PH-Antonini-01	PH-Brastow-01	PH-Gaar-02
PH-Mozingo-01	PH-Skain-01	

- General Comment: We are pleased to see that signage, in addition to fencing, is being recommended to protect sensitive wetlands. [NPS-1-13]
- I would like to voice my strong support for the Significant Natural Resource Areas Management Plan. Pollution, habitat loss and fragmentation, and invasive species all make it difficult for native plants and animals to survive in the city. The remaining remnants of grasslands, coast scrub, oak woodlands, riparian areas, and salt marshes in natural areas throughout San Francisco must be maintained and expanded in order to preserve the bio-diversity which is San Francisco's most important natural element. [BAAQMD-1-01]
- We feel:
  - It is an innovative management plan to safeguard our City's Natural Areas.
  - Implementation of the Plan will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas.
  - It provides clear direction to the City on how to prioritize management and restoration of our Natural Areas.
  - The Plan is the most cost effective method for managing our resources and protecting these areas for future generations. [CAAONC-1-02]

- In general, we support the goals of the Natural Areas Plan which promote ecological restoration, community stewardship and sustainable management of San Francisco's natural areas. [CBD-1-01]
- The implementation of this innovative management plan will help improve the habitat and landscape for threatened local plants and animals, enhance public safety and improve access and recreational use of the designated Natural Areas. The Plan provides clear priorities and cost effective methods for management of resources and protection of these for future generations. FOW-GGP's fully supports the SNRAMP, and our mission is to provide stewardship: community advocacy and resources for the realization of the Plan's objectives for the Oak Woodlands Natural Area of Golden Gate Park. [FOW-GGP-1-02]
- Golden Gate Audubon supports additional funding to support additional Natural Areas Program staff. The SNRAMP is a 20-year plan that anticipates growing impacts on the natural areas. To be effectively implemented, the Project will demand more than the ten gardeners that are currently on staff. [GGAS-1-05]
- Golden Gate Audubon endorses the DEIR's selection of the "least toxic decision making model." (DEIR, at 90). Because the use of pesticides in San Francisco is extremely controversial, Golden Gate Audubon encourages the NAP to develop a comprehensive communication and education package prior to applications, especially near neighborhoods, schools, playgrounds, and other areas that may be accessed by children and other vulnerable groups. [GGAS-1-06]
- Golden Gate Audubon also endorses the intent to remove non-native trees with native trees or shrubs, as is appropriate for the habitat. [GGAS-1-08]
- Golden Gate Audubon strongly endorses management measure GC/OH-9a (Monitor the dog impact on wetlands and Islais Creek channel and consider appropriate restrictions (including fencing) to keep dogs out of the creek channel and wetlands). It is known that dogs have significant negative impacts on local birds and other wildlife populations. San Francisco Bay has already lost approximately 90% of its wetland habitats, leaving native wildlife that depend on such habitats few spots for rest, forage, and roosting. Dogs should be entirely excluded from the wetland and any riparian habitat areas. All dog play areas should be clearly delineated, preferably with fences. [GGAS-1-19]
- Golden Gate Audubon endorses management measure LM-4a (Maintain and enhance important bird nesting and foraging habitat to include the removal of invasive species and natural recruitment of preferred species). (DEIR, at 135) [GGAS-1-23]
- Golden Gate Audubon also endorses management measure LM-7a (Relocate the DPA to a different area to avoid disturbing breeding birds in the current location). Given the current moratorium on DPAs, it is unlikely that the DPA could be moved and that the only viable option is removal. While Golden Gate Audubon supports removing the DPA from the site, Golden Gate Audubon encourages the city to find a suitable location for the DPA that will not result in an impact to native wildlife or plants. While the SNRAMP would reduce the total number of DPAs currently in San Francisco, Golden Gate Audubon reminds the City

that new DPAs are being planned for Heron's Head Park, Lennar's Hunters Point and Candlestick Point development sites, Treasure Island, and other sites in the Sunset district. [GGAS-1-24]

- We therefore strongly support the adoption it's Draft Environmental Impact Report and the final approval of the Management Plan. [GLS-1-01]
- I am writing in support of the Natural Areas Program and Management Plan. [MGSG-1-01]
- Adaptive Management

  We applaud the Report's endorsement of Adaptive Management as representing current best practice in natural resource management. [Sierra Club-1-05]
- Specific Recommendations

  In general, with the exception of Sharp Park, we find the specific recommendations offered for each of the 22 Natural Areas in San Francisco to be very sound and consistent with best management practices and science, and recommend that they be adopted as part of the plan. [Sierra Club-1-06]
- Monitoring

  We endorse the Report's recommendations to establish a robust monitoring program for each of the City's natural areas. [Sierra Club-1-07]
- I am writing in support of the Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project 2005.1912E. [Bartley-1-01]
- I wholeheartedly support the tree removal proposed in this plan, naturally taking into consideration its impact on nesting bird species. I strongly feel that certain tree species, specifically Blue Gum Eucalyptus, are not only hazardous to humans but also a nearly useless plant for native birds. Sure some f[sic] our species have managed to adapt but this is primarily due to a lack of choice. These trees monoculture and muscle out our native understory and the associated plant and animal system that our native wildlife has evolved with. A tree plan even longer term than fifty years should consider native and near native trees such as Monterey Cypress and pines, Coast Redwood and Live Oak as gradual but steady replacements for all Blue Gum. San Francisco could and should set the standard for the elimination of this dangerous pest tree. [Bartley-1-02]
- Overall I feel the SNRAMP has been well prepared for the 31 natural areas within San Francisco. The Bayview Park section of the Plan, with which I am most familiar, is very well done and thoroughly covers all aspects involved in managing the natural resources of the area. I am pleased with the progress that has already been made there following SNRAMP guidelines. [Bors-1-01]
- Please accept the report for it is a long worked on and comprehensive review of the plan.

  It is very important to save the last few public areas we still have that support native plants. Native plants are not only beautiful but also support our wildlife (insects, bees, birds). Let's keep some of it for future generation. [Cabada-1-01]

- The City's SNRAMP is truly an innovative plan that will improve wildlife habitat, access, and recreational uses while increasing safety. This comprehensive plan is the most cost effective method of managing our resources and protecting lands for future generations. [Campbell-C-1-03]
- As a twenty year resident of San Francisco I wanted to voice my support for the Natural Areas Plan. They conform to my sense of what is needed and possible in San Francisco. I support the moment to restore the Sharp Park golf course. [Creely-1-01]
- The proposed master plan for SF's natural areas is a great start at managing these ecologically, recreationally and socially valuable open spaces. Please do everything in your power to ensure the survival and health of these parks. The GGNRA has found that when the community is involved in maintaining and restoring the park, the diversity of park users and frequency of visits increases. Parks are what transform a neighborhood into a community. The Natural Areas provide special opportunities for families to experience nature right in the city. This is especially important for families without the means to travel to national and state parks. [Flasher-1-01]
- Please do whatever you can to save what is left of San Francisco's natural areas. If that means separating out the golf course at Sharps Park that may be what has to be done. But, the important thing is to leave some open space which can be used by the wildlife which is still left in our city. It will improve the environment the animals and the people who live there. [Hatch-1-01]
- I have reviewed the Draft Environmental Impact Report for SNRAMP wanted to make a few comments. I am the Director of the Environmental Studies program and professor of Biogeography at SFSU and have been involved in research and education at SFSU in the natural areas of San Francisco for many years. I think the natural areas are critical to the health of San Francisco and its citizens and urge you to go forward with certifying the EIR and allow SF Recreation and Parks, Natural Areas Program to continue to manage these critical natural areas within the city by implementing the SFNAP Management plan.

  In sum although the potential for impacts of that addressed above may be unavoidable I think that the benefits far outweigh the impacts and that the project should continue as planned. [Holzman-1-01]
- The Significant Natural Resource Areas Management Plan (SNRAMP) is an innovative management plan to safeguard our City's Natural Areas. Its implementation will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. The plan provides clear direction to the City on how to prioritize management and restoration of our Natural Areas and is the most cost effective method for managing our resources and protecting these areas for future generations. [Holzman-1-04]

- I urge you to follow the plan to thin out or remove many of the eucalyptus trees on Mt. Davidson.

  I live within walking distance of Mt Davidson, and often walk in the open spaces. Only rarely do I venture into the eucalyptus forest because it is so messy and dangerous underfoot.

  I would like to see open areas populated by native annuals, perennials, bushes, trees or even grasses.

  I fear that the neighbors are misled into expecting dire results from your undoing of the past error of planting a "productive" eucalyptus forest. [Kass-1-01]

- SNRAMP is an innovative plan that will protect San Francisco's natural resources. Implementation of the plan will help safeguard local plants and animals by providing clear direction management priorities. This is the most cost effective method for managing San Francisco's natural resources. [Kesel-1-02]

- The Natural Areas Plan goals are sufficient [Langille-1-03]

- We support the draft EIR for the Significant Natrual Resource Areas Management Plan. It makes sense on a number of levels. The San Francisco elements need to be approved because they will guide the restoration of a very small part of our parklands and open spaces within the City.

  We agree that trees need to be removed in limited numbers. For example at Lake Merced restored areas need to be opened to light so native species can survive. In many cases those trees are eucalyptus which impact soil chemistry and block light from coastal scrub. In other cases the trees may be pines or cypress growing on slopes that are shading out native vegetation. Often these trees sprouted from seeds burried by Western Scrub Jays, so they are not part of a planned parkland. These trees also fall when they reach maturity and cause significant erosion. The plan for removal of selected trees is appropriate and necessary, not only at Lake Merced but in other natural areas. [Murphy-D-1-01]

- The Natural Areas Program is an innovative management plan to safeguard our City's Natural Areas. Under the leadership of Christopher Campbell and Lisa Wayne we have embraced the goal of returning Fairmont Plaza to a thriving eco system. We realize this goal will take time, but through our on going work parties and the guidance from Parks & Recreation we are enjoying the positive changes in our green space. The Plan is the most cost effective method for managing resources and protecting these areas for future generations. It also engages the neighborhood in ongoing maintenance of the plaza. Our group has been inspired by the improvements and we are in discussions to work with the Parks Trust to set up an account to fund further restoration work in the park. The plan provides clear direction to the City on how to prioritize management and restoration of our Natural Areas. Recently the Parks & Recreation in conjunction with the Natural Areas Program worked with PG&E to mitigate potentially disfiguring addition of power lines in our natural area. I have every confidence that they will have the same influence when the AT&T boxes tentatively scheduled for this green space are up for approval. These are but two examples of how they

looked at a range of alternatives and the potential impacts for both natural and recreational amenities of the City's Natural Areas. [Rafferty-1-01]

- I would like to ask you to realize the importance of the 'Significant Natural Resource Areas Management Plan' for the City of San Francisco, please. With over 150 to 250 species being lost daily to extinction, preserving of our wild area or natural habitats, is essential. San Francisco, as you know, has many species of plants found no where else. Along with these unique plants are fauna that depend on them exclusively, i.e. the 'Hairstreak Butterfly'. Therefore, preserving these wild areas is even more important. [Rogers-1-01]
- The Significant Natural Areas Management Plan is a decade overdue and is based on painstaking research and innovative, cutting edge, sustainable land management practices. It represents a step in the right direction for the Recreation & Park Department, and indeed for the City as a whole. As a professional ecologist involved in urban restoration for the past 13 years, I can personally attest to the overflowing positive impact that the restoration activities this plan proposes can have on the quality of life and ecological integrity of our city. The SNRAMP is the most cost effective way for managing our precious and quickly disappearing natural gems and will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. [Swenerton-1-01]
- Trees are wonderful things, but too many trees, like anything else, is not the best thing and, you know, thinning them out makes for a healthier environment sometimes. Makes it safer; makes it the ones that remain healthier, and they're -- I think careful tree removal would be something that is important. [PH-Antonini-01]
- So I support the plan wholeheartedly. I would like to see it go forward. I hope we have your support. [PH-Brastow-01]
- It's unfortunate that the draft EIR cannot talk about the environmental benefits of restoring San Francisco's natural heritage. The 31 natural areas in San Francisco are natural areas because they're remnants of the original landscape containing flora and fauna that were here when the Spaniards arrived in 1769.

  So the goal is to try to protect what remains of San Francisco's natural heritage. And, you know, it's been a long time coming trying to get this EIR adopted, and I think we're getting very close now, and we can start implementing some of the action items in the management plan. I'm very excited about that. So I hope we have your support. Thank you. [PH-Gaar-02]
- Our counties have worked collaboratively and cooperatively to come up with a plan that really does address the issues of habitat preservation and to protect those species that are enumerated in the article -- in the draft EIR, specifically frogs, the red-legged rana aurora draytonii, the garter snake, and others. [PH-Mozingo-01]
- We need to move ahead with these -- this study itself in the defined, and give Park and Rec staff wherewithal to actually begin to improve our recreational facilities and our natural areas in San Francisco. [PH-Skain-01]

Response PD-1

These comments express support for the proposed project or individual components of the project and do not request changes to the text of the document. Accordingly, no further response and no changes to the Draft EIR text are required.

The proposed management activities anticipate continuation of the current NAP staffing levels, as reflected on Draft EIR p. 89; however, should funding increase, it is possible that staffing levels could be augmented and the pace of activity implementation could increase, although it is not anticipated at this time.

Most of the existing or potential future parks that one of the commenters mentions — Heron's Head Park, Candlestick Point–Hunters Point, and Treasure Island — are outside of the control of the SFRPD, and it is unknown whether DPAs would be allowed at these locations. The SFRPD does control some parks in the Inner and Outer Sunset district, and no DPAs are planned for these parks.

Refer also to Response PD-25, RTC p. 4-201, for a discussion of the adaptive management process used to monitor and maintain the restoration activities within the Natural Areas.

Comment PD-2	**Support protecting the Golden Gate Park oak woodlands**

The response to Comment PD-2 addresses all or part of the following individual comment:

GGAS-1-21

- Golden Gate Audubon strongly endorses the protection of Golden Gate Park's Oak Woodlands. (DEIR, at 130). We do note that dog play areas should be well-delineated, preferably with fences, and that leash requirements should be monitored and enforced. [GGAS-1-21]

Response PD-2

This comment expresses support for an individual Natural Area. As noted on SNRAMP p. 6.15-10, there are two existing DPAs within and adjacent to the Golden Gate Park Oak Woodlands.

The comment regarding fencing these DPAs and monitoring and enforcing leash rules have been forwarded to the SFRPD staff and Commission for their consideration. However, SNRAMP p. 5-11 specifically states that if park users and dogs stay on trails, no further access restrictions or fencing would be required. If a lack of enforcement and compliance with leash laws continues and/or damage to sensitive habitat areas is observed, the SFRPD could consider restricting access to sensitive habitat areas, as described in the Dog Policy, which could include the installation of physical barriers. Permanent physical barriers, such as fencing, are viewed as a last resort to be used only after signage and other soft solutions have been shown to be ineffective. If fences are installed, public access would still be allowed on designated trails, and all fencing, if required at Golden Gate

Park or in other locations, will be low and rustic so as to not block views and to blend with the surrounding landscape.

4.B.2 Opposition to the Project

Comment PD-3 General opposition to the project

The response to Comment PD-3 addresses all or part of the following individual comments:

MPIC-2-02, Armanini-1-01, Besser-1-01, Donovan-1-01, Glikshtern-1-01, Hooker-1-03, Johns-1-01, Kalafati-1-01, Kessler-1-12, Klebaner-1-01, Lendaro-1-01, Mills-1-01, Risk-1-07, Scott-1-02, Thayer-1-01, Valente-1-09, PH-Rotter-P-05, WTPCC-1-01, Asher-1-02, Bowman-1-02, Freedman-1-01, Gomez-1-01, Hu-1-01, Johnson-1-02, Keating-1-01, Kessler-2-11, Koster-1-01, Mattingly-1-03, O'Neill-1-02, Schlund-1-03, Scott-1-04, Thompson-C-1-01, Valente-1-12, WTPCC-1-13, Barnsdale-1-01, Cook-1-06, Ghosh-1-01, Heldman-1-01, Ingram-1-01, Jungreis-1-06, Kessler-1-11, Kessler-2-12, Lansdown-1-01, Miller-E-1-01, Perry-A-1-01, Scott-1-01, Shepard-A-1-02, Thompson-D-1-01, Zeiger-1-01

- We absolutely oppose the Proposed Project and Maximum Restoration Alternatives because of the significant and unavoidable negative environmental impact these plans would have on the Park's aesthetics, cultural resources, wind and shadow, recreation, biological resources, hydrology, hazardous materials, and air quality. [MPIC-2-02]
- WTPCC concerns with the Natural Areas Program (NAP) are as follows:
  - > NAP's plans to cut 18,500 trees in parks controlled by SF RPD, including plans to cut 1,600 trees on Mt. Davidson
  - > NAP's use of herbicides, including repeated applications at the same site, poor signage, improper applications, and concerns about children and pets playing in areas where toxic herbicides have been applied
  - > NAP's plans to close access to areas under its management, including closing 9.2 miles of trails, and turning the park experience into one full of "Stay on the Trails" and "Keep Out" signs
  - > NAP's plans to remove existing habitat (especially bushes and trees) and replace it with grassland will destroy habitat needed by wildlife and birds currently living in our parks

> NAP has done an extremely poor job of informing people, including park neighbors, of its plans; those plans were created without seeking input from park neighbors and park users

> NAP has expanded far beyond its original mandate to protect and preserve remnants of San Francisco's natural heritage, into large-scale conversion of existing habitat into something completely different, conversions that will change the character and uses of the park for decades to come

Because of these concerns, WTPCC opposes the proposed NAP Management Plan (SNRAMP) currently undergoing environmental review. We ask the Planning Department to address our issues and concerns with the Draft NAP DEIR (details below). We urge the Recreation and Park Commission to rethink its support of NAP's plans. The parks belong to the citizens of San Francisco, not to Natural Areas Program staff.

WTPCC opposes the expansion of NAP's mandate beyond the protection and preservation of existing remnants of San Francisco's natural heritage. The original Management Plan for NAP, written in 1995, was 12 pages long.

Over the years, however, NAP has claimed more and more city parkland, to the point that most of the land under NAP control does not have existing remnant habitat. Rather NAP has claimed land that it wants to change from the existing habitat that currently has few native plants to one that more closely resembles the habitat before Europeans settled in the area. Because of this expansion, the final SNRAMP is 711 pages long.

WTPCC supports the idea of preserving existing remnants of the historical habitat. We do not support the idea of wholesale habitat conversion that requires cutting down thousands of healthy trees, extensive and repeated applications of herbicides, closure of access to large areas of our parks, and destruction of existing habitat needed by the animals and birds living there now. As a result, WTPCC opposes NAP and its current plans for our parks.

NAP's plan is extremely ill advised. It flies in the face of common sense. At its most benign, it is taking something beloved and beautiful and making it less beautiful. At its worst, it is exposing the residents of San Francisco to herbicides, the ravages of wind, erosion, run-off, and mudslides and it is exposing the city to liability for damaged and down-graded property. [WTPCC-1-01]

- The removal of trees from Mt Davidson and elsewhere in the city is not what the city needs or wants. Already, San Francisco has far fewer trees than other beautiful major cities. Gavin Newsom realized this when he visited Chicago and came back with ideas to plant trees on many meridians in the city. San Francisco was not planned with beautiful tree-lined streets-street trees for the most part have been an afterthought. Our parks and open areas are the only places where we can enjoy the beauty and atmosphere that trees bring. [WTPCC-1-13]
- Having lived and worked in the Bay Area my entire life, I am strongly opposed to the recent Environmental Impact Review and Natural Areas Program (NAP) Recommendations released by the SF Planning Department which threatens to confiscate parklands in San Francisco and Pacifica that I have enjoyed with my dogs for so many decades.

The draconian NAP recommendations call for closure of Dog Play Areas at Lake Merced, and substantial reduction in size of these areas in several parklands including McLaren Park, Bernal Hill, and Sharp Park. In addition, recommended "restoration" actions also call for the use of toxic chemicals and the cutting down of thousands of healthy, beautiful trees which would destroy the enjoyment of these parks for everyone [Armanini-1-01]

- To lose San Francisco's forested areas would be shameful. Much of the city's beauty is due to the great number and diversity of trees that we have. [Asher-1-02]
- San Franciscans should be warned that the movement to create so-called "natural areas" has not been successful in many places. It is based on a rather rigid view of what is "natural" and requires, ironically, intensive weeding, irrigation, and the use of pesticides. At the same time, it typically removes the areas in question from public use. None of this is appropriate for public parks. It will not serve San Franciscans well. Here in the East Bay we have witnessed similar campaigns. One is the 72-acre Berkeley Meadow. This area was landfill, so "restoring" it back to its natural condition was a leap of imagination. The Berkeley Meadow requires constant weeding, irrigation, the use of pesticides, and the entire area is behind chain link fence save for a short, fenced walk through part of it. It has become a kind of diorama for plant that does not meet the public need for open space and recreation. By contrast, the City of Berkeley's nearby Cesar Chavez Park, which is of similar size, is in constant use by a multitude of users – including people walking, jogging, flying kites, walking dogs, taking photographs, picnicking, and bird watching. Cesar Chavez even has a thriving burrowing owl colony. I urge you to resist the most restrictive options proposed in the NAP E1R. They will be expensive and may, ironically, actually cause damage to the environment while not providing much-needed outdoor options for San Franciscans. [Barnsdale-1-01]
- Don't tear down the trees @ Mt Davidson [Besser-1-01]
- Only in extreme cases should the Parks & Rec Dept defer from McLaren's policy of NO "Keep off the grass" signs. These are city parks and are not major environmental conservation areas; plus non-native trees are part of our planted landscape and should be celebrated not demonized. [Bowman-1-02]
- We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants. I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created. [Cook-1-06] [Jungreis-1-06]
- I am writing to express my opposition to the proposed SF Recreation and Parks Department Natural Areas Program. [Donovan-1-01]
- I am absolutely appalled that the city is seriously considering removing 1,600 mature and healthy trees on Mount Davidson and replacing them with native shrubs which will required regular applications of hazardous pesticides. This is madness. [Freedman-1-01]

- We have far more pressing matters than changing our vegetation back in time. The costs alone makes this plan impractical. [Ghosh-1-01]
- The plan is criminal. Cutting healthy trees and using herbicides should be illegal. How can anybody possibly conclude that the plan would have no significant negative impact on wind and shadow, hydrology and water quality, and forest resources is a mystery.

  Ideally I'd like the NAP eliminated all together. [Glikshtern-1-01]
- Whatever action is taken on Mt Davidson will impact the rest of our lives, as we plan to live in our home until death. We are not in favor of the plan for Mt. Davidson as outlined by the Natural Areas Program. We are unhappy with many aspects, but will focus on three core issues in this letter. [Gomez-1-01]
- I'm opposed to cutting down healthy trees and the use of pesticides. The plan would have a significantly negative impact with respect to wind, shade, hydrology water quality, and forest resources. [Heldman-1-01]
- The NAP program is based on non science, and the logic behind it is wrong as well. It would have us give up our recreational areas so that the beautiful, old trees can be eliminated in favor of grasses and plants that "should be there in the minds of the plans proponents, at some arbitrary point in time, back before we planted anything of our own choosing. It also uses toxic pesticides and chemicals to deal with the stumps. Add to that that the fact that there is never enough money or man-power to maintain these restoration "science" projects, and what you have is a nightmare scenario for our beloved parks. I have been going to those parks for decades. This is not what they need. Someone needs to put a stop to the NAP program. If not, they need to tell us citizens of SF what's so good about it. It wastes our money and destroys our trees. It locks us out of our parks. [Hooker-1-03]
- I was reluctant to submit comment because I fear my comment will be dismissed being from a "one of the dog people." However, if comments are being tallied pro and con, **I want my letter to be tallied as a critic of the NAP DEIR.**

  (In the early 2000's people who walked with their dogs in the parks were some of the first park visitors to become aware of the actions and plans of the natural areas program. Dog walkers were the "canary in the coalmine," in alerting the public to the trail closures and the need for public oversight of the Natural Areas Program. Since then, some supporters of the NAP have tended to dismiss any criticism of the NAP if it came from a dog owner.)

  Yes, I am concerned about the loss of recreational access in SF parks. But that is only one of many concerns. I am also concerned about NAP's violations of existing regulations protecting wildlife and the use of herbicides, NAP actions that are contrary to scientific evidence (or lack supporting scientific evidence), as well as numerous other NAP actions detailed in comments submitted by others. [Hu-1-01]
- Please reconsider and DO NOT let NAP destroy our parks in a misguided attempt to turn back the evolutionary clock and re -create an idealized "better" environment from a time before European settlers arrived, a time when San Francisco was mostly sand dunes and rocks, with few trees. Our city faces strict prioritization of scarce resources that when

allocated to parks should be to keep them safe and accessible, not create fenced-off gardens in the process destroying what we already have. This so-called "wholesale habitat conversion" would require tens of millions of dollars in taxpayer funding and unprecedented broad-scale volunteer hours for modest gains, if any. [Ingram-1-01]

- I live on Mt. Davidson and absolutely oppose the plan to deforest the mountain (as well as other forests in SF). [Johns-1-01]
- I have no idea why RPD would want to make the city less friendly to families and less friendly to recreation. But if the department chooses to go down this path, I pledge my unrelenting opposition, every step of the way. [Johnson-1-02]
- I'm opposed to this any plan that involves cutting down health tree's. [Kalafati-1-01]
- I am opposed to any expansion of the designated natural areas to the extent resulting in restriction of the types of public recreational access to the particular public park areas. Our City parks are a treasured resource adding greatly to the quality of life and well being of the citizenry. As such, any proposal likely to result in restriction of full access of the people to the parks should be reviewed with greatly heightened scrutiny and suspicion. While development of native plant areas does seem generally laudable at first blush, such efforts are inappropriate for a municipal park if the result is fencing the people out of their parks. [Keating-1-01]
- To put in their grasses, NAP is destroying healthy trees – trees which, besides offering animal habitat, offer shade, wind barriers, beauty and psychological relief. The trees are part of ecosystems which were established over 100 years ago. They are a part of a balanced, healthy animal habitat. What ever happened to saving the trees? [Kessler-1-11] [Kessler-2-11]
- For all these reasons, the Proposed Project as well as the "Maximum Restoration Alternative" are bad for wildlife, habitat and environment. [Kessler-1-12] [Kessler-2-12]
- I'm opposed to this plan. Cutting healthy trees and using herbicides should be illegal. It **would** have **significant negative impact** on wind and shadow, hydrology and water quality, and forest resources - the findings are incorrect. [Klebaner-1-01]
- The expansion of the NAP and the destruction of healthy, mature trees in many areas of SF is not only a waste of tax-payer money but a blight on the landscape. If more people were aware of the plan, I'm sure they would be pounding down the doors of City Hall in protest. But ordinary citizens are too busy with their lives, working, taking care of their children, etc. Also, there is no coverage of this issue in our local papers as far as I have seen. I have seen pictures of SF in the 1800s and it is not an attractive sight. Windswept, barren sand dunes creating wind tunnels from the ocean to downtown. Is that what we want to recreate? If this inevitable result of what the NAP supporters desire was put to the public in an open vote, I'm sure it would be voted down. As representatives of the citizens of SF, I urge you to support our interests and reject the EIR and the specious "science" it's predicated upon. [Koster-1-01]
- Furthermore, by their own admission, NAP can barely manage the land they have. Two years ago, they met then Mayor Newsom, demanding more money for their program,

claiming they didn't have the budget for the projects they were then attempting. And now they want more?!?!?! They want more land and more money to perpetuate this myth that they can restore the land to pre-Columbian condition. That is not even possible. [unreadable text] As a taxpayer and home owner in the city of San Francisco, I demand this folly be wrapped. [Lansdown-1-01]

- Has anyone really looked at these native plants they are really really ugly….no one thinks they are worth saving at any cost… Every one who votes for this will NEVER get reelected because there are so many dog lovers in SF they won't stand a chance… Do we really need another matter to be upset about during these trying times…political unrest war and unemployment…now where to walk your dog. Give us a break….put this on the back burner until the economy turns around and we have jobs to go to instead of walking our dogs… [Lendaro-1-01]
- I am also very unhappy to hear that you plan to cut down scores of healthy 'non-native' trees with a desire to create a more open scrub bush and grassland environment. I understand many species have adapted to the more forested environment, including some endangered species. This seems like a very rash idea that could have unexpected domino effects. Has anyone studied any of the repercussions? [Mattingly-1-03]
- As a Glen Park resident, homeowner, and parent I am horrified at many of the key elements planned by your department for Glen Canyon Park. As I read the impact report your department published I am appalled at the surrealistic objectives you and your fellow bureaucrats have established for the park. Your plan is the apex of SF governmental absurdity - in the midst of the starkest economic crisis since the Great Depression, massive SF budget deficits, reduction in essential services, and cuts in programs for our children you are going to spend our taxes to chop down 120 beautiful Eucalyptus trees and an unspecified number of Willow trees, close "social trails," deny access to rocks my kids like to climb, make "pools inaccessible to the public," so you can plant "native" grasses, reintroduce a damselfly, and install larval host plants, etc.?!? It seems you feel Glen Canyon Park is your department's petri dish instead of a city park? Your plans have been challenged as absurd and misguided by a Distinguished Professor of Evolution and Ecology at UC Davis and other well informed scientists, ecologists, and citizens and yet you will proceed? [Miller-E-1-01]
- As an environmentalist with a degree in Environmental Studies, a member of the Sierra club and avid city parks user, I'm writing to argue against the SF Recreation and Parks Department's plans to destroy 18,000+ trees and reintroduce "native" and endangered small plants in their stead. This plan would limit the SF humans' and their pets' access to the parks we pay tax dollars to RECREATE within. The SF Recreation and Parks Department should remove "Recreation" from it's title if this plan goes forward. If restricted plants are planted and their areas then closed off for recreation, it seems this would not be under the mission of a city recreation and parks department but under a natural preservation zone. Such an area would not make sense to put in a densely populated city environment. For a final more globally based environmental question, how can a country that "scolds" Amazonians, Guatemalans and other societies for tearing down trees for subsistence needs like fuel and/or

to grow food have the guts to rip down trees that keep our air clean for the sake of the word "native" which seems a very disputable word. I must contest this proposal. Thank you and I hope you truly consider the views of this city's most populous residents, the dog owners. [Mills-1-01]

- Finally, putting aside the important considerations regarding why off-lease areas, which this plan would restrict, are so important to dogs and their owners, I question the validity of expansion of the Natural Areas Program on it's face. It seems to me that the Natural Areas Program has as its ultimate goal a restoration of San Francisco to it's "natural" state, which they define as limited to flora and fauna dating from a time before major settlement. In order to recapture this environment, they propose:

  1. Restricting use of our parks to large segments of San Francisco's population,
  2. Destroying healthy living trees and plants because they came into the environment after the time the Natural Areas Program has deemed 'natural' and therefore permissible*, and
  3. Introducing toxins into the environment in order to destroy plants and trees not meeting their criteria.

  It seems to me they want to turn the City's parks into museums to a time past, rather than living, evolving environments for this City's citizens to enjoy. Let's face it, our lovely Golden Gate park exists largely outside of the parameters of the "Natural Areas". [O'Neill-1-02]

- I became aware of the NAP's intention to cut down many of the healthy and beautiful trees on Mt. Davidson from the local paper, and some fliers. My husband and I are both completely against it, and are disgusted by this plan. First, as residents of Westwood Highlands, located on the south side of Mt. Davidson, we can't even understand how this idea could have ever been considered a good one. The beautiful trees, and the smell of Eucalyptus are wonderful and add to the beauty of this mountain and the park.

  With all the government "wasteful" spending going on not only in the federal, but state government as well, I would think that there are better ways to spend local taxpayers money.

  Don't do it.

  Feel free to call us if you want more information regarding our thoughts on this particular matter. [Perry-A-1-01]

- In summary, we object strongly to the Significant Natural Areas Management Plan proposals for Mt. Davidson and to the lack of community involvement in the drafting of those plans. We also contend that the Draft Environmental Impact Report of the SNRAMP is deficient in many respects. [Risk-1-07]

- The NAP program removes non-native vegetation, including mature trees. While these plants and mature trees might not be native, they are beautiful and desirable. It does not seem clear why replacing them with native species is a desirable goal. [Schlund-1-03]

- Expanding the Natural Areas Program as has been proposed is a wrong-headed idea that will waste scarce budget dollars and will not serve a majority of city residents. [Scott-1-01]
- The NAP attempts to turn the clock back to a time when San Francisco was primarily sand dunes. Most of us enjoy our parks with large non-native, but healthy trees. Not enough money is allocated to maintenance of the existing natural areas, resulting in high use of herbicides and weedy unattractive areas. Why does anyone want more of that? [Scott-1-02]
- While I am not opposed to preserving existing areas of natural habitat, I am strongly opposed to cutting down non-native trees, using heavy doses of herbicides, destroying existing non-native areas that are home to birds and animals that have adapted, and removing large areas of our parks from recreational use by people and dogs. [Scott-1-04]
- NAP introduced this plan to remove trees, reduce trails and severely restrict access to recreation, repeatedly spray toxic herbicides in areas where children recreate, destroy existing habitat that supports animals which live in our parks, and violate state law governing the use of herbicides. And they spend money on cutting down healthy trees which provide habitat for many animals, instead of spending the money on maintaining trees in parks for citizen safety. For example, in 2003, a study was done to identify the health of the trees in Stern Grove. Many trees were identified as hazardous and in need of maintenance. RPD did not perform the prescribed maintenance on those trees, but did cut down non-native trees. In 2008 a woman was killed by a falling tree branch that had been identified in this study. [Shepard-A-1-02]
- Please don't develop Mount Sutro any further. The area needs to maintain its serenity in order to remain a nice destination for people from all around the Bay Area, both for hiking and otherwise.

  Thank you for your time and for keeping Mount Sutro one of the few natural areas left in the city. [Thayer-1-01]
- This is a response from a Glen Canyon Park supporter who has lived in Glen Park for over 26 years and has enjoyed and loved daily walks through Glen Canyon Park. Please, please, please, stop the misguided people who claim to have and share the best interests of most of us who love this park. The park first and foremost belongs to ALL of us; it exists for us all. It is a NATURAL HABITAT and as such should be protected from ruin by the above over earnest small group of very vocal people who want to turn it into another botanical garden. We already have a S.F. Botanical Garden where people can enjoy all kinds of flora (including a large area of native plants of the Bay Area). [Thompson-C-1-01]
- This restoration movement doesn't make sense. We live in THE CITY. Should we get rid of the buildings too? Should we return Golden Gate Park to sand dunes? California has a LOT of nature. It just doesn't happen to be in the CITIES, because they are CITIES. [Thompson-D-1-01]
- NAP does not reflect the social conscience of San Franciscans. The NAP plans to destroy 18,400 mature (defined as over 15 feet tall) trees and untold numbers of seedlings and saplings merely because they are non-native. There can be no legitimate dispute that this

does not reflect the desires of the population at large. The overwhelming majority of the public loves trees, and does not care about their origin. We appreciate the fact that mature trees improve the air quality in our urban environment and improve the beauty of the City. Thus, on one hand, we have the Mayor's program to plant more trees in the City, and on the other hand, we have NAP removing them. This is tantamount to digging a hole and then filling it up. We would point out the trees to be planted under the Mayor's program are non-native. In many cases NAP declares all or portions of city parks directly adjacent to residential neighborhoods as "natural areas." Often no plants, birds or animals in the park are listed as endangered or threatened by the State or Federal government. Nor are there any "sensitive" species here as designated elsewhere in the NAP proposal by local native plant and bird enthusiasts. Yet, there is as part of the plan an objective to reduce "predation pressures". This would refer to the killing of feral cats and any other wildlife NAP deems unacceptable. Considering the proximity of this park to residential development, the trapping of cats and other wildlife on this park property could result in the destruction of pets. NAP proposes to kill bullfrogs and non-native turtles because they are believed to be competitors to native animals. This certainly offends the sensibilities of San Franciscans and our long history of devotion to animals in general and our pets in particular. [Valente-1-09]

- NAP destroys park property and is unsustainable. NAP intends to destroy current flora and fauna on 1100 acres, not a mere 100 acres. NAP subsequently must revegetate these areas with native plants, and supervise them until they have matured. Beyond that, those proposing this NAP have failed to advise you that these properties will require intense management in perpetuity. NAP as proposed and as it is currently implemented is a miserable failure. The NAP Management Plan states that trees (at least those taller than 15 feet) removed will be replaced on a nearly one-to-one basis, although it acknowledges that the replacements may not be planted in the same area, or even in the same park. However, there are reasons to doubt this claim. In a few parks, NAP has planted native plants to replace non-natives that it cut down. Most of the trees did not survive. NAP and its supporters cut down 25 young trees at Tank Hill about a decade ago. The few trees that NAP left standing had their limbs severely cut back to allow more sunlight to reach a newly planted native plant garden. Only four of the more than two dozen live oaks that were planted as replacements have survived. NAP may claim they will plant native trees to replace the healthy non-natives cut down, but most won't survive and the character of the parks that once had healthy forests will change. [Valente-1-12]

- There are many problems with the Natural Areas Program. I don't have the time or capacity to enumerate all of them in my following brief comment. However, the SF Forest Alliance has done a monumental job of research to accomplish that feat. Hopefully their careful and incisive research will be given the close attention it justly deserves.

  Nap needs to be scaled back substantially mainly because it's failed to accept that urban parks represent a respite from city life and the opportunity for recreational uses first and a a very distant second, a museum for native plants. I see no justification for nap's self-anointed permission to exert control over how park visitors may use and enjoy their parks - imposing fences and signage. [Zeiger-1-01]

- The destruction of the number of trees is a gross violation. San Francisco has barely one tree per citizen in this city, and this proposes to turn down a large percentage of that. It shouldn't be done. Thank you very much. [PH-Rotter-P-05]

Response PD-3

These comments express opposition to the project (and the Maximum Restoration Alternative, which is also addressed in Response AL-, RTC p. 4-568). Concerns include the removal of trees and existing habitat, use of herbicides, closure of trails, the conversion of DPAs to on-leash dog areas, and the lack of community involvement. Refer to Response G-3, RTC p. 4-19, for a discussion of the independent scientific review of the 2005 Draft SNRAMP; refer to Response RE-13, RTC p. 4-347, for a discussion of the conversion of DPAs to on-leash dog areas; and refer to Response G-10, RTC p. 4-50, for a discussion of the public outreach/community involvement process.

With respect to the number of trees that will be removed, as stated in Draft EIR Chapter III, Project Description, p. 92, invasive trees that are removed would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area.

Comments Kessler-1-12 and Kessler-2-12 refer to all of their previous comments (Comments Kessler-1-1 and Kessler-2-1 through Comments Kessler-1-11 and Kessler-2-11), all of which have been addressed in this RTC document (see Appendix A for specific locations).

While one of the commenters inferred that the project planned to destroy trees, the stated objectives of the SNRAMP, as reflected on Draft EIR p. 82, instead are to:

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management approach;
- To provide guidelines for passive recreation compatible with San Francisco's natural resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex[41] for the benefit of special-status species.

[41] The Laguna Salada (or Sharp Park) managed wetland complex consists of three features: (1) Horse Stable Pond (HSP), an open water pond and fresh-brackish water wetland; (2) Laguna Salada (LS), which is located north of HSP; and (3) An approximately 1,000-foot-long channel with culverts (metal pipes that that are located underneath golf cart pathways), which was constructed to drain water from LS to HSP.

As the above objectives indicate, the SFRPD seeks to balance the need for maintaining and enhancing San Francisco's ecosystems and natural resources with the need for providing recreational opportunities, along with education, research, and stewardship programs. In fact, in a peer review conducted by Peggy Fiedler, PhD., Dr. Fiedler concluded that the Plan in general succeeded in its goals and "strikes a balance between natural resource protection and the needs of citizens in a highly urbanized, densely populated, highly ethnically diverse, overall well-educated area."

With respect to the use of pesticides and herbicides (sometimes referred to as hazardous materials by the commenters), refer to Response HZ-1, RTC p. 4-531, for a discussion of the least-toxic decision-making model that the SFRPD employs in the application of pesticides and herbicides. Refer to Response BI-1, RTC p. 4-351, for a discussion of the burrowing owl.

One commenter indicated that the plan would have a significantly negative impact with respect to wind, shade, hydrology, water quality, and forest resources. While the Draft EIR did conclude that there would be significant and unavoidable impacts related to cultural resources and air quality on a project-specific basis and cultural resources, recreation, biological resources, and air quality on a cumulative basis, there were no significant and unavoidable impacts related to wind, shade, hydrology and water quality, or forest resources; all impacts were found to be less than significant or could be reduced to a less-than-significant level after implementation of the identified mitigation measures. Refer also to Response WS-1, RTC p. 4-309, and Response WS-2, RTC p. 4-310, for a discussion of wind impacts at Mount Davidson and Pine Lake and wind impacts from tree removal, both as a result of the proposed project and in association with the project alternatives, respectively. The commenters do not provide substantial evidence that would change the conclusions of the Draft EIR.

Otherwise, the comments express general opposition to the proposed project or individual components of the project.

Comment PD-4 Opposition to habitat restoration activities

The response to Comment PD-4 addresses all or part of the following individual comments:

Adams-S-1-01	Armanini-1-02	Art-1-02
Asher-1-01	Bley-1-01	Burgard-1-01
Cook-1-02	Delacroix-1-02	Elkins-1-01
Fox-1-02	Garber-1-02	Hecht-1-04
Heldman-1-02	Hovland-1-01	Jungreis-1-02
Lu-1-01	Mattingly-1-01	Potts-1-01
Ray-1-02	Rotter-P-1-02	Shapiro-1-01
Stewart-E-1-01	Valente-1-06	

- This is regarding San Francisco's Park and Recreation Department's plan to reduce dog parks throughout the city in favor of implementing a Natural Area Program. My comment is: What are you thinking? Have you no sense of history or geology? You think you can restore environment of a major metropolis to its original state? Over time, things change. I get that we don't want a non-native species to consume and take over everything in our parks, but to kill perfectly healthy trees, to pull up all that ice plant along the coast simply because it is non-native is simply nuts. First, we can't support this program financially, and second, what about the dogs? [Adams-S-1-01]
- I find the proposed "restoration" actions particularly offensive, as they are founded largely on subjective ideology that arbitrarily values theoretical vegetation and fauna from long ago in favor of current terrain and wildlife that has established itself there. I am in complete agreement with Dr. Arthur Shapiro's statements and am appalled by the fanatical ideology and proposal for current parkland and habitat destruction, especially in these difficult economic times. [Armanini-1-02]
- The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created. This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas. Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife? [Art-1-02] [Cook-1-02] [Delacroix-1-02] [Fox-1-02] [Jungreis-1-02] [Ray-1-02]
- I am opposed to the creation of yet more 'natural' areas in San Francisco. What was appropriate a few hundred years ago is no longer the case. John McLaren would likely be on my side here. Change is a natural process. The environment, climate, populations (and needs of same) are different now. To restore planted areas to that of a historical period of time deemed appropriate isn't practical. If you want to get technical, lets go back to the time when earth was covered by oceans (which may turn out to be the case in due time anyway). [Asher-1-01]
- In regard to cutting down healthy trees, please do not proceed with the San Francisco Recreation and Parks Department's Natural Areas Program. According to the SF RPD's own outreach material, this will involve the felling of thousands of healthy trees to make way for plots of as-yet-unplanted native vegetation that will require increased use of pesticides and herbicides. The native plants have a poor chance of survival (many of SF RPD's previously planted native trees and shrubs have died before being able to take hold), the program blocks off trails and other areas of public use, and the existing trees, though non-native, are healthy, thriving, and contribute all of the benefits that large, living trees offer (urban cooling, pollution mitigation, verdant views, and more). It will take immense amounts of energy, money, effort, time, and increased pollution to move forward with the tree removal and native plantings; instead, please leave the trees standing and use just a fraction of the proposed NAP resources to maintain them. [Bley-1-01]

- As a resident of Miraloma Park since June 2003, we have been able to regularly enjoy the beauty of the forested hill of Mount Davidson both from accessing the trails for hikes and explorations with our family and from the windows of our home on Molimo Dr. We fill that the plan to deforest the hill of mature trees to return the area to native plants is an ill-conceived venture as the park has a natural beauty and ecology that is well serving the community that surrounds it.

  Further, the native ecology of the hill has been in flux for millions of years. It is true on our planet that ecological conditions have changed, at times, over thousands of years as well as in much shorter periods. [Burgard-1-01]

- I'm writing to protest the planned "restoration ecology" plan and "native plant" efforts to be undertaken in Glen Canyon and elsewhere in the city. The canyon is a much-used resource, by walkers, hikers, runners, climbers, summer campers, parents with strollers, pet owners, students, a whole spectrum and cross-section of the population. Anecdotally, people have told me that they come from cross-town to walk in the area. What is the thinking about pulling out all the well-established trees, scrub and other plants, in the name of re-establishing some old-fashioned starting point for local flora? Have you looked at old photos of the area? There's grass and some scrub on the hills. Today, there's grass, scrub and trees - plus community gardens. Who's determining the concept of "original" and "pristine"? What is the zero point? Is there science behind it, or politics? What is driving this bus? I urge you: reconsider this policy. As a city that's always challenged fiscally - especially in Park and Rec - we don't have the extra money to undertake an effort that's not focused, on questionable scientific ground and, most importantly unpopular AND disruptive. If the funds are there and begging to be used, please find a place that can use real improvement that will directly affect people's actual use of the site. [Elkins-1-01]

- This proposed environmental assault by SF Recreation and Parks is the result of an unfortunate effort by people with a knee-jerk response to the idea that nonnative plants are intrinsically bad for public lands. This is not based upon objective research but rather upon prejudice. The net negative environmental impact upon public lands will [Note: the letter includes no additional text.]

  Natural communities evolve. The idea that a place needs to be "restored" to a snapshot point in time ignores the complexity of an evolving environment and only acknowledges that the megafauna of that point in time as being the important thing to be considered in public land management. [Garber-1-02]

- I agree whole heartedly with Professor Arthur Shapiro's evaluation, "The creation of small, easily managed, and educational simulacra of presumed pre-European vegetation on San Francisco public lands is a thoroughly worthwhile and, to me, desirable project. …The proposed wholesale habitat conversion advocated here does serious harm, both locally (in terms of community enjoyment of public resources) and globally (in terms of carbon balance-urban forests sequester lots of carbon; artificial grasslands do not). At both levels, wholesale tree removal, except for reasons of public safety, is sheer folly." [Hecht-1-04]

- In addition, the "non-native" argument seems to me to be arbitrary. One can choose whatever date he/she wants to characterize a specific kind of vegetation as "native." There may well have been other times in the past, before the introduction of the eucalyptus, where then "native" plants were out-competed by some other new vegetation. [Heldman-1-02]
- I am strongly opposed to the destruction of non-native trees and other non-native vegetation in an attempt to restore native habitat. There is no scientific evidence to support the idea that native plant restoration is environmentally superior to a habitat that includes a diversity of tree and plant species, whether they are native or introduced to this part of California. Also, many plants and trees that thrived before the Europeans arrived here are no longer suitable for this climate and require a lot of watering and weeding (i.e. gardening) to create conditions that might make them grow as long as a great deal of energy (and water) are put into maintaining them. As the climate continues to change, native plants and trees will become even less likely to survive, no matter how much TLC is given them. [Hovland-1-01]
- I am writing to express my dismay regarding the Natural Areas Program (NAP) disruption to San Francisco park areas. I am a 20-year resident of San Francisco and advocate for the natural environment (NRDC). The idea of "original" habitat restoration in the midst of urban areas is, in my opinion, misguided. I am not convinced that restoration of native species will succeed, and I do not agree that the effort required to do so is a good use of limited resources. Some of the attempts to "improve" local park areas have been obvious failures. The speculative impacts of people, plants and animals described in the EIR do not provide a sound basis for large-scale land use redirection. Programs such as NAP are, in fact, highly disruptive to already-established communities of flora and fauna, which may be non-native but at this point deserve to be left in place. If public safety is an issue, due to naturally occuring root system failure, weather, or erosion, those issues should be addressed as they arise. Resource-intensive, anticipatory, poorly researched and planned interventions are usually ill advised. In my opinion, NAP is squarely in the ill-advised category due to mechanical and chemical interventions applied in a densely populated, frequently visited region. [Lu-1-01]
- Planting 'native' plants that then mostly die due to lack of maintenance suggests that the 'native' plants are no longer viable in the current San Francisco area climate. With climate change, plants better suited to this area seem like better options than trying to restore plants that may have been native hundreds of years ago. [Mattingly-1-01]
- I have lived in San Francisco for almost 30 years. Years ago I lived at the base of Mt. San Bruno and used to go for daily hikes after work until one fine afternoon I came around the corner to find the entire mountain had been clear cut. I have only been back one time since. In my humble opinion the park and the beautiful tails that once threaded along under the eucalyptus grove was completely ruined do to that plan to restore the mountain to it's original habitat.

  Now all these years later I live in Glen Park just one block away from the canyon, where my two daughters go to Glenridge co-op nursery school, needless to say after 10 years of living here i have come to find out that the city plans to cut down the eucalyptus there now and

start the application of pesticides to prevent unwanted growth in the canyon. I can't begin to tell you how upset this has made me.

What is next? Golden Gate Park started as sand dunes, will it be returned to it's original state too?

Please do not let this happen! [Potts-1-01]

- We had the good fortune to read a letter (10-6-11) to you on this matter from Professor Arthur M. Shapiro, Distinguished Professor of Evolution and Ecology at UC Davis. We hope you will have read his letter to gain some understanding of the long range environmental issues at stake. The NAP program of massive tree removal, animal habitat destruction, extensive herbicide use is not a sound policy under the conditions of global environmental changes that have been evident for many years. We ignore this at great peril. [Rotter-P-1-02]
- At a time when public funds are exceedingly scarce and strict prioritization is mandatory, I am frankly appalled that San Francisco is considering major expenditures directed toward so-called "restoration ecology." "Restoration ecology" is a euphemism for a kind of gardening informed by an almost cultish veneration of the "native" and abhorrence of the naturalized, which is commonly characterized as "invasive." Let me make this clear: neither "restoration" nor conservation can be mandated by science – only informed by it. The decision of what actions to take may be motivated by many things, including politics, esthetics, economics and even religion, but it cannot be science-driven. In the case of "restoration ecology," the goal is the creation of a simulacrum of what is believed to have been present at some (essentially arbitrary) point in the past. I say a simulacrum, because almost always there are no studies of what was actually there from a functional standpoint; usually there are no studies at all beyond the merely (and superficially) descriptive. Whatever the reason for desiring to create such a simulacrum, it must be recognized that it is just as much a garden as any home rock garden and will almost never be capable of being self-sustaining without constant maintenance; it is not going to be a "natural," self-regulating ecosystem. The reason for that is that the ground rules today are not those that obtained when the prototype is thought to have existed. The context has changed; the climate has changed; the pool of potential colonizing species has changed, often drastically. Attempts to "restore" prairie in the upper Midwest in the face of European Blackthorn invasion have proven Sisyphean. And they are the norm, not the exception. The creation of small, easily managed, and educational simulacra of presumed pre-European vegetation on San Francisco public lands is a thoroughly worthwhile and, to me, desirable project. Wholesale habitat conversion is not. A significant reaction against the excesses of the "native plant movement" is setting up within the profession of ecology, and there has been a recent spate of articles arguing that hostility to "invasives" has gone too far – that many exotic species are providing valuable ecological services and that, as in cases I have studied and published on, in the altered context of our so-called "Anthropocene Epoch" such services are not merely valuable but essential. This is a letter, not a monograph, but I would be glad to expand on this point if asked to do so. I am an evolutionary ecologist, housed in a Department of Evolution and Ecology. The two should be joined at the proverbial hip. Existing ecological communities are freeze-frames from a very long movie. They have not existed for eternity, and many have

existed only a few thousand years. There is nothing intrinsically sacred about interspecific associations. Ecological change is the norm, not the exception. Species and communities come and go. The ideology (or is it faith?) that informs "restoration ecology" basically seeks to deny evolution and prohibit change. But change will happen in any case, and it is foolish to squander scarce resources in pursuit of what are ideological, not scientific, goals with no practical benefit to anyone and only psychological "benefits" to their adherents. If that were the only argument, perhaps it could be rebutted effectively. But the proposed wholesale habitat conversion advocated here does serious harm, both locally (in terms of community enjoyment of public resources) and globally (in terms of carbon balance-urban forests sequester lots of carbon; artificial grasslands do not). At both levels, wholesale tree removal, except for reasons of public safety, is sheer folly. Aging, decrepit, unstable Monterey Pines and Monterey Cypresses are unquestionably a potential hazard. Removing them for that reason is a very different matter from removing them to actualize someone's dream of a pristine San Francisco (that probably never existed). Sociologists and social psychologists talk about the "idealization of the underclass," the "noble savage" concept, and other terms referring to the guilt-driven self-hatred that infects many members of society. Feeling the moral onus of consumption and luxury, people idolize that which they conceive as pure and untainted. That may be a helpful personal catharsis. It is not a basis for public policy. Many years ago I co-hosted John Harper, a distinguished British plant ecologist, on his visit to Davis. We took him on a field trip up 1-80. On the way up several students began apologizing for the extent to which the Valley and foothill landscapes were dominated by naturalized exotic weeds, mainly Mediterranean annual grasses. Finally Harper couldn't take it any more. "Why do you insist on treating this as a calamity, rather than a vast evolutionary opportunity?" he asked. Those of us who know the detailed history of vegetation for the past few million years – particularly since the end of Pleistocene glaciation – understand this. "Restoration ecology" is plowing the sea. [Shapiro-1-01]

- Hello, my name is Ethan Stewart. My family and I live on Stanford Heights Avenue in Miraloma, and I am writing about the proposed natural area plan for Mt. Davidson. I am opposed to the current plan of healthy tree removal in native plant restoration. The trees that exist there are already part of the urban environment. There is really no such thing as being able to return any area to a "native" habitat, especially when tree removal results in the potential for greater wind erosion, harsher treatment through pesticides to control non-native plants and animals and in fact greater destruction to the Mt. Davidson recreation area through greater potential for non-native species to crowd out any attempts at restoration. As a frequent hiker to the area, the trees provide habitat for birds, butterflies and other species now living on Mt. Davidson, and should be protected. Additionally, as someone who is concerned about native environments and habitats along with quality of urban living, I am opposed to the plan simply because it seems misguided. Urban environments are by definition non-native and the most reasonable solution is to preserve what makes the area wonderful while doing whatever is possible to minimize damage elsewhere. Attempting to recreate something that may or may not have existed can very well lead to even greater problems. Please consider revising or rejecting the proposed draft for Mt. Davidson. Mahalo for your time and consideration. [Stewart-E-1-01]

- NAP does not meet scientific scrutiny. In regard to the Management Plan itself, Professor Connor stated: "I have read this plan and it is without scientific basis, it does not articulate clear, achievable, nor appropriate conservation goals for a set of small urban parks, it is void of an examination of the cost, feasibility, or utility of the management actions recommended, and it is without any sense that our urban parks must satisfy the needs for a wide variety of uses. I acknowledge that conservation numbers among the uses to which I would like to see our parks put, but not necessarily at the expense of other uses that are appropriate for urban parks and inappropriate in wild lands." Arthur M. Shapiro (Professor of Evolution and Ecology at UC Davis) states the following. It cannot be allowed to trump the clear preferences of the vast: "The Natural Areas Program has its place, and it needs to be kept in that place majority of parkland users in San Francisco. The hatred of "exotic" trees, some of which are California natives anyway, is not only ideological but sometimes verges on the pathological, and has strong overtones of xenophobia and racism (look at the anti-"exotic" rhetoric yourself!). He also notes, "… the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna, including most of the familiar species of urban, suburban, and agricultural environments. Some of these species are now almost completely dependent on exotics and would disappear were weed control more effective than it currently is." (S.D. Graves and A.M. Shapiro, "Exotics as host plants of the California butterfly fauna," Biological Conservation, 110 (2003), pp. 413-433) A classic example of this is the migrating Monarch butterflies who overwinter in eucalyptus trees in several locations on the coast of California [Valente-1-06]

Response PD-4

These comments express opposition to the project, particularly with respect to the proposed restoration activities that include planting of native plants rather than nonnative plants. Further, the scientific basis for the proposed restoration activities is questioned.

One commenter mentions that the project proposes to reduce dog parks throughout the city in favor of implementing a NAP while other commenters appear to imply that the NAP is the same as the SNRAMP. An important distinction is that the NAP is an existing program whose mission is two-fold: to preserve, restore, and enhance remnant Natural Areas and to develop and support community-based site stewardship of these areas. The SNRAMP provides a framework for the long-term management of the Natural Areas. Combined, the NAP and the SNRAMP would preserve, restore, and enhance the City's Natural Areas. In terms of the reduction of dog park areas, out of 32 DPAs, the project proposes to close one DPA and reduce the size of two DPAs. Further, with the three DPAs that are proposed for modifications within Natural Areas, 80 percent (or 79.5 acres) would remain.

One of the commenters mentioned that the proposed project would include a wholesale habitat conversion. Some of the key objectives of the SNRAMP, as articulated on SNRAMP pp. 1-3 and 1-4, are to (1) identify and prioritize restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity;

(2) provide passive recreational uses and a recreational trail system compatible with the city's natural resources; and (3) provide guidelines for educational, research, and stewardship programs. The Natural Areas are diverse, rather than narrowly focused on one particular habitat type; they support an array of native habitats and species, some found nowhere else in the world, such as the San Francisco garter snake and the Mission blue butterfly. The opportunity exists in these areas to protect and restore a wide range of sensitive species and natural habitats. Further, SNRAMP Section 2.1 indicates that the project seeks to re-establish native community diversity, structure, and ecosystem function, which also requires a range of habitats, rather than the conversion of one habitat to another.

One of the commenters states that California butterfly fauna are dependent on exotic species. While the Mission blue butterfly may be able to live in habitats that primarily consist of invasive species, the Mission blue prefer a host plant and appropriate nectar plants in a native coastal grassland habitat. The host plants utilized by the Mission blue are silver lupine (*Lupinus albifrons*), summer lupine (*Lupinus formosus*), and varicolor lupine (*Lupinus variicolor*). Nectar plants include various composites (*Asteraceae*) that grow in association with the lupines.

As mentioned in Response HY-1, p. 4-486, the SNRAMP is a 20-year management plan for the Natural Areas, and, as such, the proposed activities would not occur all at once; rather, the SNRAMP sets forth a management framework that the SFRPD would work towards in the 20-year lifetime of the management plan. With respect to the removal of trees in Sharp Park, and as presented in Table 5 on Draft EIR p. 114, approximately 15,000 of the 54,000 existing eucalyptus trees would be removed from select areas during the 20-year lifetime of the SNRAMP to restore native scrub habitats. Thus, trees would be removed in the Natural Areas over a 20-year period of time, and not all at one time.

Refer also to Response PD-11, RTC p. 4-159 for a discussion of the SNRAMP's goal of restoring native habitats in order to increase biodiversity. With respect to the scientific review of the 2005 Draft SNRAMP, refer to Response G-3, RTC p. 4-19. Refer also to Response G-19, RTC p. 4-88, for a discussion of potential impacts to dogs as a result of reducing DPAs.

Otherwise, the comments expresses opposition to the habitat restoration proposals and the habitat restoration theme that underlies much of the SNRAMP project, including the effects of restoration on carbon balance (stating that urban forests sequester carbon). Refer to Response GG-1, p. 4-297, for a discussion of the effects of the conversion of land covered by trees to grasslands (i.e., carbon storage and carbon sequestration as compared to loss of carbon) on climate change and global warming.

Comments on the merits of the project have been forwarded to the SFRPD staff and Commission for their consideration.

Comment PD-5 Native plant restoration versus providing more recreational areas

The response to Comment PD-5 addresses all or part of the following individual comments:

Bowman-1-09 PH-Antonini-03

- The EIR does not address the precedence of prioritizing native plant restoration over recreation and increasing green space. The opportunity cost of these plans is not evaluated.

  This plan prioritizes unsustainable native plant restoration over humans. While native plants do provide recreation for people that enjoy gardening in the parks and has value in preserving special status plants and wildlife, the scale of this program is overwhelming for the benefits. More than 1/3 of the little parklands in SF cannot become like a museum, not to be touched by anyone but a select few. Fortunately or unfortunately, SF has little open space and dense housing, and there is little likelihood of changing that. In some ways, it is good that people stack into a small housing area and then share open space instead of spreading out and taking up more open space in suburbs.

  In addition, the plan does not address areas such as Bernal Hill that has little green year around, and this plan is unlikely to result in the addition of aesthetically pleasing trees that would add to the character and charm of the park. Predominately brown native grass and even attempts to establish native trees are unlikely to significantly improve the aesthetic beauty of the park as non-native trees would. This plans prevents beutifying these parks for the community.

  The plan also does not account for the expansion of endangered species and that can permanently remove land from ever being available for other purposes in the future. From what I understand, endangered status is not just related to the actual population of a species but also the number of sites. SF has no control on expanding sites so even if a species flourishes in these SF sites; the species are unlikely to be removed from the endangered species list. For example, the California Red Legged is common on the coast; it is the populations in the Sierras that are an issue. No matter how well the frogs do in SF city parks, the frog is unlikely to be taken off the endangered list. [Bowman-1-09]

- You know, people talk about dog walking areas. People talk about recreational areas. We have a big shortage of playing fields and other things and these are things that we need to really look into. [PH-Antonini-03]

Response PD-5

These comments express the opinions that the project prioritizes native plant restoration over recreation and green space; that the expansion of endangered species could result in land that is not available for other purposes in the future; and that there are a shortage of playing fields.

Refer to Response PD-3, RTC p. 4-132 for a discussion of how the project balances the needs for native plant restoration and continued recreational opportunities. Further, the Draft EIR analyzes the project, as proposed, which includes a balance of native plant restoration and recreational

improvements. As further discussed in Response G-4, RTC p. 4-29, CEQA and the CEQA Guidelines do not require an economic analysis of the project, such as the opportunity costs of implementing a proposed project (14 CCR 15131).

Refer to Response PD-11, RTC p. 4-159, for a discussion of the importance of re-establishing native habitats to improve biodiversity, and refer to Response G-19, RTC p. 4-88, and Response RE-13, RTC p. 4-347, for a discussion of the amount of parkland available in the city, both now and after implementation of the SNRAMP.

The SNRAMP does address Bernal Hill, in which it is primarily categorized as annual grassland (see SNRAMP Figure 6.21-3) and is dominated by slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), foxtail barley (*Hordeum murinum*), ripgut brome (*Bromus diandrus*), rattlesnake grass (*Briza maxima*), and annual fescue (*Vulpia bromoides*, *V. myuros*). These grasses, which appear brown in color during certain periods of the year, were introduced from Europe by various human activities and have displaced much of the native bunchgrass vegetation.[42] No trees are proposed for removal on Bernal Hill. The objectives of the SNRAMP are generally to promote the functioning of San Francisco's native ecosystem and to provide guidelines for passive recreational uses compatible with the city's natural resources, as well as educational, research, and stewardship programs; none of the objectives address aesthetic resources.

The SNRAMP seeks to improve biodiversity and habitats for sensitive plants and animals. The success of the SNRAMP would not affect the availability of land for other purposes in the future because it is not SFRPD's goal, purpose, or allowed authority to develop land for any purposes other than natural and recreational areas. Further, the extent to which the outcome of the SNRAMP would, or would not, affect the listing of an endangered species is speculative to consider at this time.

Comment PD-6 Opposition to the proposed public access restrictions

The response to Comment PD-6 addresses all or part of the following individual comments:

Betcher-1-01	Borden-1-01	Browne-1-04
Chirico-1-01	Enzi-1-01	Pruitt-1-01
Shepard-J-1-02	Smith-1-01	Valente-1-07

- I am particularly concerned that present off-leash areas available for people with dogs in San Francisco will be even more limited than they are already. For better or worse, the animal species that can continue to co-habit our planet with people are increasingly limited. For the vast majority of people who live in our urban areas, shared living experiences with dogs or cats are the only contact we have left with our fellow creatures. Dogs need to have at least

[42] California Native Plant Society (CNPS), Policy on invasive exotic plants, 1996. This document is available online at: www.cnps.org/archives/exotics.pdf, accessed on June 7, 2016.

some time every day when they can run free, and people need to accompany them. There's of course a down side to everything, including children playing in parks and playgrounds, disturbing others and sometimes damaging the environment a little, but we know that such activities are essential to the health, happiness and well-being of our children. We have to consider that, in the case of dogs and dog-owners, urban dwellers really have no alternatives to the parks and beaches. It is unfair and unkind to take that away. Please leave the off-leash dog areas intact.

Thank you for your consideration. [Betcher-1-01]

- The existing NAP and the possible expansion of the Program to the Maximum Restoration Alternative would be harmful for the vast majority of San Franciscans. We need better access to the outdoors, not less. Under those alternatives, we would see more trail closures, roped off areas and herbicide spraying, reducing the access to wild areas we enjoy today.

  The Proposed Project and Maximum Restoration alternatives go too far.

  Those plans focus too much on trying to keep people out of the Natural Areas by removing the attractions that draw them there. There are three manifestations to this, closing popular social trails, trying to prohibit bicyclists from using the trails, and making the areas off limits to people walking dogs off-leash. I strongly disagree with the first two. As for dogs, they are destructive when walkers allow them to dig up the ground and it is all too common to find plastic bags of dog poop left trailside. [Borden-1-01]

- This report is another misguided attempt at "improving" or "saving" an area that needs no improvement, let alone saving. It may need some management, but not based on this report and not by this group of "experts". We are a small SF community that is doing just fine preserving this beautiful hill. I don't appreciate my tax dollars being wasted on this study and it's recommendations to remove large areas of land from public use. Remember, this is an urban environment and we need to find sound, balanced solutions that fit. [Browne-1-04]

- I am writing to oppose the planned takeover of more city park space by the natural area program. As a San Francisco resident, tax payer, small business owner, and dog owner, I strongly feel that the public parks best served by having public access to people, including the dog owners.

  I have volunteered many hours working with the Rec and Park personel for conservation. The NAP already has that the needed manpower can maintain. [Chirico-1-01]

- As a citizen who has chosen to live IN A CITY, I have no wish to have my access to public parks taken away from me.

  The Natural Areas Program is a deluded, nonfunded attempt to privatize public parks which are funded through public money. [Enzi-1-01]

- I'm writing to oppose the SF Recreation and Parks Department's plans to destroy 18,000+ trees and reintroduce "native" and endangered small plants in their stead. This plan would limit the SF humans' and their pets' access to the parks we pay tax dollars to RECREATE within. San Francisco prides itself (up to now) for having one of the highest population of

dog owners/guardians of any city and it was exactly the welcoming attitude of the city and its parks to pets that attracted us to rent then buy in San Francisco. If the parks become less accessible, then San Francisco becomes a less attractive place to live and recreate. [Pruitt-1-01]

- My biggest concern is what was intended to preserve the few remnants of San Francisco's historical habitat has changed into an ever-expanding program that controls over 25% of our City's parkland and with more areas being closed to the public all the time.

  We live at the foot of Mt. Davidson. NAP is closing the trails, fencing off all the views, removing the benches we sit on, cutting down thousands of healthy trees, using poisons to sustain these native plant gardens, and actively ENCOURAGING POISON OAK!!! Where are we supposed to recreate?

  What is wrong with this City? We are planning for higher density but taking away parkland where people recreate? NAP calls for "passive recreation". Just how is that supposed to remedy the obesity in this country? [Shepard-J-1-02]

- I appreciate the beauty of native plants and the history behind showing what vegetation grew before the city was here. Also, they make sense for saving water. But please do not close off any more land in San Francisco for this purpose – I think we have enough areas set aside already. [Smith-1-01]

- NAP diminishes necessary access to parks for recreational opportunity so important for our families. This City has already forfeited a significant amount of recreational parkland to the GGNRA. Much of this land has been converted from its originally intended recreational purpose to off-limits habitats. Now we are looking at losing an additional one third of our SFRPD parks to natural areas. In this densely populated metropolis, where are we supposed to go for recreation? As the old Cat Stevens ballad asks, "Where will the children play?" We can utilize off-leash recreation as an example of the loss of legitimate recreational use. Currently, there are as many or more dogs in the City of San Francisco as there are children. Additionally, the City of San Francisco enacted a law in 2005 that requires dog guardians to provide their dogs with adequate exercise. The ordinance states: "Adequate exercise means the opportunity for the animal to move sufficiently to maintain normal muscle tone and mass for the age, size and condition of the animal." Clearly for many of the medium to large size breeds, this can only be accomplished by off-leash recreation. Even a simple game of "fetch", the most basic of activities humans engage in with their dogs, cannot be played unless the dog is off-leash. Yellow Labrador retrievers are a very popular breed of dog in the City, yet they are genetically predisposed to being overweight. These dogs require a good deal of off-leash running exercise as well as some swimming in order to maintain an acceptable, healthy weight. Furthermore, there are some breeds of dogs which require swimming as a primary form of exercise. If they are exercised primarily on grass, pavement or the ground, they develop arthritis at an extremely young age. One example of this would be the Newfoundland – a dog bred primarily for water rescue. This NAP program not only reduces the available area for off-leash recreation at a time when the number of dogs is ever-increasing, it also eliminates all areas where dogs are legally allowed to swim. One of the

> Commissioners pointed this out to Lisa Wayne at a meeting, and asked if NAP had considered alternative areas for swimming since they planned to eliminate the current areas, and she merely replied, "No". This is not indicative of an attitude which seeks to fulfill the legitimate recreational needs of perhaps the largest "special interest" recreational group in the City-dog guardians. This attitude puts guardians at substantial risk of violating their legal duties and is unconscionable. This NAP cannot be approved without modifications which would increase the available area for off-leash recreation beyond what it is now, as well as designate specified areas for dogs to swim. Anything less would subject the City of San Francisco to litigation; the City has enacted an ordinance placing requirements upon dog guardians, acknowledged in same ordinance it is expected public property will be utilized to fulfill these requirements, and subsequently systematically removed the ability to fulfill these requirements by eliminating access to public property for that use. These actions are clearly discriminatory, and will serve to inflame the dog guardian community. Litigation over this issue would be inevitable and costly. Monies would be better spent fulfilling the City's obvious responsibilities to the recreational needs of the public in order to avoid litigation entirely. NAP plans call for the immediate closure of about 15% of the legal off-leash space (Dog Play Areas, or DPAs) in San Francisco city parks – the complete closure of the DPA at Lake Merced and reductions in the DPAs at McLaren Park and Bernal Hill. NAP says that dogs "may" impact the plants in natural areas, and therefore the closures are needed. The NAP refers to dogs as "nuisances". NAP offers no proof, however, that any impacts actually occur or ever have occurred. Hard, scientifically rigorous proof must be provided if NAP is to kick people out of areas they have enjoyed for years. The way it's set up now, NAP can take areas that have been legally off-leash for decades and, with the stroke of a NAP staffer's pen (and no real proof), the off-leash is gone. NAP could close up to 80% of the legal off-leash space in SF city parks [Valente-1-07]

Response PD-6

These comments express opposition to access restrictions in San Francisco parkland. The proposed project is a management plan for the current program area and does not create new Natural Areas or restrict public access to the existing Natural Areas, but instead focuses on enhancing native communities within existing Natural Areas. In fact, one of the stated goals of the SNRAMP, as identified on p. 2-2 of the SNRAMP, is "To improve and develop a recreational trail system that provides the greatest amount of accessibility while still protecting natural resources." For a more detailed response regarding recreational access opportunities under the SNRAMP, refer to Response RE-8 and Response G-5, RTC pp. 4-324 and 4-31, respectively. As further discussed in Response LU-2, RTC p. 4-214, although some access points or social trails would be removed, the SNRAMP would maintain public access to all Natural Areas.

In terms of bicycle use, bicycles are currently allowed on paved areas in some of the Natural Areas (if trails are designated accordingly), such as Balboa Park, Bernal Hill, Buena Vista Park, Glen Canyon, Lake Merced, McLaren Park, Pine Lake, and Twin Peaks. Further, since the SNRAMP Draft EIR was written and circulated for public review, four multi-use trails (which includes bicycle use)

have been added in the Natural Areas (two in the Interior Greenbelt, one in the Oak Woodlands of Golden Gate Park, and one in McLaren Park). The SNRAMP does not propose changes to bicycle use in the Natural Areas.

With respect to recreational impacts caused by the closure and reduction in size of a total of three DPAs, the EIR concludes that the proposed closure and reduction of the DPAs would not result in significant impacts to recreational resources (Impact RE-1 on Draft EIR pp. 256 to 258 and Impact RE-4 on pp. 258 to 259). On-leash dogs would continue to be allowed access to all Natural Areas and significant acreage would also be available for off-leash dog recreation. However, when combined with impacts resulting from the GGNRA Dog Management Plan, the EIR conservatively determines that the cumulative impact of these two projects could accelerate the physical deterioration of those DPAs and the Natural Areas in general (Impact RE-7 on Draft EIR pp. 261 to 262; Impact RE-7 was further clarified and expanded in Response RE-2, RTC p. 4-313). With respect to increased use of the Natural Areas by visitors, the EIR finds impacts to recreational resources to be less than significant (Impact RE-1, beginning on p. 256, Impact RE-4, beginning on p. 259, and Impact RE-7, beginning on p. 261).

Refer to Response G-19, RTC p. 4-88, and Response RE-13, RTC p. 4-347, for a detailed discussion of on-leash and off-leash dog use opportunities throughout the city. Further, the SNRAMP does not eliminate all areas where dogs are legally allowed to swim. Unless posted otherwise, dogs are allowed to swim in water features provided in public parks. As part of the SNRAMP, and as stated on SNRAMP p. 5-11, specific access to the water would be restricted at Pine Lake. This is a small lake and wetland (1.7 acres) used by migratory and resident wildlife. Access to the water would also be restricted to a portion of Gray Fox Creek (in McLaren Park), as stated on Draft EIR p. 139.

Refer also to Response G-26, RTC p. 4-114, for a response to comments regarding a bias against dogs.

Comment PD-7 Opposition to reduction of Bernal Hill dog play area

The response to Comment PD-7 addresses all or part of the following individual comments:

Caskey-1-01	Huebsch-1-01	Illig-1-01
Johnson-1-01	Muniz-1-01	RileyHoppes-1-01

- Closure or restriction of our dog parks, specifically Bernal Hill, would be devastating to the Bernal community.

  We are responsible dog owners, and want to express our *earnest* desire to maintain access to Bernal Hill, and all other existing DPAs with our dogs. [Caskey-1-01]

- I am a resident of Bernal Heights. I frequently take my dog to run on the Bernal Hill. My dog does not dig or disturb the natural environment. I would be terribly sad and upset if this area was closed to dogs. My upset and sadness would be for several reasons. There needs to be open space for dogs in San Francisco. The neighborhood (dog owners and non-dog owners)

use the Bernal Hill park a great deal. The habitat that exists is "natural" and supports the current use. GGNRA and SF Parks focus on habitat restoration is wrong. Given the limited budgets that all government agencies must live with, it seems wrong to expend funds on unneeded habitat restoration. Better use of the funds would be on general park restoration. Precita Park and Holly Park are great examples for using funds to restore parks. The result is that neighbors use the parks and feel a greater alliance to their neighborhoods, making them safer and more livable for all. [Huebsch-1-01]

- I strongly object to the closure of any part of Bernal Hill to off-leash dog recreation. I have owned a home in North Bernal Heights for 17 years and I am up this hill with my dog at least once a day. This hill is a unique urban park that is shared by hundreds of neighbors with and without dogs every day, and the natural areas have not been affected by the recreational use of these SF residents. I disagree with the findings of the EIR regarding this park and I urge the Planning Commission to reject any plans to restrict or close areas to recreational use by residents and their companion animals. [Illig-1-01]

- I am writing to express my alarm that the SF Recreation and Parks Department may eliminate large swaths of off-leash dog play areas in city parks. I am particularly alarmed at plans to restrict off-leash activity in Bernal Hill Park -- a beautiful space that I have lived next to and used daily for 12 years.

  Bernal Hill without off-leash dogs will lose most of the "eyes and ears" the dog-walking community provides – the eyes and ears that keep it a safe and clean place for recreation. What is now a vibrant park could very well turn into a meeting spot for vandals, petty hoodlums, and homeless encampments.

  Why on earth, in these constrained budgetary times, would RPD divert resources from its other critical programming to implement unpopular, unwanted restrictions on off-leash dog recreation? I object to the policy of restricting dog play areas, on the merits, regardless of RPD's fiscal situation. But when I consider the opportunity costs involved in RPD taking this on, I am truly shocked. What programs will RPD sacrifice in order to ruin Bernal Hill Park for me and my family, and thousands of other law-abiding recreational users? [Johnson-1-01]

- I am opposed to the closure of the DPA on Bernal Hill. I don't own a dog, but I love walking on the hill and meeting friend and fellow Bernal residents that do have dogs. The Bernal DPA is a safe and beautiful place to bring dogs and it must be protected. Kids, dogs, residents-young and old, all mixing together. It's refreshing to see such activity in the middle of an urban area. If the Bernal DPA is reduced in size as purposed, there will be no space for all of this activity. Dogs and their guardians will have no choice but to walk the concrete surfaces in our neighborhood and a years-long tradition of meeting on the hill will be gone. The Bernal DPA is our urban public space! Please don't isolate members of our community by closing this area. Keep the Bernal DPA open and free for all to enjoy. Please do not reduce the size of this DPA. Our community needs every inch of this space. [Muniz-1-01]

- Dear Bill - I'm a 17-year San Francisco resident, and for the last 8 years, I've lived in Bernal Heights. My dog and I enjoy Bernal Hill daily, and we frequent many other city parks. Dog owners are some of the most responsible citizens in our city. We clean up after ourselves and

> our dogs, and we take time via cleanup days to catch those few piles that we may have missed. We respect our community and our parks and cherish them more than any other San Francisco citizens. It's not a good use of police time to chase after and ticket dog owners. There are far more significant issues to take up police and park service time, money and energy. Of all of my political representatives, Supervisor Campos is the only one who never responds to emails with significant issues. Nonetheless, I'm copying him in here. It may sound cliche, but I have a dog, I'm active in my community, and I vote. The policy you propose is unreasonable, unenforceable, poorly conceived and not in the interests of the majority of San Franciscans. Thank you for your consideration. [RileyHoppes-1-01]

Response PD-7

These comments express opposition to modifications to the Bernal Hill DPA.

The portion of the Bernal Hill DPA proposed for conversion to on-leash use contains sensitive MA-1 habitat areas located on steep slopes, some of which are inaccessible due to their steepness (refer to Recommended Management Action BH-3a on Draft EIR p. 118). The MA-1 areas are designated as such due to the presence of several sensitive plant species and native grassland on the steep north side of the hill (primarily, the shooting star, common muilla, and the star lily). Off-leash dog use in areas with steep slopes can cause soil to be dislodged by dogs running up and down the hill and digging, thereby undermining the sensitive species and habitat in these areas and contributing to erosion.

The soils in the steepest portions of Bernal Hill are highly susceptible to erosion from wind, rain, and trampling. The effects of wind and rain are increased when trampling removes vegetation and disturbs the soils. When other factors are equal, the severity of erosion is directly related to the level of uncontrolled public use, including the creation of social trails. The greater the uncontrolled use of the site, the more severe the erosion of the steep hillsides. By converting these steep areas to on-leash/on-trail areas, erosion caused by dog and human use can be prevented or reduced.

The SNRAMP does not propose to prohibit dogs on Bernal Heights Park. Instead, it proposes to reduce off-leash areas by six acres, maintaining 15 acres of the 21-acre site as accessible to off-leash use. Of these six acres, approximately 2.5 acres are largely inaccessible due to slopes between 45 and 90 degrees. Therefore, the accessible acreage of current off-leash areas that would be converted to on-leash/on-trail use (to prevent further erosion and the loss of sensitive plant species and habitats) is 3.5 acres. Dogs and people would still be able to experience the trails, views, and wildflowers in these areas, but would be required to remain on-trail.

The remaining off-leash portions of the DPA would be limited to the flat and less-steep areas on and around Bernal Hill. These relatively flat areas are currently the most heavily used off-leash areas and are most suitable for the run-around use associated with DPAs. The off-leash areas that would remain include (1) the quarry at the southwestern portion of the park; (2) the quarry at the eastern

end of the park; (3) the closed portion of Bernal Heights Boulevard; and (4) the terrace on top of the hill east of the radio tower. The off-leash trail loop, linking all of these off-leash areas, would remain.

Refer to Response RE-10, RTC p. 4-337, for a discussion of access to parks after implementation of the SNRAMP.

Comments about the relative merits of the proposed project will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. That consideration is carried out independent of the environmental review process.

Comment PD-8 Opposition to reduction of McLaren Park dog play area

The response to Comment PD-8 addresses all or part of the following individual comment:

Loeffler-1-01

- I am all for respecting natural areas of the parks, but to take more space away from people trying to recreate themselves and their dogs, does not make sense, especially in this tight financial climate, where people are looking for economical ways to recreate. Putting a well socialized dog on a leash will often make them more aggressive. There are more dogs than children in San Francisco. Dogs need to play, not be held on a leash.

  McLaren Park is a Natural park. We who walk here, love it and come here because we love it AND because we have a dog that can RUN FREE. I would bet that most parks are used mostly by dog walkers. I can tell you that, I walk every day, and most of the people I see walking, have a dog with them. That is the largest percentage of people who use the parks.

  McLaren Park is full of dog owners and dogs- please do not take away dog walking areas and do not make more stringent laws about putting dogs on leashes in more areas. [Loeffler-1-01]

Response PD-8

This comment expresses opposition to the proposed project, specifically modifications to the McLaren Park DPA.

The portion of the McLaren Park DPA to be converted to on-leash use includes the Gray Fox Creek area, which is considered a sensitive natural community because it offers one of the few creek riparian habitats with aboveground water available for wildlife, and the willow trees and surrounding scrub, which provide needed habitat for the California quail (refer to Recommended Management Action MP-9a on Draft EIR p. 139). The SNRAMP proposes to eliminate dog access to a 0.6-acre portion of Gray Fox Creek and to convert a 7.7-acre area around the creek to an on-leash on-trail use area to protect sensitive habitat. This would affect a total of 8.3 acres of the 61.7-acre Natural Area.

4.B.3 SNRAMP Goals

Comment PD-9 Decommissioning of trails

The response to Comment PD-9 addresses all or part of the following individual comment:

Bowman-2-01

- 1. Correct the distances for Existing Trails and To Close/Relocate Trails

  1.1 Need to correct Existing and Resulting Trail Distances in Table 5: Summary of Natural Areas Management Plan

  The following inaccuracies were observed in the trail distances in Table 5:

  1. The 2008 Park Bond Trail Restoration Program (Bond Trail Restoration) for Billy Goat Hill and Twin Peaks demonstrates RPD's intentions for decommissioning trails based on the SNRAMP and this intent far exceeds the feet of trails designated in Table 5. *Attachment B* includes some of the project documents illustrating the decommissioning of trails.
  2. It is likely that the street roads and sidewalks were included in the trails distances designated in Table 5 since the existing and remaining trails distances are much greater than the trails depicted on the DEIR trail maps for Twin Peaks and Billy Goat Hill DEIR maps. Including city streets and sidewalks is not appropriate because they are not maintained by RPD and/or are not Natural Area's trails.
  3. The McLaren proposed plan also includes creating habitat for the endangered Mission Blue Butterfly, which based on the Final Bond Trail Restoration Twin Peaks conceptual trail design (http://sfrpd.org/wp-dev/wp-content/uploads/Twin-PeaksTrail-concept-plan.pdf), results in closing even primary trails. Also, the Interior Greenbelt trail is missing from the SNRAMP map of existing trails and should be added to the map and the existing trail feet in Table 5.

  These inaccuracies indicate that Rec & Park must reevaluate and restate the trail distances for all sites represented in the Table 5 for the revised DEIR to ensure that:

  1) The distances reflect the most likely SNRAMP plans for decommissioning existing secondary trails (aka social trails) and primary trails based on the actual trail projects already completed or designed for the Natural Areas. For example, Billy Goat Hill, Twin Peaks, Glen Canyon, and McLaren all contain(ed) significant secondary trails (aka social trails) than are represented in Table 5 and Twin Peaks and McLaren contain primary trails crossing planned endangered species restoration zones.
  2) Trail distances are only for actual Natural Areas' foot trails and not city streets and sidewalks, particularly those not maintained by the Natural Areas or even RPD.

  Additional Notes:

  The Bond Trail Restoration projects represent the most conclusive evidence of RPD's intentions regarding decommission trails and erecting fencing based on the SNRAMP. While

I do not have the professional tools necessary to measure the trail distances on the Bond Trail Program or the DEIR maps with complete accuracy, the rough measurements demonstrate that the numbers represented in the DEIR Table 5 are significantly different both in percentage and overall distance for both Billy Goat Hill and Twin Peaks and represent a far greater impact on recreation than currently is represented in Table 5. Below is a rough analysis based on using string and a ruler to measure the trail distances that is purely to illustrate the need for RPD to reevaluate and correct the values presented in Table 5.

	*Rough Trail Feet Estimate*****				*DEIR Draft Table 5 Trail Feet*			
2008 Bond Trail Restoration Project	***After Trail Project***	***Existing***	***Decommissioned by Trail Project***	***%***	***After Trail Project***	***Existing***	***Decommissioned by Trail Project***	***%***
Billy Goat Hill *	688	1912	1224	64%	1855	2600	745	29%
Grand View **	1471	1853	382	21%	1313	1722	409	24%
Twin Peaks ***	2718	8050	5332	66%	6939	8741	1802	21%

* *The estimated feet of authorized trails after the trail restoration is per the map in the Billy Goat Hill Trail Enhancement And Restoration Project - SCOPE OF WORK for Yerba Buena Construction. The estimate of the original trails is based on the trail depictions on the Scope of Work map and the trails depicted on the Draft DEIR FIGURE 6.9 - 4 MANAGEMENT AREAS AND TRAIL PLAN BILLY GOAT HILL. Note there is a significant difference in the trail feet between the estimate and the DEIR draft which may be represented by the city street that runs beside the park and that isn't appropriate to include as a Natural Areas' trails.*

** *The estimated feet of authorized trails after the trail restoration is per the map in the Grand View Trail Enhancement And Restoration Project - SCOPE OF WORK for Yerba Buena Construction. The estimate of the original trails is based on the trail depictions on the Scope of Work map and the trails depicted on the Draft DEIR FIGURE 6.5 - 17 MANAGEMENT AREAS AND TRAIL PLAN GRAND VIEW.*

*** *The estimated feet of authorized trails after the trail restoration is the Final Twin Peaks Conceptual Project Plan. The estimate of the original trails is based on the trail depictions on the conceptual plan and the trails depicted on the Draft DEIR FIGURE 6.8 - 5 MANAGEMENT AREAS AND TRAIL PLAN TWIN PEAKS. Note that DEIR draft likely included the non-RPD road as a trail, which was not included in the rough estimates as it is not a NAP trail.*

**** *These estimates are rough estimates based on the use a string and ruler technique to measure the distances and calculate using the scales provided on the map. These only provide a general assessment of the trail distances.*

Table 5 also likely understates the trails to be decommissioned for other Natural Areas based on the actual history of the Natural Areas Programs and the Bond Trail Program, which is the best evidence of RPD's intentions. Based on the Bond Trail Program projects, one must project that NAP intends to decommission almost all secondary trails (aka social trails) plus some primary trails that cross the MA-1 zones or proposed endangered species reintroduction areas. For example, the primary trails at McLaren are approximately 3 miles, which is far less than the more than 8 miles stated in Table 5 for trails to remain. Even though much of MA-1e doesn't even contain the lupine host plants for the Mission Blue, the proposed plan is to "augment the Mission Blue Butterfly Habitat" and "monitor" and "install fencing" in the extensive MA-1e zone, which is predominated by non-native oat grassland. Based the strategy for decommissioning primary trails illustrated by the final Twin Peaks design, the distances for several of the McLaren MA-1e primary trails must be included in the trails designated to be decommissioned in Table 5. [Bowman-2-01]

Response PD-9

This comment questions the existing and proposed trail distances provided in Table 5 and whether or to what extent the Bond Trail Restoration has decommissioned trails.

As mentioned in Response G-3, RTC p. 4-19, the projects identified in the 2008 and 2012 Clean and Safe Neighborhood Parks Bond are separate and independent from the SNRAMP; however, in the case of the 2012 Clean and Safe Neighborhood Parks Bond, some of the money is set aside for citywide parks improvements. It is possible that some of these monies could be used for management actions and improvements proposed under the SNRAMP, but no physical improvements could be accomplished unless and until the SNRAMP is adopted and this EIR is certified by the Planning Commission.

The trail lengths presented in Table 5 of the Draft EIR refer only to designated primary, secondary, and social trails; it does not include streets or sidewalks. Further, the data contained in Table 5, including the length of the trails, was generated using a Geographic Information System (GIS), which also produced the Soils, Land Features, and Trails maps contained in the SNRAMP. GIS is a sophisticated computer system used for capturing, storing, checking, and displaying data related to positions on the Earth's surface. Each of the individual Natural Areas maps provided in the SNRAMP indicates the source data used in the GIS map and who created and revised the GIS map and on what date. The information provided in Table 5, and on the maps provided in the SNRAMP, represent the existing conditions at the time work on this EIR commenced.

As mentioned in Response RE-10, RTC p. 4-337, Impact RE-1, Draft EIR pp. 256 to 257, addresses the potential effects of trail closures on recreational resources and access. Of a total of 211,303 feet (or 40 miles) of trails, the SNRAMP calls for closing approximately 54,400 feet (10.3 miles) of social trails, creating 5,897 feet (1.1 miles) of new trails and improving existing, primary trails to provide a more manageable trail system with greater access and easier navigation through the parks. Social trails are trails that have not been officially designated and are usually created by users, while primary trails are those officially designated as main routes into and around a Natural Area. Trail closures would focus primarily on eliminating social trails because they are considered unsafe, to protect sensitive species or habitat, or to prevent soil erosion.

The commenter states that the DEIR does not correctly represent the scale of the impact on recreation that could result from the decommissioning of social trails because the SNRAMP illustrates fewer trails to be decommissioned than are illustrated on the concept plans for trail restoration projects at Billy Goat Hill and Twin Peaks. Social trails are not developed by SFRPD; instead, they result from unauthorized travel by park users and change over time as unauthorized use changes over time. As such, it is impossible for the department to maintain an inventory of all social trails. The SNRAMP identified anticipated social trails to be decommissioned, as well as improvements to authorized trails. When the SFRPD develops trail restoration plans for specific projects, a current survey is conducted to develop a trail restoration plan that reflects the most up-to-date information about social trails and the preferred alignment for authorized trails. For this reason, the Primary, Secondary, and Closed trails illustrated in the SNRAMP are similar to, but not necessarily identical to, the New and Decommissioned trails illustrated in the trail restoration projects.

The Draft EIR determines that closure of social trails, unsafe trails and trails located in sensitive habitat areas is not expected to have a significant adverse impact on recreational resources because general access would remain unimpeded; the creation of new trails and the maintenance and improvement of existing primary trails under the SNRAMP would provide a more manageable trail system with greater access and easier navigation through the parks; and these improvements may incrementally increase visitor use by improving access to the parks for more types of users.

In terms of the cumulative impacts related to the reduction in trails, which includes social trails, Draft EIR p. 263 stated that:

> "as a part of the SFRPD Trails Program, trails would be improved with SFRPD and/or grant-funded capital projects. Trail improvement in areas surrounding the 32 Natural Areas would dissipate recreation users throughout the trail system and overall would enhance the experience of passive recreation users, resulting in a beneficial and less than significant cumulative impact on recreational facilities."

Comment PD-10 Goals and objectives of the proposed project

The response to Comment PD-10 addresses all or part of the following individual comments:

GGAS-1-03 MPIC-2-07 MPIC-2-18
WEI-1-02

- Overall, Golden Gate Audubon endorses the objectives as set forth in the DEIR. However, we would amend the second-to-last objective to read (new text in underline):
  - To provide guidelines for education, research, ~~and~~ stewardship programs, and outreach to inform community members about the value and importance of natural areas within San Francisco; and

  We see "stewardship" and "education" as being somewhat more narrow than broader outreach to the community. Alternately, similar language could be inserted under the "Education" or "Stewardship" sections of Section III.E.1 *Objectives and Goals of the SNRAMP*. (DEIR, at 85, 86). [GGAS-1-03]

- In conclusion, the goals and current scope of the SNRAMP project for Mt. Davidson are incompatible with, degrade, and subordinate the goals and needs of those who live next to and use this important San Francisco park and recreation resource. The following SNRAMP proposals would all have significant negative environmental impacts for the residents of Miraloma Park: concentrated removal of 1600 trees; closure of 2,900 feet of unidentified trails; limitation of dog access to nearly six acres of the park; continued use of hazardous herbicides; prohibition of recreational amenities as defined by the Park Maintenance Standards developed to implement Proposition C in 2003; leaving maimed trees and trim waste in the park; disregard and degradation of the forest's historic and cultural value; and the failure to develop a vigorous reforestation plan for the MA-3 zones (with the same species). While the SNRAMP is described as a community-based program, the DEIR does not

describe any meaningful way for residents to modify this plan once it is approved. [MPIC-2-07]

- The DEIR notes that Mt. Davidson Park has high recreational value and trail use by the citizens of San Francisco. The park was originally created for recreational purposes. The SNRAMP proposal subordinates the recreational purposes for which the park was created to conservation and restoration goals, which is a significant change in the purpose of the park that will negatively impact park uses. [MPIC-2-18]

- **Neither the preferred alternative for Sharp Park, nor any of the alternatives assessed in the DEIR, meet the goals and objectives of the proposed project.**

  The SNRAMP has precise goals and objectives. These include recreation goals such as providing "opportunities for passive recreation, such as hiking and nature observation, that are compatible with conservation and restoration goals; and [t]o improve and develop a recreation trail system that provides the greatest amount of accessibility while protecting natural resources." Moreover, the SNRAMP conservation and restoration goals include:

  > To maintain and enhance native plant and animal communities;

  > To maintain and enhance local biodiversity;

  > To reestablish native community diversity, structure, and ecosystem function where degraded;

  > To improve Natural Area connectivity; and

  > To decrease the extent of invasive exotic species.

  Yet the preferred alternative for Sharp Park fails to meet these goals and objectives, nor does it squarely fit in any other project goal or purpose. Instead, as defined it will maximize active recreation that threatens the natural areas at the expensive of feasible alternatives that would meet the conservation and recovery goals. This is not consistent with the requirements of CEQA, and therefore the preferred alternative is not feasible – because it cannot meet the goals and objectives of the project.

  On the other hand, a full restoration alternative as proposed in the ESA/PWA report attached to this comment would meet all of these project goals and objectives – and yet it was rejected as infeasible by the Department because it may have impacts on an historic resource. But the City has failed to apply the proper standard to this question (and as described below, its assertion of historical significance at Sharp Park is absolutely in error). Financially feasible alternatives that meet the goals and objectives of the project cannot be eliminated from environmental review and consideration – i.e., excluded from the alternatives assessment process – simply because they may have some unavoidable significant impacts. This is particularly true when those impacts can be mitigated.

  Here, it is abundantly clear that the full restoration alternative proposed in the ESA/PWA report and provided to the City many months ago meets the criteria for consideration as an alternative in the DEIR. Moreover, the preferred alternative, also has unmitigatable impacts – and yet these very impacts were used to exclude the full restoration alternative for review.

This is inconsistent and not supportable by any standard or substantial evidence. For this reason, the CEQA document is flawed. [WEI-1-02]

Response PD-10

These comments question the stated goals and objectives of the SNRAMP, in some cases suggesting revisions, and in other cases questioning whether the project meets the goals stated.

The SNRAMP seeks to strike a balance between natural resource protection and the needs of citizens for active and passive recreational opportunities in a highly urbanized and densely populated environment. The SNRAMP is intended to guide the City's natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance over the next 20 years.

In terms of alternatives to the project that would maximize restoration activities, Draft EIR Section VIII, Alternatives, evaluated such an alternative (the Maximum Restoration Alternative), which addressed all of the Natural Areas including, Sharp Park. As stated on Draft EIR p. 480, this alternative would restore native habitat and convert nonnative habitat to native habitat wherever possible throughout the Natural Areas, including all management areas. The Maximum Restoration Alternative prioritizes activities related to endangered species protection and recovery, and maximum enhancement of biodiversity. Compared to the proposed project, this alternative emphasizes the restoration of native habitat over recreational uses and nonnative habitat.

In accordance with CEQA Guidelines Section 15126.6, "alternatives to the proposed project shall include those that could feasibly accomplish one or more of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." The objectives of the project, in terms of CEQA, are the project objectives articulated in the EIR, which, in this case, include the following (refer to Draft EIR p. 82):

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive Management approach;
- To provide guidelines for passive recreation compatible with San Francisco's natural resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex for the benefit of special-status species.

According to CEQA Guidelines Section 15124, the CEQA project objectives are intended to describe the underlying purpose of the project, which will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and aid the decision-makers in preparing findings or a statement of overriding considerations. The SNRAMP goals, as opposed to the SNRAMP Draft EIR objectives, broadly focus on conservation and restoration, education, research, stewardship, recreation, monitoring, design and aesthetics, and safety (refer to SNRAMP pp. 2-1 and 2-2). The CEQA project objectives are more focused than the broader SNRAMP goals (and intended to guide the development of CEQA project objectives, as previously mentioned), but they are fundamentally consistent. With respect to Sharp Park, in particular, SNRAMP p. 6.4-9 describes the intended objectives of the site improvements at this location, which are even more focused (yet consistent with the CEQA project objectives and the SNRAMP goals) and include possible expanded public access to the upper canyon and linkages to neighboring open spaces; increased and more sustainable populations of sensitive plant species; enhanced habitats for California red-legged frog and San Francisco garter snake; restoration of coastal scrub and creek riparian habitat in the canyon; improved wildlife habitat; protection of sensitive habitats and species at Laguna Salada; creation of a buffer zone between the wetlands and the golf course fairways; reduction in erosion; and protection of endangered San Francisco garter snake and California red-legged frog habitat by restricting access to Horse Stable Pond, Laguna Salada, and Arrowhead Pond.

With respect to the Maximum Restoration Alternative, the Draft EIR concluded on p. 525 (Table 21) that impacts would be the same as the proposed project; but ultimately the Draft EIR found that the Maximum Restoration Alternative does not meet the objective related to recreation, as the Maximum Restoration Alternative would provide additional restrictions on public use and access of the Natural Areas, including further restrictions of DPAs (DEIR p. 481).

In terms of the ESA/PWA alternative to which the commenter refers, it was evaluated and rejected as infeasible. According to PRC Section 21061.1, feasibility, such as a feasible alternative, is one that is "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." CEQA Guidelines Section 15126.6 specifically states that "[a]n EIR is not required to consider alternatives which are infeasible."

Draft EIR p. 526 makes the following conclusion about the Maximum Restoration Alternative[43] that:

> "During the scoping process, a public comment was received proposing a Sharp Park restoration alternative that included a model of natural flood control, outdoor recreation, environmental education, and endangered species recovery. This alternative would involve full restoration of the entire Sharp Park property, including the

[43] The ESA/PWA restoration alternative included a larger footprint than the Maximum Restoration Alternative, which was encompassed within the footprint of the ESA/PWA restoration alternative.

elimination of the golf course. This proposal was rejected as an individual alternative because it is not compatible with the 18-hole layout of the historic golf course. This alternative would, through the elimination of the Sharp Park Golf Course, result in greater significant and unavoidable impacts to cultural and recreational resources and therefore is not required to be analyzed under CEQA. In accordance with CEQA Guidelines Section 15126.6, "… alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." In addition, an alternative that would convert the entire Sharp Park Natural Area would only address one of the many Natural Areas addressed by the SNRAMP and could not practicably be extrapolated to the other Natural Areas. While rejected as an individual alternative, components and approaches embodied by this proposal have been incorporated into the Maximum Restoration Alternative."

Golden Gate Audubon Society suggested a revision to one of the SNRAMP's objectives, which is provided on both SNRAMP p. 1-4 and Draft EIR p. 85. The objective is "to provide guidelines for education, research, and stewardship." Golden Gate Audubon stated that "stewardship" and "education" are narrower than broader outreach to the community. While the SFRPD does not elect to change the objective contained in both the SNRAMP and the Draft EIR, the concept of conducting outreach to inform community members about the value and importance of Natural Areas within San Francisco is fundamental in the work the SFRPD has undertaken in preparing the SNRAMP and Draft EIR (refer to Response G-3, RTC p. 4-19, and Response G-10, RTC p. 4-50 for a discussion of the extensive outreach efforts). Further, the SFRPD maintains a website devoted to sharing information about the Natural Areas (http://sfrecpark.org/parks-open-spaces/natural-areas-program/), and there are other opportunities for outreach, such as posting notices before and after pesticides are used and when trees are slated for removal or trails are expected to be closed. The SFRPD refers to the Natural Areas Program as "a community-based habitat restoration program," reflecting SFRPD's desire to engage the community in all aspects of implementation of the Natural Areas Program.

Comment PD-11 Goals and implementation of the Natural Areas Program

The response to Comment PD-11 addresses all or part of the following individual comments:

WTPCC-1-12 Bowman-2-14
Shepard-A-1-01

- The fundamental goals of NAP are misaligned with what San Franciscans want in their parks. To date, NAP has focused on restoring open space in San Francisco to "native" status. The SNRAMP was written to interpret "Natural" to mean "Native." That's not what San Franciscans want their natural areas to be. We want Natural Areas to be:
  - > Accessible to the public
  - > Safe

> Well-Maintained

> Green and filled with growing things (trees and plants)

Nowhere on that list does it say "native only."

People love Golden Gate Park (which is filled with non-native species), but it's not always easy to get to – so they want miniature versions of Golden Gate Park in their neighborhoods. They want a variety of plants that look nice, and space that gives them a chance to escape where they can walk, run & play with their family, friends and pets. Purely native areas do not provide the same visual and recreational opportunities that our non-native areas do. That's why people living in San Francisco more than 100 years ago introduced non-native species in the first place. Lush and green is what we want, and we're not picky about whether it's native or not.

The Natural Areas Plan should reflect that desire, and work to accommodate it. NAP can certainly preserve a small portion of the total parks space for native plants (much like the botanical gardens include sections that are native only), but only if these native areas can meet the requirements above (i.e. accessible, walkable, safe, well maintained and green and lush). In a densely populated urban area like San Francisco, native-only should be a "nice to have" that takes a back seat to priorities like accessible, safe and lush.

WTPCC asks the Planning Department to address the issues we identified with the Draft DEIR. We ask the Recreation and Park Commission to rethink its support for NAP. [WTPCC-1-12]

- Clarify in the DEIR that most of the "Natural Areas" are predominately non-native plants and trees and not remnant or sensitive habitat. Most of the Natural Areas are planted forests and old livestock pastures that SNRAMP plans to convert to native coastal dunes, scrub, and grassland to treat as conservation areas instead of recreational areas. The statement "The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas" is incomplete without incorporating the current land use and type of land.

  Throughout the SNRAMP, it discuss that the Natural Areas are predominated by plants that are not native to SF, and the urban forests are almost exclusively non-native plants. RPD often makes the claim in the media and public presentations that the Natural Areas are remnant Natural Areas is misleading and does not provide the public with a clear understanding of the extend of the SNRAMP plans. [Bowman-2-14]

- NAP is fundamentally flawed and misses the point entirely. It is not what San Francisco wants or needs. We want accessible, attractive, safe, and well maintained parks and recreation areas. We need more services that attract and keep families in our city. NAP not only does not provide these vitally needed resources, it sucks funding away from them. Some of the contradictions caused by NAP facing the families in our neighborhood are illustrated by recent activities by RPD.

  All playground directors were fired leaving a gap in children's recreation in our city. RPD saw this as a money saving endeavor. We see it as a giving up of one of RPD's most basic

functions. At the same time, RPD spends money on NAP, a program that serves very few people. Although the city department name begins with "recreation" they have apparently abandoned the requirement to provide that service. [Shepard-A-1-01]

Response PD-11

These comments question whether the goals of the NAP are aligned with what San Franciscans desire in their parks.

The NAP is the branch of SFRPD responsible for managing the City's Natural Areas. The mission of the Program is two-fold: to preserve, restore, and enhance remnant Natural Areas and to develop and support community-based site stewardship of these areas. The initial impetus for the Program came from several local grassroots environmental organizations that recognized the value of the "Significant Natural Resource Areas" as plant and wildlife habitats, ecosystem functions, socioeconomic values, living museums protecting natural heritage, and as outdoor classrooms. Recognizing the functions and value of these Natural Areas and the need to protect and restore them, SFRPD agreed to support and develop a community-based habitat restoration program, today known as the NAP. A critical component of the NAP is the development of a restoration and management plan for the City's Natural Areas – the Significant Natural Resource Areas Management Plan (SNRAMP). The SNRAMP was first adopted in 1995. In 2006, the SNRAMP was revised, with this Draft EIR evaluating the proposed 2006 SNRAMP. Most of these comments relate to the goals of the NAP, which is not the project evaluated in this EIR; however, the following is provided in response for informational purposes.

Preservation of San Francisco's Natural Areas, and of native plant habitat in particular, is an important and long-standing policy goal for the City. Policy 4.1 of the Recreation and Open Space Element (ROSE) of the San Francisco General Plan (April 2014) recognizes the value and importance of undeveloped, relatively undisturbed Natural Areas in the city for the potential to preserve biodiversity. The policy further states that "[n]ative plant habitats should be preserved and efforts undertaken to remove exotic plant species from these areas." The Biodiversity section of the City's *Sustainability Plan*[44] recognizes that, even in the increasingly urbanized San Francisco environment, it is important to protect and maintain biodiversity within the City's Natural Areas. A commitment to increasing biodiversity is also demonstrated by the San Francisco Department of the Environment's Biodiversity Program, whose mission it is to protect, enhance and restore the biodiversity, habitats and ecological integrity of San Francisco's natural environment - in parks, wildlands, neighborhoods and in the built environment - and to connect San Franciscans to nature in their city.

The rationale for the importance of preserving and restoring biodiversity in San Francisco's Natural Areas is further stated both in the Management Approach section of the SNRAMP and in the Draft

[44] City of San Francisco Commission on the Environment, *Sustainability Plan for the City of San Francisco,* 1997. This document is available online at: http://sustainablecity.org/, accessed on June 6, 2016.

EIR Project Description. In order to address concerns, such as the loss of special-status or unusual native species or habitats, and the loss of diversity and components of a healthy ecological system, the SNRAMP sets forth several goals related to conservation and restoration. Among those goals are to maintain and enhance native plant and animal communities and local biodiversity; to decrease the extent of invasive exotic species cover; and to re-establish native community diversity, structure, and ecosystem function where degraded (SNRAMP p. 2-1). It should be noted that this management approach applies only to the 32 Natural Areas (remnant fragments of San Francisco's historic landscape) and not to all City parks managed by SFRPD.

It is true that nonnative plants and animals are commonly found throughout many of the Natural Areas, and accordingly the SNRAMP classifies the land within the Natural Areas into three management area categories (MA-1, MA-2, MA-3) based on the level of habitat complexity and sensitivity, and the presence of significant plant and animal species. The SNRAMP focuses restoration efforts on those areas that have the most sensitive and diverse habitats (MA-1) and focuses on recreation and preservation of greenspace in the least sensitive areas (MA-3).

Refer also to Response BI-15, RTC p. 4-402, and Response BI-36, RTC p. 4-470, for a more detailed discussion of the effects of invasive species.

4.B.4 Proposed Modifications to Sharp Park

Comment PD-12	**Recommend removing Sharp Park and Laguna Salada from the SNRAMP**

The response to Comment PD-12 addresses all or part of the following individual comments:

CBD-1-02	GGAS-1-01	NTC-1-03
SFT-1-05	Sierra Club-1-02	WEI-1-01
Bartley-1-05	Blum-1-01	Blum-1-02
Blum-1-05	Blum-1-06	Bors-1-03
Bowling-1-02	Child-1-01	Elliott-1-01
Flasher-1-02	Gravanis-1-02	Kushner-1-02
Langille-1-02	Louie-1-01	Oliva-1-01
Pfister-1-03	Rogers-1-02	Schmoll-1-01
Stringer-1-01	Weed-1-01	Wilson-1-06

- However, the Natural Areas Plan is severely flawed due to inclusion of a poison pill in the form of a sham "restoration" plan for Sharp Park. The Sharp Park element of the plan is at odds with the best available science on impacts of the golf course, it ignores the recommendations of the only peer-reviewed restoration plan for Sharp Park and it proposes further illegal impacts to endangered species at the site. Sharp Park should be removed from the Natural Areas Plan.

  It is shameful that San Francisco has put the restoration of all of the City's natural areas in jeopardy by including a knowingly controversial and objectionable Sharp Park project which

has been discredited by independent scientists, restoration experts and dozens of San Francisco conservation and community groups. We question why San Francisco would include a Sharp Park element that would likely drive San Francisco's namesake species, the San Francisco garter snake, toward extinction - all to promote an unsustainable, money-losing golf course.

If San Francisco approves and attempts to implement the proposed Natural Areas Plan with the sham Sharp Park "restoration" element, it will result in additional litigation against the City for illegal and unnecessary degradation of endangered species habitat.

We find it curious that the Sharp Park element of the Natural Areas Plan ignores ongoing violations of the Endangered Species Act resulting from golf course activities such as water pumping from wetlands and mowing that are harming endangered San Francisco garter snakes and California red-legged frogs. The Natural Areas Plan ignores the current litigation against San Francisco for continuing illegal activities at Sharp Park without an approved habitat conservation plan or legal permits under the Endangered Species Act. The Natural Areas Plan ignores the pending San Francisco Board of Supervisors vote on legislation to repurpose the golf course and transition management to the Golden Gate National Recreation Area.

The Natural Areas Plan ignores the conclusions and recommendations of leading scientific experts on endangered species and wetlands restoration, who contend that the Park Department's proposed golf course activities impair the long-term survival and recovery of endangered species at the site, and that the Parks Department's alleged compliance plan is not being followed and is unworkable. The Natural Areas Plan ignores the only peer-reviewed science on alternatives for managing Sharp Park, *Conceptual Ecosystem Restoration Plan and Feasibility Assessment: Laguna Salada, Pacifica, California* (ESA-PWA 2011). The peer-reviewed report demonstrates that the best option for protecting and restoring endangered species at Sharp Park is removing the golf course and restoring the functions and natural processes of the lagoon and surrounding wetlands; and that removing the golf course to restore habitat to the east of the lagoon is essential for the long-term sustainability of endangered species found on the site.

The Sharp Park element of the Natural Areas Plan proposes numerous unnecessary, controversial, discredited, illegal and ecologically damaging projects such as: dredging Laguna Salada and other wetlands with a backhoe; continuing an illegal water pumping and management regime; filling in 5.5 acres of existing wetlands; de-watering endangered species habitat; and removing and evicting endangered species from Sharp Park to Mori Point, an activity that is extremely unlikely to be permitted by state and federal regulators and is illegal without proper permits. The Sharp Park element proposes perpetuating the very illegal management activities that kill and harm endangered species and have resulted in the current litigation against San Francisco.

The "restoration" projects proposed in the Sharp Park element elements are not based on any credible science and fly in the face of recommendations from experts on endangered species and wetlands restoration. The proposed pre-activity surveys, worker education program,

biological monitoring and illegal relocation of individual endangered species do not in any way adequately mitigate for impacts. [CBD-1-02]

- As an initial matter, Golden Gate Audubon is extremely concerned that the DEIR's inclusion of what is essentially a new project at Sharp Park will derail the approval of the DEIR and implementation of the Management Plan. As presented in the DEIR, the project at Sharp Park is far different than what has been considered in the past and would essentially force a decision to be made about management at the site before adequate environmental review and public input has been conducted. The Sharp Park plan, as now included in the DEIR, is likely to result in significant (and in our opinion, successful) challenge to the DEIR, slowing down the implementation process for the entire Project. Therefore, Golden Gate Audubon urges the Planning Department to tier Sharp Park from the DEIR for further study. We address this issue – include the question of piece-mealing review – further below.

  The full plan for Sharp Park is laid out in Section III.I.23 of the DEIR and we will therefore address it further below. However, for purposes of reviewing the DEIR in its current state, Golden Gate Audubon must comment on the project as described in Section III.F.2. (DEIR, at 97-98) It appears that the Sharp Park project as described in the DEIR is significant different than what was envisioned in the SNRAMP. (See DEIR, at 105). Golden Gate Audubon believes that the Planning Department is attempting to shoehorn a much larger Sharp Park project into the SNRAMP DEIR and creating the potential for confusion, conflict and delay. On that grounds, Golden Gate Audubon recommends that the Planning Department separate out Sharp Park from the rest of the DEIR for further study, public input, and approval.

  Because management of all of Sharp Park should be considered holistically, Golden Gate Audubon encourages the Planning Department to segregate Sharp Park from the rest of the SNRAMP DEIR for further environmental review and planning. [GGAS-1-01]

- The analysis of Sharp Park in Pacifica should be separated from the rest of the analysis of the Natural Areas Plan for the following reasons:

  Geography - Sharp Park is in a different county, has a different user group, and has a wholly different regional environmental context.

  Proposed Jurisdictional Changes - Some in the community, including Nature in the City, are advocating for Sharp Park to become part of the Golden Gate National Recreation, which currently effectively surrounds Sharp Park on three boundaries.

  Ecological Distinction - Sharp Park is the only RPD Significant Natural Resource Area with two federally listed endangered species; it possesses a much larger flora and fauna than the rest of the 31 areas; and it is the only one with an acute threat of sea-level rise to protected species, valuable wetland habitat, and local communities.

  Financial - Sharp Park Golf Course is in a state of uncertainty and instability in terms of whether it can be maintained as a viable and affordable public resource. The problems of dependence on pumping freshwater out of endangered species habitat, on the existence of an

old and vulnerable sea wall, and on financial subsidy for golf course function are not sustainable.

Legal - If Sharp Park is not separated from the environmental analysis of the Natural Areas Plan, then litigation is going to hold up finalization and implementation of the Plan for a much longer, indefinite period of time. This is unfair to San Franciscans, who have been waiting for 15 years for the completion of the Significant Natural Resource Areas Management Plan process. [NTC-1-03]

- We have a real concern that the inclusion of Sharp Park, which is located in San Mateo County is inappropriate and should be excluded from the project description and analysis. It is not one of San Francisco's Significant Natural Resource Areas. Further, it is embroiled in a number of issues that could delay the certification of this document and the implementation of the program.

  I urge you to sever Sharp Park from the DEIR document so that the program may move forward in a timely and appropriate fashion. [SFT-1-05]

- **Large-scale changes in the proposed project for Sharp Park require further CEQA analysis.**

  The proposal for Sharp Park has been radically changed as identified in Appendix J. These changes are not consistent with the project goals and purposes of the Natural Areas Program, nor are they blur the essential distinction in the CEQA process between the defined project areas and the environmental/background setting. For both of these reasons, the Sharp Park section should be segregated out from the EIR process and undergo further environmental review.

  As stated in the DEIR, The SNRAMP is intended to "guide activities on properties owned or maintained by the SFRPD through its Natural Areas Program. Figure 1 is an overview map of the Natural Areas." DEIR p. 82. At Sharp Park, the Natural Areas Program "owns or operates" only certain portions of Sharp Park: Laguna Salada, Horse Stable Pond, the connecting channel between these two aquatic features, portions of Sanchez Creek, and the eastern hillside forests. These areas are clearly labeled in Figure 1 of the DEIR, and exclude all areas that are "owned or operated" by SFRPD through its Golf Program. Indeed, as explained in several communications by the SFRPD since 2006, this distinction between Golf Program and Natural Areas Program lands has been an essential element of how the environmental assessment would be conducted – and has been repeatedly used by the Department to oppose considering alternatives for the Sharp Park Natural Area that would provide additional environmental, recreation, and other SNRAMP Project benefits on the site.

  Yet every alternative proposed by SFRPD for Sharp Park beside the no-action and maintenance alternatives incorporate golf lands into the project proposal. This is particularly true in the preferred alternative, which defines the "restoration footprint" of the SNRAMP for Sharp Park to include about 1/3 of the golf course links. This creates an inherent, confusing flaw in the DEIR, because it is no longer possible to distinguish between the project proposal and the environmental setting within which the project is proposed to be

conducted. SFRPD cannot create a cohesive environmental review document if it is changing the environmental setting and baseline project area along with the project itself. This alone requires further explication and environmental review before the Sharp Park portion of the DEIR is approved.

The importance of this distinction is highlighted by the purpose and goals of the project, as stated in the DEIR. The DEIR states that the SNRAMP will "provide the framework for the long-term management of the Natural Areas." DEIR p. 84. Section III.E.2 of the DEIR further describes the specific management categories within the Natural Areas Program jurisdictional areas, defining categories of natural areas that will have different management regimes (MA-1, MA-2, and MA-3). Id. But at Sharp Park, the golf course lands that are included within the "restoration footprint" are not considered to be any of these three categories of management units. This is consistent with the original project proposal for Sharp Park, as well as the maps produced during the scoping period, which clearly indicated that no golf links would be part of any management area within the plan.

These flaws create an incoherent DEIR at the critical first steps at Sharp Park. Without a clearly defined project proposal and environmental setting, none of the procedural elements of a CEQA assessment can be properly conducted. As a consequence, flawed environmental decisionmaking is likely to occur – the opposite of what CEQA is designed to do.

This is apparent in the DEIR's complete failure to consider full environmental restoration alternatives at Sharp Park for the area's aquatic lands and features. While on the one hand the DEIR selects as the preferred alternative for Sharp Park a plan that would redesign Sharp Park's golf links to reduce flooding on the course, the DEIR refused to consider full environmental restoration alternatives at Sharp Park. The problem with the alternatives assessment will be discussed more fully below, but these problems have at their root the City's failure to create a consistent project area and environmental baseline condition. Therefore, this portion of the EIR cannot simply be remedied by reviewing and adopting or rejecting another alternative during the period between the draft and final EIR: the City must also redefine its project and environmental setting to remedy this problem. [WEI-1-01]

- Our main request at this juncture is procedural: we ask that as the planning and environmental review process moves forward, that the portions of the Significant Natural Resource Areas Management Plan and the environmental review documents that pertain to Sharp Park and Laguna Salada be severed from the rest of SNRAMP planning process and the SNRAMP DEIR. Instead, the Sharp Park and Laguna Salada project should placed on a separate planning and environmental review track. The reasons for this are numerous and are discussed in the following comments.

C. Planning Rationale for Severing Sharp Park from the rest of the DEIR.

I. CEQA Process

As the portions of the Report relating to the programmatic analysis of the Plan and routine maintenance are thorough and complete, and unrelated in any underlying environmental way to the flawed project-level analysis for Sharp Park, we request that the SNRAMP DEIR

be recirculated with the Sharp Park component of the DEIR deleted from that document for the reasons listed above. The San Francisco portion of the recirculated SNRAMP could then move expeditiously to the certification of a final EIR.

We do not believe this would constitute "piecemealing" as it can be reasonably demonstrated that these are already two separate projects. Indeed, a major reason for separating these projects, approving the programmatic elements, and enlarging the scope of the Sharp Park project to include the whole park rather than the designated 5- acre natural area is precisely to avoid "piecemealing" with respect to the various elements proposed for the Sharp Park golf course reconstruction.

2. Background

It is understood that the planning work for restoration of Laguna Salada began as an integral part of the City's Significant Natural Resource Areas Management Plan, and has thus far been treated as part of that plan for environmental review purposes. However, now that an initial phase of analysis has been done, we believe they reveal compelling planning reasons to separate the Sharp Park/Laguna Salada restoration proposals from the rest of the SNRAMP DEIR. Reasons for severing these two tracks includes the fact that Sharp Park is only included in the SF SNRAMP EIR due to historical contingencies, that there is little intrinsic relation between the portions of the SNRAMP dealing with Sharp and the rest of the plan, that Sharp Park is located in a separate geographical area and political jurisdiction, and that these two parts of the overall "project" are already separated within the existing DEIR as a division between programmatic and project levels of analysis. [Sierra Club-1-02]

- Sharp Park should be considered separately from the rest of the plan. While we have many unique ecosystems in San Francisco Sharp Park is perhaps the most unique of all San Francisco properties. The city is already in violation of the Endangered Species Act and with the acknowledged sea level rise the only reasonable course is to return this property as a wetland. Continuing to wasting resources maintaining this property as a golf course is a grave mistake. Spending millions and perhaps tens of millions of dollars on a park that very few San Franciscan's even know about instead of focusing on improvements of city parks is an egregious waste. If the proposed policy continues we guarantee that it will be looked back on a folly. [Bartley-1-05]
- It was, therefore, very disturbing to find that Sharp Park, located in in San Mateo County had been included in this long awaited document. By including Sharp Park in this document, the integrity and approval of the DEIR has been seriously compromised. As you well know, the issues around Sharp Park's natural resources and their management are inextricably linked with multiple other issues which, to date, remain unresolved. Therefore, by including Sharp Park in the SNRAMP, the SNRAMP approval may be delayed unnecessarily, putting in jeopardy the entire management of San Francisco lands. Because the issues surrounding Sharp Park are multiple, complicated, and unresolved, the DEIR is, therefore, fatally compromised. [Blum-1-01]

- Some of the unresolved conflicts surrounding Sharp Park include finding a legally acceptable, long term, solution to the crime of "taking" endangered species by RPD [Blum-1-02]
- Failure to consider the increased maintenance costs it will take to stave off sea rise which will further damage the park and the endangered species and who will pay for the increased maintenance cost

  Failure to ascertain if the citizens and taxpayers of San Francisco are willing to allow RPD to continue to redirect limited funds to continue to underwrite a failed San Mateo golf experience at the cost of shortchanging San Francisco City parks even further than they are today. [Blum-1-05]
- I urge you to withdraw this DEIR, sever the Sharp Park areas from the document and reissue the San Francisco portion for public comment so we can move forward in an ethical and forthright manner. [Blum-1-06]
- I feel that Sharp Park's location and unique problems make it quite different from the natural areas in San Francisco. It is very controversial with too many unanswered questions. I am concerned that approving the DEIR as is could lock Sharp Park into an unfortunate uncertain future. On the other hand, I do not want to delay approval of the SNRAMP for the 31 natural areas within San Francisco where I feel the SNRAMP does a very good job. I feel that Sharp Park should be separated from the SNRAMP and the SNRAMP DEIR should be approved for the 31 natural areas within San Francisco without further delay. [Bors-1-03]
- If we have to separate Sharp Park from the rest of the Natural Areas Plan in order to move forward, although not my preferred approach, please, let's do that and make some progress for our City. [Bowling-1-02]
- I'm writing to urge you to separate out Sharp park from the Natural Areas plan. Thank you for taking our comments into consideration. [Child-1-01]
- I am concerned that the Significant Natural Areas Resource Areas Management Plan is being adversely affected by the special situation surrounding the Sharp Park Golf Course. I would like to urge you to please remove consideration of Sharp Park from the Plan and allow this smart, and ecologically sound Plan to go forward to preserve 31 other of the City's recreation and park areas. They are in dire need of improvement and not being bogged down by the lawsuits around Sharp park will allow these areas to get the attention they need. Thank you for your time. [Elliott-1-01]
- If the issues around Sharp Park are holding up approval of the plan, please separate the golf course from the rest so we can continue to maintain the other natural areas in a condition that promotes visitation. Thanks for this opportunity to provide feedback. [Flasher-1-02]
- Laguna Salada -- Please consider carefully the pros and cons of including the Sharp Park natural area in San Mateo County in the same environmental analysis as the natural areas within San Francisco County. Because Sharp Park is so complex and controversial, and the potential environmental impacts of whatever occurs there are so different from those of the in-city areas, it would make more sense to conduct two separate analyses. I realize that some

people claim that doing two separate environmental assessments could constitute piecemealing, but I fail to see how there would be significant cumulative impacts that would require the two proposals to be analyzed together. If the analyses cannot be separated, I hope that a thorough explanation of the reasoning will be provided that carefully considers the intent of CEQA. [Gravanis-1-02]

- The consideration of Sharp Park should be removed from the DEIR and placed on a separate planning track. [Kushner-1-02]
- Please separate out Sharp Park from the Natural Areas Plan so that San Francisco's nature and biodiversity is not dragged down by Sharp Park and its golf course.

  Therefore, please separate out Sharp Park from the Natural Areas Plan! In addition, please ensure that the City and County of San Francisco places the protection of the natural environment and endangered species at Sharp Park Golf Course at the highest priority. [Langille-1-02]
- Please SEPARATE out SHARP PARK from the Natural Areas Plan, so that San Francisco's nature and biodiversity are not dragged down by Sharp Park and its golf course. And please RESTORE SAN FRANCISCO'S NATURAL AREAS.

  Natural areas are important to my family and me, because we believe that habitats for native plants and the wildlife that depend on certain plants have already been diminished by human impacts. [Louie-1-01]
- I'm writing to recommend that the Sharp Park and golf course be separated out from the Natural Areas plan. I recommend this so that San Francisco's natural areas can get the stewardship they need without the potentially significant delay the Sharp Park golf course issue could bring. [Oliva-1-01]
- Nature in the City (www.natureinthecity.org) advocates separating Sharp Park from the Natural Areas Plan to avoid tying up the Plan in litigation. If this is necessary to avoid typing up the Plan, then I support this Action because I believe that those making legal challenges to the current recommended Actions in Sharp Park based on endangered species statutes will succeed. [Pfister-1-03]
- May I suggest, so that San Francisco's biodiversity is not threatened, that you separate the 'Sharp Park ' project from the 'San Francisco Natural Areas Plan', please. Furthermore, I believe there should be professional management of our City's natural areas and a program of ecological restoration for the City, also. [Rogers-1-02]
- I am writing to you to ask you in support of the main goals of the Natural Areas Plan. Also, I am urging you to separate out Sharp Park from the Natural Areas Plan so that we can move forward with restoring and preserving San Francisco's natural areas and biodiversity. [Schmoll-1-01]
- I am writing to comment on the Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP).

I am citizen of San Francisco and a supporter of the Natural Areas Program and the goals in the Natural Areas Plan. I am concerned however that because of the ongoing legislation and litigation concerning Sharp Park that it should be separated out from the rest of the environmental analysis of the Natural Areas Plan. [Stringer-1-01]

- Please consider removing the Sharp Park from the Natural Areas Plan. Thanks. [Weed-1-01]
- Separate out Sharp Park from the Natural Areas Plan. [Wilson-1-06]

Response PD-12

These comments primarily request that the proposed SNRAMP be modified by removing the proposed Sharp Park Restoration Project as an element of the project, stating that the SNRAMP and the restoration project are sufficiently distinct to allow for separate environmental analyses. Other comments state that the description of activities at the Sharp Park Natural Area is substantially different from previous descriptions. Comments also discuss the merits of the proposed actions at Sharp Park and state that the Draft EIR ignores ongoing violations of the Endangered Species Act (ESA) by the SFRPD and legislation at the Board of Supervisors to transition management of Sharp Park to the Golden Gate National Recreation Area. Other comments express disagreement with the Draft EIR's analysis of the proposed project's impacts to biological resources and analysis of project alternatives. Comments concerning a full restoration alternative for Sharp Park not analyzed in the EIR are directed to Response AL-11, RTC p. 4-600.

Removal of the Sharp Park Restoration Project from the SNRAMP Project Description

The Planning Department is responsible for analyzing the environmental impacts of the project as proposed by the project sponsor, in this case, the SFRPD. Although the lead agency is charged with proposing modifications to a proposed project–in the form of mitigation measures–to reduce or eliminate the project's potential significant impacts, a lead agency would generally not propose changes to the project description itself, such as removing the Sharp Park Restoration Project from the SNRAMP, and therefore, from the Draft EIR. Between the release of the SNRAMP and the development of the EIR, the project at Sharp Park progressed such that it could be reviewed at a project-level rather than a programmatic level. For this project, there are policy and operational reasons for including a project-level analysis of the environmental impacts of the Sharp Park Restoration Project in the EIR for the SNRAMP. The Sharp Park improvements, as described in the SNRAMP and SNRAMP Draft EIR, are an integral part of the SNRAMP itself – they are entirely within the existing Natural Areas boundary and they implement all of the general recommendations (GR) that would occur elsewhere within the Natural areas, including, but not limited to, the protection of sensitive species and habitats, typically through the control of invasive plants (GR-1), but also, in the case of Sharp Park, by restricting dogs from habitat for the San Francisco garter snake and California red-legged frog (GR-8c), as well as the management of sensitive species and vegetation series of limited distribution (GR-2). In addition, one of the project objectives, as identified on Draft EIR p 82, is to specifically "restore the Laguna Salada wetland complex for the

benefit of special status species." Similarly, another project objective, as also identified on Draft EIR p. 82 is to "identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity." If the Sharp Park component of the SNRAMP project were to be removed, one of the CEQA project objectives would not be achieved (i.e., restoring the Laguna Salada wetland complex), and the other objective would be achieved to a lesser extent (i.e., implementing restoration activities).

CEQA contains no prohibition against analyzing two related projects in one EIR. Rather, CEQA prohibits piecemealing, or dividing, one project into two or more projects, which can lead to an underestimation of the project's impacts on the environment. Here, combining the analysis of the Sharp Park Restoration Project with the SNRAMP facilitates the analysis of the two project's cumulative impacts. Further, as stated above, the Sharp Park improvements are entirely within the existing Natural Areas boundary and they implement the management actions identified in the SNRAMP.

However, while within the Natural Areas boundary, based on feedback from resource agencies the boundaries of the restoration project (within the Natural Areas boundary) have been expanded to include portions of the Sharp Park Golf Course. Draft EIR Figure 2, Laguna Salada Restoration Footprint, Draft EIR p. 100, and Figure 3, Laguna Salada Restoration Features, Draft EIR p. 101, delineate the project boundaries. Following completion of the Sharp Park Restoration Project, those areas that were previously designated as part of the golf course that have been restored to provide habitat for special-status species would become part of the Sharp Park Natural Area. Remaining areas not slated for restoration activities would remain part of the golf course and would continue to be managed as golf course operations.

In terms of the boundaries of the Sharp Park Natural Area, the text on Draft EIR p. 104 (following Table 4, Laguna Salada Habitat Types within Restoration Footprint) has been changed to clarify the changes to the Sharp Park Natural Area boundary resulting from completion of the Sharp Park Restoration Project, as follows:

> Following completion of the Laguna Salada Sharp Park Restoration Project, those areas that were previously designated as part of the golf course that have been restored to provide habitat for special-status species would become part of the Sharp Park Natural Area.

CEQA Analysis

The SNRAMP project was initially described in the NOP, which was issued on April 22, 2009. At that time, the Draft EIR was anticipated to analyze the 20-year management plan at a programmatic level, with project-level review of routine maintenance actions and habitat restoration at Sharp Park. The Notice of Preparation identified the following components of the proposed Sharp Park Restoration Project at Laguna Salada and Horse Stable Pond in Sharp Park, among others.

- SP-4a – Implement improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada, including the following:
  - > Create shallow pools within existing wetlands,
  - > Continue monitoring California red-legged frogs and San Francisco garter snakes,
  - > Remove tires from Horse Stable Pond,
  - > Install signs and barriers to keep dogs out of Horse Stable Pond,
  - > Separate the small peninsulas within Laguna Salada from the mainland by small canals, and
  - > Restore Sanchez Creek by deepening the channel, expanding the creek corridor upstream, and buffer zones to limit human disturbance;
- SP-4b – create low mounds, planted with willows, on the western edge of Laguna Salada to serve as a visual barrier, to provide snake and frog basking sites, and to provide nesting habitat for riparian birds;
- SP-4c – reduce draw-down of Horse Stable Pond when California red-legged frog egg masses are present or maintain a stable water level during red-legged frog breeding season.

Subsequent to issuance of the NOP, the project was refined, as described in Draft EIR Chapter III, Project Description, pp. 97 to 104, in part to respond to regulatory agency comments. These refinements provided enough specificity to allow the project, as refined and revised, to be evaluated to a project level of detail.

With respect to the conclusions and recommendations of leading scientific experts, three independent scientific reviews of the 2005 Draft SNRAMP were conducted in August 2005, as stated on SNRAMP p. 1-10. Dr. Lynn Huntsinger[45] and James W. Bartolome reviewed the entire 2005 Draft SNRAMP and provided a detailed report to the SFRPD. The goal of the independent review was to assess the scientific basis for the SNRAMP and evaluate the goals, issues, and recommendations. Additionally, the reviewers were asked to determine if the 2005 Draft SNRAMP was feasible to

[45] Dr. Huntsinger holds a Ph.D. in Wildland Resource Science from the University of California, Berkeley; an M.S. in Rangeland Science from the University of California, Berkeley; and a B.A. in Chinese Studies (Modern History) from the University of California, San Diego. She is currently a Professor of Rangeland Ecology and Management at the University of California, Berkeley.

implement and if implementation of the proposed management activities would result in the desired outcome.

As described on Draft EIR pp. 97 through 104, the project description states that the activities planned for the Natural Areas can generally be divided between routine maintenance and programmatic projects. In the Draft EIR, as further described on pp. 96 to 104, routine maintenance and the Sharp Park restoration are addressed at a project level, while the programmatic projects (e.g., rerouting or constructing trails, stabilizing hillsides, and undertaking initial invasive weed or tree removal projects that typically exceed half an acre or on average 20 trees at any one time) are addressed at a program level. Programmatic projects would undergo additional environmental review, as appropriate, at the time they are proposed. In the Draft EIR, both the programmatic- and project-level components are described in detail, substantially expanding upon what was provided in the NOP. Since publication of the Draft EIR, the restoration activities proposed at Sharp Park have not changed. As previously described, the Draft EIR includes both a program-level and project-level analysis. As described on Draft EIR pp. 79 to 80, there is sufficient detail to provide a project-level analysis of routine maintenance activities and the Sharp Park Restoration Project. However, because the specific details of programmatic activities, as identified in the Draft EIR, are unknown at this time, the Draft EIR analyzes the activities at a programmatic level. CEQA allows, and it is common practice, for an EIR to include both a programmatic analysis and project-level analysis for those portions of the project where sufficient details have been developed.

Further, an EIR is an "informational document" intended to inform public agency decision makers and the public of the significant environmental effects of a project proposal, identify possible ways to minimize the significant effects, and describe feasible alternatives to the project to reduce or eliminate those significant effects. Certification of an environmental document does not constitute a project approval of any kind. Certification of this EIR (with the Sharp Park Restoration project) included does not preclude decision makers from taking other actions in the future with respect to Sharp Park or the SNRAMP.

Prior Litigation

The comment notes that litigation is currently pending regarding Sharp Park. This is no longer correct. The two actions regarding Sharp Park have been dismissed. In one lawsuit, plaintiffs sued the City in federal court, alleging the City's ongoing maintenance and operation of Sharp Park Golf Course violated the federal Clean Water Act and the federal Endangered Species Act. This case was dismissed as moot by the federal trial court, and an appeal of that case was dismissed by the Ninth Circuit Court of Appeals (*Wild Equity Institute et al. v. CCSF, et al.*, Case No. 13-15046). In the other lawsuit, petitioners alleged that the City violated CEQA in its approval of the Sharp Park Safety, Infrastructure Improvement, and Habitat Modification Project. That case was dismissed by the state trial court (*Wild Equity Institute et al. v. CCSF, et al.*, Case No. CPF-14-513613). The outcome of these cases has no bearing on the analysis or conclusions in the EIR. This is because—as required by

CEQA—the Draft EIR analyzes the environmental impacts of the proposed project by comparing the existing physical environmental conditions against the potential physical effects of the proposed project. The existing baseline conditions at Sharp Park remain the same, and this project—including both the SNRAMP and the Sharp Park Restoration Project—could proceed, if approved by decision makers.

Transition of Sharp Park to the GGNRA

While the transfer of management of Sharp Park to the Golden Gate National Recreation Area is not a foreseeable action at this time, even if such management transfer were to occur, it would not affect the analysis or conclusions contained in the EIR. Commenters are correct in stating that the description of proposed actions at Sharp Park has been modified from previously described actions. Draft EIR Section III.G, Changes Made to the SNRAMP Since Publication, pp. 105 to 107, identifies a number of changes that have been made to the SNRAMP because certain proposed actions were (1) found to be infeasible; (2) completed under a separate environmental review; (3) incorrectly described; (4) re-assessed as contrary to policy; or (5) further developed with additional details and specificity.

Scientific Basis of the Sharp Park Restoration Project

Some comments question the scientific basis of the restoration plan and whether the actions would protect the species or are realistic. The proposed restoration plan at Sharp Park was developed by biologists that are experts in wetland, California red-legged frog, and San Francisco garter snake ecology. In addition, scientific experts from local resource agencies, academic institutions and other organizations reviewed the restoration plan during its development and as part of a science round table. In terms of the scientific basis for the SNRAMP, refer also to Response G-3, RTC p. 4-19, which indicates that the Plan was independently and affirmatively reviewed by three scientists, as well as many other agencies, organizations, and individuals who participated in the preparation and/or review of the document.

Whether implementation of proposed actions is realistic is unrelated to the analysis of impacts in the Draft EIR.

Refer also to Response PD-13, RTC p. 4-175, for a discussion of the proposed actions for Sharp Park, including the City's scientific studies, deliberations, and decision-making processes that resulted in the decision to pursue the restoration activities at Sharp Park, as well as a discussion of the alterations proposed for the golf course. In summary, and as further explained in Response PD-13, RTC p. 4-175, the golf course would replace one hole (Hole 12), as required by Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264. Restoration, as proposed under the SNRAMP, would require the elevation of four holes (Holes 10, 14, 15, and 18) to be raised, and the proposed habitat corridor between Horse Stable Pond and Laguna Salada would require Holes 10 and 13 to be slightly shortened or narrowed.

Comment PD-13 Proposed actions for Sharp Park

The response to Comment PD-13 addresses all or part of the following individual comments:

NPS-1-12	NPS-1-16	NPS-1-18
NPS-1-19	SFPGA-3-13	SFPGA-3-15
Sierra Club-1-08	WEI-1-05	Keitelman-1-02
Pfister-1-02	PH-Solomon-01	

- General Comment: We are unable to find any information in the DEIR as to how management of the golf course regarding threatened and endangered species is linked with what is proposed in the document (e.g., mowing). [NPS-1-12]
- Sharp Park Restoration (pg. 103): We suggest changing the language on the following statement: "Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified would be scarified, re-contoured, and hydro-seeded with native vegetation to approximate their pre-disturbance condition." We recommend changing the language to state "those staging and storage areas that are not permanently modified (or identified as staging areas for near-future approved projects) would be scarified …" It doesn't seem appropriate to commit resources re-vegetating an area that will be disturbed in the following project season. [NPS-1-16]
- SP-4b Recommended Management Action (pg. 145): We suggest maintaining low vegetation in these upland mounds to allow for sufficient sun exposure, possibly by including some boulders or similar substrate that wouldn't support vegetation growth. [NPS-1-18]
- SP-8a Recommended Management Action (pg. 145): We recommend including language about working with golf course staff to reduce chemical (fertilizer/herbicide) use to the minimum required and to use chemicals appropriate for areas adjacent to endangered species habitat. [NPS-1-19]
- A description of project timing and phasing must be added.

  (a) Page 103 infers that the Restoration project would be implemented over multiple seasons (which would run from May 1 to October 15). However, the DEIR does not state how many such seasons will be required to complete the project, or what construction activities will occur in each phase, or how such construction will affect golf operations during those phases. May 1 to October 15 is the prime season for golf operations, so the City must develop and include in the DEIR a detailed plan for how to minimize impacts to golf operations during each phase of the Restoration project implementation. [SFPGA-3-13]
- The DEIR should note that the Restoration project "recovery action" is a voluntary and discretionary action. DEIR pp. 98, 293, 326, and elsewhere correctly note that the Sharp Park Restoration plan is a "recovery action," the purpose of which is to provide higher quality habitat for the SFGS and the CRLF. The FEIR should supplement this description by noting that the Restoration project is a completely voluntary and discretionary action by the City, and one that is consistent with the species recovery objectives of both the federal Endangered

Species Act and the California Endangered Species Act but is not required by either the FESA or CESA. [SFPGA-3-15]

- The primary objective of the Management Plan, for the Sharp Park natural area, as for the other areas, is the protection of biological resources. However, in its analysis, the DEIR defines the project as that of protecting biological resources while maintaining an 18-link golf course. The Report goes beyond its purview when it proposes to reconstruct the golf course outside of the designated natural area as the appropriate mitigation for impacts on existing course. There is considerable confusion within the document as to whether the plan is really a plan for the restoration of the Laguna Salada or a plan to reconstruct the 18-link golf course. Moreover, while the Plan envisions reconstructing the affected link elsewhere, there are no details as to exact location or environmental analysis of the impacts of such reconstruction in the Report. Our concern is that what started off as a project related to natural resource protection in the midst of a golf course has morphed into a plan to reconstruct the golf course in the midst of sensitive habitat. The goals and objectives of the project need to be clarified, and the portions of the project related to reconstructing the golf course should either be removed from the DEIR, or the scope of the project needs to be broadened to include both elements. [Sierra Club-1-08]

- **The preferred alternative at Sharp Park is infeasible because permits cannot be obtained to implement it without jeopardizing the financial feasibility of the project.**

  As explained in the attached meeting notes and proposed letter from SFRPD staff, the Fish and Wildlife Service has already reviewed substantially the same plan that is proposed in the preferred alternative for Sharp Park Golf Course. And they have informed San Francisco that in order to implement this plan, it cannot de deemed a "recovery" effort, and so stringent permitting requirements will apply. These will include, among other things, the creation of a capital endowment that will fund the long-term management of Sharp Park's natural areas. Such an endowment or trust would likely require investments of millions of dollars – making the entire proposal infeasible, or certainly less financially feasible than other alternatives available to the City.

  The reason this is so is because the proposed project, particularly in light of reasonable alternatives that were nonetheless rejected by the City, has little to do with the long term restoration of Sharp Park's special status species or the underlying environmental conditions that were destroyed by Sharp Park Golf Course. Rather, the preferred alternative reduces the probability that those objectives of the SNRAMP will be achieved, sacrificing these goals and objectives for golf course water management objectives. The proposed plan is designed to reduce flooding of Sharp Park Golf Course by dredging areas of Laguna Salada and dumping the spoils on the holes which most regularly are flooded during normal winter rains. Given the overwhelming concerns raised about this proposal by the only peer-reviewed assessment of the dredging plan (i.e., the ESA/PWA report), and its incompatibility with the goals and objectives of the SNRAMP, it is simply a violation of CEQA for the city to continue implementing a proposed project that ultimately meets objectives of other projects not within the environmental assessment presented in the DEIR. [WEI-1-05]

- Moreover, in 2004 a survey of San Franciscans found that the number one recreational demand is for more hiking and biking trails: golf finished 16th out of 19 options in the same survey. Yet the city is currently forced to cut services at recreational centers and open spaces while it subsidizes the underused golf course at Sharp Park. This is why residents of both Pacifica and San Francisco have come together to urge San Francisco to consider recreation alternatives at Sharp Park. Because this review is ongoing, San Francisco has not consented to the end-run proposed by golf advocates in Pacifica. [Keitelman-1-02]
- The Recommended Management Actions that do not involve extensive ecological restoration seem half-baked and unlikely to be successful. Is there any scientific basis for believing that these specific actions will protect endangered species? Pumping, building mounds, educating golf course staff, and monitoring water levels and species do not seem to be actions for which implementation is realistic. These types of actions seem to me apologies and cover frequently found in EIS plans for not really addressing the problem of endangered species. It appears that any alternative that does not involve extensive ecological restoration is not science based. The Plan should acknowledge that support for other alternatives is political in nature. [Pfister-1-02]
- I think that this EIR is probably going to be incomplete unless it analyzes the option of taking Sharp Park and giving it to the Golden Gate National Recreation Area. That's something that has been proposed already. I don't believe it's covered in this. I really think that should be on the table for analysis in order for this to be a complete EIR Thank you very much. [PH-Solomon-01]

Response PD-13

These comments express a variety of concerns regarding the proposed project at Sharp Park, including effects on golf course play during construction-related restoration activities, effects of continued operation of the golf course on restoration activities, whether the proposed project constitutes a recovery action, the nature of the proposed re-vegetation, golf course maintenance and use of chemical fertilizers and pesticides on the golf course, transfer of the park to the GGNRA, the context and background of the restoration project, the scientific basis and feasibility of implementing the proposed measures, the appropriateness of including the golf course in the proposed project, and the recreational desires of San Franciscans.

Impacts of Restoration Activities on Golf Course Activities

While the proposed SNRAMP project, which includes future restoration activities at Sharp Park, is entirely separate and independent from the existing and ongoing Golf Course operations, construction associated with the proposed project could affect play at the Sharp Park Golf Course. Currently, it is anticipated that construction-related restoration activities at Sharp Park would be completed in three seasons, although they may be completed in a single season. These details would be further developed as the construction documents are refined. During construction, it is anticipated that the golf course would continue to operate as an 18-hole course; however, there may be periods of time when individual holes will be temporarily closed due to construction activities,

and some holes will likely be shortened and/or narrowed, as well. Therefore, the text on Draft EIR p. 261 (first partial paragraph, under Impact RE-6) has been changed to clarify the potential temporary impacts to the playability of the golf course during construction-related restoration activities, as follows:

> … significantly affecting this recreation facility. However, with implementation of M-RE-6, which calls for retaining the golf course as an 18-hole course, this impact would be reduced to *less than significant*. It is anticipated that during construction, public access to some holes may be temporarily restricted in order to allow movement of heavy equipment and machinery; however, since construction impacts would be temporary and limited in extent and duration, these impacts would also be *less than significant*.

In terms of balancing the requirements associated with construction-related restoration activities and the ongoing operation of the golf course, the second bullet of Mitigation Measure M-BI-6a, as fully presented in Response BI-7, RTC p. 4-365, has been changed to clarify the location of construction staging areas, access corridors, and work areas, as follows:

> - Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project;
> - The construction documents for the Sharp Park restoration project would identify construction staging areas, access corridors, and work zones that are least impactful to biological resources, as well as golf play and operations. Avoidance of wetlands and other biological resource areas, however, would take precedence over avoidance of golf play areas, such that golf play and operations would be impacted rather than biological resources;

One of the commenters also suggests a text change that would avoid committing resources to re-vegetating a staging and storage area (associated with construction-related restoration activities) that could be disturbed in the following project season. Accordingly, the text on Draft EIR p. 103 (lines 7 to 10) has been changed as follows:

> Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified (or identified as staging or storage areas for the next season's restoration activities) would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

Impact RE-6, which is provided on Draft EIR pp. 260 and 261, states that the proposed habitat restoration effort at Sharp Park would modify about 19 acres of the playable and nonplayable space at Sharp Park Golf Course, with some of the areas becoming Natural Areas. In terms of how impacts to actual golf course play would be minimized once the Restoration Plan is implemented, Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, requires the SFRPD to coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf Course while preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources; this would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway

to retain playability and flow of the course. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increase the number of holes east of the highway to five. Restoration, as proposed under the SNRAMP, would require the elevation of four holes (Holes 10, 14, 15, and 18) to be raised, and the proposed habitat corridor between Horse Stable Pond and Laguna Salada would also require Holes 10 and 13 to be slightly shortened or narrowed and Hole 12 to be closed. The determination of where the replacement hole is constructed and whether additional holes need to be moved may require additional environmental review, once the golf course design is further refined and further approval actions are proposed. While removing a hole would affect the playability of the 18-hole course, Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, was identified to restore the playability of the Sharp Park Golf Course as an 18-hole course, and Draft EIR p. 261 concluded that a less-than-significant project-related impact would result.

Further, as stated on Draft EIR p. 374, the operation of pumps to control water levels in Horse Stable Pond and Laguna Salada would be designed to maintain optimal water levels for the protected species. The operations of the pumps would have a secondary benefit of reducing the flooding (which can leave red-legged frog egg masses stranded once flood levels subside) on the golf course and adjacent properties. Water levels in Laguna Salada and Horse Stable Pond would not be drawn down more than necessary to prevent flooding and would, therefore, not draw down groundwater levels such that saltwater would intrude. To further prevent flooding, and as stated on Draft EIR p. 100, excavated dredge spoils appropriate for use as golf course substrate materials would be used on-site to raise the elevation of Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada.

Impacts of Golf Course Activities on Restoration Activities

Recognizing that ongoing golf course activities could impact sensitive biological habitats that are enhanced and restored as part of the SNRAMP, Draft EIR Mitigation Measures M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326; Mitigation Measure M-BI-12a, Protection of Wetlands during the Sharp Park Restoration Project, p. 339; and Mitigation Measure M-BI-12b, Laguna Salada Restoration Project Wetland Mitigation Plan, p. 340, provide for monitoring and maintenance activities to ensure or increase the likelihood of the success of the restoration activities. Further, several SNRAMP recommendations also address how golf course operations must be implemented to avoid or reduce impacts to sensitive habitats. Recommendation SP-4e indicates that golf course vehicles should not use the service road from Moose Lodge to Horse Stable Pond, instead using the levee to avoid a "take" of an endangered species. Both Recommendation SP-4e and Recommendation SP-9a require the creation of educational materials and signage to inform and educate staff about the importance of protecting sensitive habitats and endangered species. Lastly, Recommendation SP-9c requires the creation of a buffer zone between the Laguna Salada wetlands and the golf course fairways to protect sensitive habitats and species from human disturbance. Further, measures to reduce impacts to sensitive

species or habitats (associated with the use of fertilizers or pesticides on the golf course) are discussed in the last paragraph of the following section.

Recommended Revisions to Management Actions 4b and 8a (Restoration Planning Details and Coordination between the SFRPD and Golf Course Staff)

The commenter provides suggestions regarding Recommended Management Actions SP-4b and SP-8a in terms of restoration planning details and ongoing coordination between the SFRPD and the golf course staff with respect to the use of fertilizers and herbicides.

With respect to Management Action SP-4b, while the current restoration design has advanced beyond the conceptual level (to a 35 percent level of construction detail), it is not yet at final design. Details regarding sun exposure, the type of vegetation to use in the upland mounds, and re-vegetation of staging and storage areas would be determined during the development of more detailed construction documents; however, it is anticipated that the upland areas would be designed with some open features to promote basking habitat for San Francisco garter snake. In addition, resource agencies may require temporary revegetation of construction areas.

The commenter requests that additional language is included in Management Action SP-8a about "working with golf course staff to reduce chemical (fertilizer/herbicide) use to the minimum required and to use chemicals appropriate for areas adjacent to endangered species habitat." This language is included in Management Action SP-5a, provided on SNRAMP p. 6.4-14, which states that "The Integrated Pest Management and Natural Areas Program staff shall work with the golf course operations staff to reduce the use of chemicals to the bare minimum. Alternative management methods may be more environmentally appropriate for this location (MA-1d to MA-1f)." Further, as with Natural Areas staff, golf course staff are also subject to the City's Integrated Pest Management (IPM) Program, a multistep ecologically-based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests with the least possible hazard to people, property, and the environment. Further, as stated on Draft EIR p. 369, under the SNRAMP, only aquatic-specific herbicides would be applied to wetlands and to areas next to waterbodies. Refer to Response HZ-1, RTC p. 4-531, for a detailed discussion of the City's IPM program, Reduced Risk Pesticide List, use of the Precautionary Principle, the SFRPD's least-toxic decision-making model process for the treatment of invasive species, and the type and amount of pesticides that have been used by SFRPD in the Natural Areas.

As further discussed below, the proposed project does not include the existing golf course or the golf course operations and, thus, management of the golf course is not addressed in the Draft EIR; however, the Biological Opinion[46] for the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project addresses the golf course operations with respect to the use of pesticides. Biological Opinion p. 15 states that "During the 10 year duration of the Project, only organic fertilizers, such as pro-biotics, blood meal, lime, and compost tea, will be used at Sharp Park, and they will only be applied to the greens, tees and surrounds. No fertilizers will be applied to fairways." The same page of the Biological Opinion goes to say that "During the 10 year duration of the Project, the City will not use any chemical pesticides on the golf course or associated landscaped areas at Sharp Park. Golf course pests and weeds will be controlled either by hand weeding or promoting healthy soil ecosystems."

With respect to the potential impacts of pesticide use on the California red-legged frog, and in response to a lawsuit filed by the Center for Biological Diversity on April 2, 2002, against the United States Environmental Protection Agency (EPA), the Courts issued a Stipulated Injunction that includes restrictions on the use of products that contain 66 pesticide active ingredients in 32 California counties, including San Francisco. Pesticides in the injunction that are on the San Francisco Reduced Risk Pesticide List are those containing glyphosate, imazapyr, and triclopyr. The restrictions prohibit ground applications in a 260-foot zone around any waterbody in affected areas (consisting of 200-feet of upland habitat surrounding the water and an additional 60-foot buffer zone around the upland habitat). Upland habitat includes all areas within 200 feet of the mean high water mark where the frog can find shelter, refuge from predators, or rest, and includes rocks, organic debris, small mammal burrows, moist leaf litter, and manmade features. A reduced buffer zone of only 60 feet is required for localized spot treatments using hand-held devices on rights-of-way, roadsides, pastures, lawns, or forests; spot treatments of wasp and hornet nests; individual tree removal using cut stump applications; basal bark application to individual plants; or use of pesticides in bait stations. The prohibitions in the injunction do not apply to public-entity-administered vector control programs or the control of state-designated invasive species or noxious weeds under certain conditions, such as if the application is at least 15 feet from waterbodies, no precipitation is forecast within 24 hours, or it is applied by a certified applicator under the direct supervision of a certified applicator.[47]

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[46] A Biological Opinion is issued by the USFWS to provide written documentation of the agency's opinion as to whether a project is likely to jeopardize a listed species or destroy or adversely modify a listed species' critical habitat. At issue for the SNRAMP project was whether there would be effects to the federally threatened California red-legged frog *(Rana draytonii),* the endangered San Francisco garter snake *(Thamnophis sirtalis tetrataenia),* and the endangered mission blue butterfly *(Icaricia icarioides missionensis).*

[47] San Francisco Department of the Environmental Factsheet. *California Red-Legged Frog Stipulated Injunction Regarding Pesticide Use in Critical Habitat.* January 1, 2009.

Project Objectives and Other Proposed Uses at Sharp Park

Some commenters question whether the proposed project to restore Laguna Salada is a project to reconstruct a golf course and question whether the environmental assessment inappropriately includes the golf course. The objectives of the project, in terms of CEQA, are the project objectives articulated in Draft EIR Section III.C, Project Objectives, which include the following (refer to Draft EIR p. 82):

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management approach;
- To provide guidelines for passive recreation compatible with San Francisco's natural resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex for the benefit of special-status species.

The CEQA objectives were taken from the SNRAMP objectives, with the exception of the objective that seeks to restore the Laguna Salada wetland complex for the benefit of special-status species. That particular objective came from a Board of Supervisors' recommendation, which was issued three years after the Final Draft Plan was issued, but before the EIR was prepared. There are a few additional SNRAMP objectives that are not CEQA objectives because they deal specifically with data and analysis that was required for development of the SNRAMP. In addition, the SNRAMP also articulates a series of goals that support the SNRAMP objectives.

The Draft EIR objectives do not suggest that the project should protect biological resources while maintaining an 18-link golf course. The project objectives, in fact, do not address the golf course at all and the golf course is not part of the SNRAMP project. The purpose of the Sharp Park Restoration Plan is to improve habitat for the California red-legged frog and San Francisco garter snake. The restoration project would have a secondary benefit of reducing the flooding on the golf course and adjacent properties.

The restoration project was developed in consultation with resource agencies. Those agencies determined that a plan that only identified restoration within the current Natural Areas boundary would not provide sufficient habitat for the California red-legged frog and the San Francisco garter snake. Therefore, the only way to meet the goals and objectives of the SNRAMP was to expand the restoration activities into the golf course, resulting in the elimination of one hole (Hole 12) and the narrowing and shortening of others, as previously described.

The Draft EIR evaluated the impact of changing the golf course design and concluded that significant and unavoidable project-related impacts to historic resources and significant and unavoidable cumulative recreation impacts would result from the project and, therefore, mitigation measures were identified. In order to reduce impacts to the recreation resource, Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, would restore the playability of an 18-hole course, and in order to reduce impacts to cultural resources. Mitigation Measure M-CP-7, Documentation of the Sharp Park Golf Course, p. 222, would document the cultural resources of the Sharp Park Golf Course.

As discussed on Draft EIR p. 264, implementation of the Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, could result in additional environmental impacts. The potential impacts associated with the redesign of the golf course to replace the hole as described in Mitigation Measure M-RE-6 have been identified on Draft EIR pp. 264 to 269. Once a redesign is proposed, additional environmental review may be necessary. While the portions of the course that are included within the restoration project would become part of the Natural Area at Sharp Park, the project is not a proposal for changing the golf course, although areas on the golf course are affected by the restoration project.

One commenter cites the SFRPD's Recreation Assessment, which concludes that hiking trails and other recreational activities are more desirable than golf. As previously mentioned, the golf course is not part of this proposed project; instead, because the SNRAMP project affects the golf course, the Draft EIR must identify ways to mitigate those impacts. Further, this comment is on the merits of the project, not the environmental analysis. Comments on the project's merits have been forwarded to the SFRPD staff and Commission for consideration.

Scientific Basis for the Proposed Restoration Activities

With respect to one of the commenter's concerns about the scientific basis for the proposed restoration activities and the evaluation process that resulted in the SNRAMP, the text on Draft EIR p. 77 (beginning with the first paragraph) has been changed to add new information, as follows:

> While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks of San Francisco and Pacifica that are managed by the SFRPD. In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation ~~and~~& Park Commission approved the first Significant Natural Resource Areas Management Plan.
>
> Since 1995, the SFRPD has embarked on an almost 10-year process that involved SFRPD, meetings with over 3,000 members of the public, task forces, advisory groups, independent technical advisers, consultants, and decision-making bodies to study, consider, and ultimately propose the 2006 Significant Natural Resource Areas Management Plan.

In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city. Outreach included sending fliers to neighborhood groups and residents within 300 feet of all Natural Areas, the Mayor's Office of Neighborhood Groups, SFRPD's list of neighborhood groups, and other interested parties. Announcements were also posted at all Natural Area sites. An online survey was available for individuals and members of the public that were unable to attend in person. Feedback was received from approximately 2,700 members of the public. Further, several task forces, committees, and working groups were convened as part of this process, including (1) the Natural Areas Program Citizen Advisory Committee, an ad hoc group that made recommendations on how to revise the plan, (2) a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and (3) the Sharp Park Working Group. The Sharp Park Working Group, which was convened by SFRPD and facilitated by an independent party, consisted of land managers with an interest in the property, including San Mateo County, the City of Pacifica, the Golden Gate National Recreation Area, and the SFRPD. In addition, revisions to the Sharp Park Restoration Plan were also specifically made in response to input from scientists and regulatory agencies.

Three independent scientific reviews of the 2005 Draft SNRAMP were also conducted in August 2005. The goal of this independent review was to assess the scientific basis for the plan and evaluate the goals, issues, and recommendations. Additionally, the reviewers were asked to determine if the 2005 Draft SNRAMP was feasible to implement and if implementation of the proposed management activities would result in the desired outcome. The first review was conducted by Dr. Lynn Huntsinger and James W. Bartolome[48] who provided a detailed report to the SFRPD (Huntsinger and Bartolome 2005). This review reached the following overall conclusions:

- The 2005 Draft SNRAMP was based on sound science and was a reasonable compromise between ideals, practicality, and competing uses.
- The management goals (conservation, restoration, education, stewardship, recreation, and monitoring) are consistently addressed throughout the Plan.
- The proposed actions and monitoring seemed generally feasible.

The review suggested revisions to the recommendations dealing with management of the urban forest understory, grasslands (see GR-3 in Section 5), and butterfly host plants (see GR-10). The general recommendations referenced by these comments have been revised and updated. The review also suggested minor changes to the Monitoring protocols (Section 7), which were implemented.

A second review was conducted by Roy A. Woodward, PhD. Dr. Woodward made comments on and suggested edits to the text, particularly as it related to the Monitoring Plan and Protocols. The 2005 Draft SNRAMP was revised per these edits as appropriate.[49]

A third review was conducted by Peggy Fiedler, PhD. Dr. Fiedler concluded that the 2005 Draft SNRAMP in general succeeded in its goals and "strikes a balance between natural resource

[48] Review: Significant Natural Resource Areas Management Plan, Lynn Huntsinger and James W. Bartolome, Submitted to the San Francisco Recreation and Parks Department, August 2005.

[49] Hand edits to 2005 SNRAMP text from Dr. Roy A. Woodward, Ph.D., Senior Environmental Scientist, Natural Resources Division, State of California, Department of Parks and Recreation, no date.

protection and the needs of citizens in a highly urbanized, densely populated, highly ethnically diverse, overall well-educated area."[50]

~~Over the course of several years,~~ Ultimately, the SFRPD updated and expanded the level of detail in the 1995 plan, as well as incorporated the comments from the above scientific reviews on the 2005 Draft SNRAMP, ~~ultimately~~ resulting in ~~a new~~ the 2006 Final Draft Significant Natural Resource Areas Management Plan (SNRAMP, SFRPD 2006)~~, with a final draft plan~~. The San Francisco Recreation ~~and~~& Park Commission approved the final draft SNRAMP ~~plan~~ for CEQA evaluation in August 2006. In April 2009, the Board of Supervisors introduced legislation that required the SFRPD to develop and plan for restoring Sharp Park for the California red-legged frog and the San Francisco garter snake; in response to this, the SFRPD began to develop the Sharp Park Conceptual Restoration Alternative Report, which was completed in September 2009.

In December 2009, the Recreation & Park Commission agreed to proceed with the Laguna Salada Restoration while preserving the 18-hole golf course at Sharp Park. In August 2011, the SNRAMP Draft EIR was released for public comment and in September 2011, a Historic Preservation Commission Hearing was held (with split votes as to whether Sharp Park is a historic resource) and in October 2011, the Planning Commission Hearing on the Draft EIR was held.

This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 in San Francisco and one (Sharp Park) in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP.

Refer also to Response G-3, RTC p. 4-19, for a more detailed discussion of the City's 10-year process that resulted in the SNRAMP.

Sharp Park Recovery Efforts

Some comments discussed whether or not the actions at Sharp Park are considered "recovery efforts," whether the actions are voluntary, are consistent with federal and state species recovery legislation, and whether they are feasible. A primary purpose of the actions described in the SNRAMP and the Draft EIR is to contribute to the recovery of the California red-legged frog and San Francisco garter snake. The actions described in the SNRAMP are consistent with the Recovery Plan for the California red-legged frog and San Francisco garter snake. The proposed restoration actions would also reduce existing flooding impacts on the Sharp Park and adjacent properties. The text on Draft EIR p. 98 (beginning of the only full paragraph) has been changed to clarify that the restoration actions described in the SNRAMP and Draft EIR are voluntary, as follows:

The Sharp Park Restoration project is a voluntary and discretionary action by the City, a primary purpose of which is to provide higher quality habitat for the San Francisco garter snake, a State and Federally endangered species, as well as a species identified as fully protected under the State Fish and Game Code, and the California red-legged frog, a State threatened species; further, it is an action that is consistent with the species recovery objectives of both the federal Endangered Species

[50] Peer review of the Public Draft Significant Natural Resource Areas Management Plan, June 2005, Peggy L. Fieldler, Ph.D., Senior Scientist II/Associate, BBL Ecosystem Science and Restoration Services to Ms. Lisa Wayne, San Francisco Recreation and Parks, September 29, 2005.

> Act and the California Endangered Species Act. The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. …

It is understood by all involved parties that specific permits would be required from the involved resource agencies to conduct the proposed restoration activities, but it is not assumed that permits would be denied or that they could only be obtained by jeopardizing the financial feasibility of the project. Permit requirements for the proposed project at Sharp Park are described in Table 3, Potentially Required Regulatory Approvals, Draft EIR p. 81. During the review of the proposed project, the resource agencies would determine what permitting requirements are required for the project. Financial feasibility of the project is not discussed in the Draft EIR because CEQA does not require such an evaluation.

GGNRA Management of Sharp Park

Lastly, one of the comments requests that Sharp Park is "given to" the GGNRA. As also stated in Response PD-12, RTC p. 4-168, while the transfer of management of Sharp Park to the Golden Gate National Recreation Area is not a foreseeable action at this time, even if such management transfer were to occur, it would not affect the analysis or conclusions contained in the EIR.

Comment PD-14	**Support the configuration and continued operation of the Sharp Park Golf Course**

The response to Comment PD-14 addresses all or part of the following individual comments:

BAGCNC-1-01	PGA-1-02	SFPGA-2-05
Archer-1-02	Gleichenhaus-1-02	Haire-1-01
Horn-1-02	Murphy-B-1-01	Valente-1-08
PH-Antonini-05	PH-Sherap-01	

- For these reasons, we thank you for your efforts to preserve the historic Alister MacKenzie golf course at Sharp Park. And we urge you to resist those who would destroy it. [BAGCNC-1-01]
- We also feel strongly that as a provider of local jobs and as an attraction that can bring golfers to your area from outside your region, there are considerable economic reasons to continue operating Sharp Park Golf Course. [PGA-1-02]
- We also feel strongly that as a provider of local jobs and as an attraction that can bring golfers to your area from outside your region, there are considerable economic reasons to continue operating Sharp Park Golf Course. The PGA of America is proud to present golf as an important component of local and regional economies as well as a healthy and fun recreational activity that can be enjoyed by young and old, men and women, as a family activity, with friends or business associates, no matter their economic or ethnic background. [SFPGA-2-05]

- Please let's dialogue with a larger vision, with an eye and ear toward to opposing view, and come to understanding that such an historic golf course must remain so that generations of adults and children can play golf, the best of all sports, for a reasonable cost, on this remarkable, historic and beautiful golf course. Your attention to this issue is greatly appreciated. [Archer-1-02]
- Reducing the footprint or significantly changing the Mackenzie designed course should be eliminated from consideration. Like many other San Franciscan's and others who play golf, I implore you to support retention of Sharp Park in its current configuration. [Gleichenhaus-1-02]
- Please, I beseech you, help us preserve this city treasure and support our efforts to keep Sharp Park intact. [Haire-1-01]
- Golf is a tremendous sport that provides exercise, enjoyment of the outdoors and underscores sportsmanship, integrity and related values. Sharp Park is a unique asset of San Francisco. The course is known by golfers around the world and has been enjoyed by local golfers because of its unique ocean side location. Given appropriate tender, loving care this course, which remains a gem available to all golfers, will shine again. In this day and age when people are working extra hard for their money and more and more enjoyable activities are getting further out of reach, it is important for us to keep this type of recreational facility open for the enjoyment of low/modest income golfers. [Horn-1-02]
- What better balance could there ever be between birds, animals and a few folks chasing their golf balls and staying well out of the way for all the wild life? God Bless Sharp Park. God Bless Sharp Park. It is a glorious combination for man, bird, and beast!!! [Murphy-B-1-01]
- In this regard, mention must be made of the incredibly ill-advised idea to convert Sharp Park Golf Course into an additional natural area, a habitat for the red-legged frog. The Sharp Park Golf Course is currently generating net income for the City, and provides a valuable recreational resource for a diverse community with respect to age, race, and affluence. To destroy such a valuable recreational resource for a ridiculous notion that red legged frog habitat could be an ecotourism draw is patently absurd. Let us remind you that the terms "recreation" and "park" are a part of the department name for good reason; recreation is an activity the staff is paid to foster, and that happens in parks, not in habitat. [Valente-1-08]
- The most important thing is to make sure that, in my opinion, that the Sharp Park golf course is maintained. [PH-Antonini-05]
- I would like to say that I'm speaking highly in favor of the golf course being preserved. [PH-Sherap-01]

Response PD-14

Some of these comments express support for the continued operation and/or current configuration of the Sharp Park Golf Course. The proposed project does not eliminate an 18-hole golf course from the Sharp Park site. Hole 12 and the other holes that would be affected by habitat enhancements would be replaced, as described in Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp

Park Golf Course to 18 Playable Holes, p. 264. Refer to Response PD-13, RTC p. 4-175, and Response BI-25, RTC p. 4-424, which further addresses the SNRAMP project and how it affects and mitigates impacts to the golf course.

In addition, the Draft EIR evaluated the Maximum Recreation Alternative, which focuses restoration in MA-1 areas and prioritizes recreation opportunities in MA-2 and MA-3 areas. With the Maximum Recreation Alternative, less habitat identified by the SNRAMP would be restored, while all or most of the recreation-related projects, such as trail network improvement, would be implemented. While this alternative would reduce impacts to recreation, the Maximum Recreation Alternative would not reduce the overall environmental impacts of the proposed project and would not meet the goals of the project. In addition, Response AL-, RTC p. 4-572, discusses an alternative that specifically seeks to maximize recreational opportunities at Sharp Park. Comments discussing the merits of the project may be weighed by decision makers; however, such comments are unrelated to the analysis contained in the Draft EIR.

Comment PD-15	**Support limiting Sharp Park activities to controlling invasive species, reintroducing native species, and exclusion of dogs in wetlands**

The response to Comment PD-15 addresses all or part of the following individual comment:

CBD-1-03

- The only proposed management actions for Sharp Park we support are those dealing with controlling invasive species, reintroducing native species and fencing dogs out of sensitive wetlands. [CBD-1-03]

Response PD-15

This comment expresses support for some, but not all, of the management actions at Sharp Park. The limited management actions proposed by the comment were considered and addressed during the 10-year period of development for the SNRAMP. The comment does not relate to the adequacy of the analysis contained in the Draft EIR.

4.B.5 Proposed Modifications to Other Natural Areas

Comment PD-16	**Proposed actions for Bayview Park**

The response to Comment PD-16 addresses all or part of the following individual comment:

Bors-1-02

- One personal thought, a short natural wildlife corridor and trail between Bayview Hill and Candlestick Point SRA might be mentioned as a future possibility. For both parks it would benefit wildlife and offer additional recreational opportunities. [Bors-1-02]

Response PD-16

This comment addresses a suggested action outside the Natural Areas boundaries and scope of the NAP. This comment has been forwarded to the SFRPD staff and Commission for their consideration in future park planning.

Comment PD-17 Proposed actions for Glen Park

The response to Comment PD-17 addresses all or part of the following individual comments:

GGAS-1-18 Form Letter-1-24

- Management measure GC/OH-4a (Avoid removing trees with red-tailed hawk or great horned owl nests and prohibit tree removal within 150 feet of occupied nest) provides an illustration of the kind of need for sound urban forestry management discussed above. Tree inventories should be considered while nesting is underway. Information about the local of important nest trees should be recorded, preferably on maps and with GPS units or tree-tagging. Removal of important nesting trees should be avoided, even if those nesting trees are non-native (at least de-prioritized over other non-native tree removals). Staff should assess whether suitable nesting habitat exists nearby for returning breeding raptors or other birds that rely on the tall trees. [GGAS-1-18]
- Keep Glen Park dog friendly. [Form Letter-1-24]

Response PD-17

These comments focus on Glen Canyon Park, in one instance supporting the urban forestry management provided by Management Measure GC/OH-4a, but also making further suggestions about how to deal with nesting birds. Another commenter requests that Glen Canyon Park remains dog friendly.

Pursuant to SNRAMP General Recommendation GR-4a, annual breeding bird surveys are proposed to develop a list of species nesting, or suspected of nesting, in Natural Areas. As an example, prior to undertaking the project in Glen Canyon Park in 2011-2012 (refer to Comment G-3, RTC p. 4-16, for more information about the Glen Canyon project), NAP staff conducted a breeding bird survey and found no nesting birds in the area. As required by General Recommendation GR-4b, provided on SNRAMP p. 5-5, vegetation management activities that are likely to affect breeding birds (pruning, tree removal, ground cover removal, etc.) shall not be conducted during the breeding season (April 1 to September 1) unless (1) projects begun prior to the breeding season have already disturbed the area, or (2) a breeding bird survey is conducted first. If active nests (or large abandoned stick nests) of a sensitive species are discovered, a 150-foot radius avoidance buffer shall be centered on the nest site(s) to prevent disturbance of the nesting birds while using power tools. Hand weeding may occur to within 50 feet of the nest. In addition, in terms of keeping Glen Park dog friendly, only 15 percent of social trails would be closed in areas that are relatively steep, with almost four miles of trails remaining. Further, on-leash dogs would continue to be allowed access to

Glen Park, as with all Natural Areas and other SFRPD parks, unless noted otherwise (such as within athletic fields and courts, children's play areas, and sensitive habitat areas).

Comment PD-18	**Opposition to any habitat restoration at Glen Park that destroys coyote habitat**

The response to Comment PD-18 addresses all or part of the following individual comment:

Furney-1-01

- I do not support a habitat restoration in Glen Park leads to the destruction of the habitat for the coyote(s) that currently live there. [Furney-1-01]

Response PD-18

The commenter is concerned about habitat restoration at Glen Park that could destroy habitat for coyotes.

Recently, coyote (*Canis latrans*) have been observed in San Francisco and are frequently observed on Bernal Hill and Golden Gate National Recreation Area lands (SFRPD NAP 2005). While neither the SNRAMP nor Draft EIR specifically mentions the occurrence of coyote at Glen Park, one of the goals of the proposed management actions, as stated on SNRAMP p. 6.3-9, is to improve the health and diversity of the urban forest, which would provide better habitat for many mammal species, including coyote.

Comment PD-19	**Proposed actions for Lake Merced**

The response to Comment PD-19 addresses all or part of the following individual comments:

GGAS-1-22

- In addition to the management actions already identified, Golden Gate Audubon recommends the following for Lake Merced:
  - > Improved trash management
    - o Trash containers should be made wildlife-proof
    - o Trash containers should be emptied regularly; currently trash is overflowing on weekends, attracting pests, non-native animals, and posing health risks.
  - > Cease dumping green waste along the sides of the lake
    - o Green waste dumped around the edge of the lake eventually works its way into the lake, changing its chemical composition and contributing to pollutant problems in the lake, including eutrophication.

> Discourage feeding of all animals.

- Signs should be installed to discourage the feeding of pigeons, other birds, and animals near the concrete bridge. Signs should be in multiple languages. [GGAS-1-22]

Response PD-19

This comment suggest additional management actions for Lake Merced, including improved trash management, eliminating the dumping of green waste along the sides of the lake, and discouraging feeding of all animals.

SNRAMP General Recommendation GR-14, p. 5-17, includes the following:

> "Educational materials, including signage to be installed at the appropriate locations and informational handouts, shall be created that discuss the impacts of feeding wildlife and wild animals as well as the problems with releasing unwanted pets into Natural Areas."

Regarding green waste, SFRPD operations did place green waste (mulch) to control erosion on the side of the lake; however, this was a one-time occurrence and is not a standard practice. In general, green waste is taken to an organic transfer station. However, brush, logs, rocks, and other natural elements from the site may be left on site to provide habitat for small mammals (refer to SNRAMP p. 5-12, General Recommendation GR-9a).

Regarding trash management, one goal of the SNRAMP, on p. 87, is, "Where possible, to design and maintain landscapes to discourage the accumulation of trash and illegal encampments." Trash management is not discussed in detail in the Draft EIR because it is considered to be part of the general and ongoing operations of the SFRPD. It is, therefore, outside the scope of the SNRAMP, and the Draft EIR only analyzes the impacts of the SNRAMP. The above comments have been forwarded to the SFRPD staff and Commission for their review and consideration.

The inclusion of the above measures would not affect the analysis or conclusions of in the DEIR.

Comment PD-20 Proposed actions for Mount Davidson

The response to Comment PD-20 addresses all or part of the following individual comments:

GGAS-1-26	MPIC-1-12	MPIC-1-16
MPIC-1-17	MPIC-2-11	MPIC-2-19
MPIC-2-20	Bowman-2-13	Burgard-1-04
Hess-1-01	Hess-1-08	Johnston-1-01
Risk-1-02		

- Mt. Davidson also provides valuable habitat for hawks, hummingbirds, and other native species. Any tree removal necessary should be conducted in a manner sensitive to these and other nesting species. [GGAS-1-26]

- Recreational Use. The DEIR notes that Mt. Davidson Park has high recreational values and trail use by the citizens of San Francisco, yet it does not address the impact of the project tree removal plan on fostering the growth of the invasive native poison-oak or how this significant negative impact on Park visitors will be mitigated. Where trees have been removed thus far, we have seen a significant increase in poison oak, often along hiking trails, and we believe this proliferation of poison oak will increase substantially as more trees are removed. The MPIC reiterates its request for the project plan to include a policy to keep poison oak at least 10 feet away from all trails at all times. [MPIC-1-12]
- The plan should also include monthly removal of all poison oak within 10 feet of trails and maintenance and protection of historic Works Project Administration (WPA) trails and retaining walls. [MPIC-1-16]
- Any activity for implementation of the SNRAMP should not restrict public use of the park or access to the historic area or viewpoints for more than 30 days at a time. [MPIC-1-17]
- SNRAMP Figure 6.2-3, Vegetation for Mt. Davidson, significantly undercounts the number of Monterey Cypress trees growing in the areas described as blue gum forest by incorrectly showing the cypress as limited to a very small area on the southeastern edge of the park. The SNRAMP vegetation inventory of Monterey Cypress should be corrected, and these cypress trees should be exempt from the tree clearing proposed to implement this program. Neither Monterey cypress nor Monterey pine are invasive, and both add greatly to the recreational and aesthetic experience within the Park, including hosting a varied bird population that would be lost with their removal. Even the California Invasive Plant Council agrees with this assessment. Both of these species are California natives; fossil evidence shows that they existed on the San Francisco peninsula in the distant past.

  On Mt. Davidson, plans to destroy 1,600 trees over 15 ft tall include many Monterey cypresses In this particular "natural area," it is not accurate to say that "most" trees that will be removed are invasive. Since these species are native to California and have existed in San Francisco in the past, it is an exaggeration to call them non-native. The MPIC insists <u>that all healthy cypress and pine trees in the MA-1c, MA-2c, and MA-2e areas be allowed to remain</u> and that new cypress or pine be replanted one-for-one within in these same zones to replace each blue gum eucalyptus cut down. Furthermore, any trees removed from the MA-3 zone also should be replaced with the historic cypress, cedar, or pine species in order to maintain the historic visual character of the Sutro forest. These species grow much faster than oaks, and are more suited than oaks to survive the soil and climate conditions in Mt. Davidson Park. In fact, oaks never existed on Mt. Davidson, so no valid argument can be made for replacement of removed trees with oaks. [MPIC-2-11]
- The DEIR does not address the fact that, as demonstrated by tree removal to date, the project tree removal plan will foster the invasive growth of native poison oak, and does not describe how this significant negative impact on Park visitors will be mitigated. Where trees have been removed thus far, we have seen a significant increase in poison oak, often along hiking trails, and we believe this proliferation of poison oak will increase substantially as more trees

are removed. The MPIC reiterates its request for the project plan to include a policy to keep poison oak at least 10 feet away from all trails at all times. [MPIC-2-19]

- The DEIR also does not address how SNRAMP will limit dog access, whether recreational amenities such as benches will be disallowed, or which trails will be closed in the MA-1 and MA-2 areas. The planned limitation of access in the MA-1 and MA-2 areas of the park would significantly negatively impact recreational experience of this important park area for residents of the West of Twin Peaks District. There is now only one bench in Mt. Davidson Park, and for full enjoyment by recreational users additional benches should be allowed and installed throughout the Park, including MA-1 and MA-2 zones. The EIR should be explicit about what is meant by passive recreation – e.g., does this mean no benches, picnic tables, trashcans, significantly fewer trails in these "native plant" zones – and should analyze the impact of such prohibitions on these recreation facilities most park users would consider to be part of passive recreation.

  Because the one trashcan previously in place at the summit of Mt. Davidson has been removed, litter is often left where this trashcan used to be. The EIR should be explicit in stating that the SNRAMP means that there will be no trash cans or litter pick-up in the park and should address the impact of this policy on the aesthetic experience of the park. [MPIC-2-20]

- In addition, poison oak is increasing in the parks and herbicide use is escalating. From personal experience, I know that poison oak outbreaks are debilitating for one to two weeks. When I have a poison oak outbreak, I am typically bedridden for 4 to 5 days with a painful reaction. Allowing poison oak to proliferate near city park trails should never be allowed because of health reasons. [Bowman-2-13]

- We ask that the Planning Department reconsider its plan to remove trees from Mount Davidson and spend the resources on improving access to the open area with improved trails, interpretative signage, and benches. [Burgard-1-04]

- Good morning Mr. Wycko. My mother, husband, son, brother and I would like to let you know that we strongly oppose NAP's plans to remove trees from Mt. Davidson. I was raised in the house on Robinhood Drive that my mother still lives in. It is 1 1/2 blocks from our beautiful Mt. Davidson. My life was so much more complete growing up in the city having the gorgeous Mountain to explore, blackberries to pick and Easter Sunrise services to attend.

  I still spend much time walking our dog on Mt. Davidson and it is a real highlight of our visits to San Francisco.

  We oppose NAP's plans for the following reasons:

  (1) Mt. Davidson is a beautiful, cathedral like area providing serene relief for city dwellers and their dogs. NAP's plans will destroy this meditative place and rob dog walkers and humans of much of the access. [Hess-1-01]

- Overall this magical and serene area must be protected for the public benefit and enjoyment and for the protection of this priceless natural habitat. [Hess-1-08]

- We are horrified by the proposal to remove healthy trees on Mount Davidson. It would make views of the mountain substantially uglier, and would significantly worsen the recreational use of the mountain. I would not enjoy hiking up there if I didn't get the experience of being in a dense forest.

  The DEIR is misleading because it does not acknowledge that the impact of removing 1600 of Mount Davidson's trees on recreation and aesthetics would be significant and adverse. [Johnston-1-01]

- * The plan would replace 1600 or more mature and healthy trees in the middle third of the 30-acre Mt. Davidson Forest with "native scrub and grassland habitats." (MA-1e, MA-2c and MA-2e on the attached SNRAMP map) Native plant enthusiasts already have access to the entire open eastern slope of Mt. Davidson. This past year a huge swath of trees was removed by the Water Department when they installed the new pipeline to the water tank at the top of the mountain. We do not want any more sections of the forest to be removed. [Risk-1-02]

Response PD-20

These comments express concerns about proposed tree removal activities at Mount Davidson and also suggest the SNRAMP include specific policies for the removal of poison oak.

According to Draft EIR Table 5, Mount Davidson consists of a total 40.2 acres of Natural Areas, of which 30.1 acres are within managements areas (i.e., designated as MA-1, MA-2, or MA-3 lands). Tree removal and thinning for habitat preservation activities and effective opening of the understory would occur on only 9 acres (or approximately 30 percent) of the 30.1 acre urban forest. No tree removal for habitat preservation would occur in the remaining 21.1 acres of urban forest. As a result, 70 percent of the urban forest at Mount Davidson would remain "as is."

As stated in Appendix F of the SNRAMP (SNRAMP Table F-1, p. F-14), the tree removal proposed for Mount Davidson represents less than 15 percent of the existing invasive, nonnative trees, calculated as 1,600 trees to be removed out of 11,000 existing trees; the trees within the existing forest stands would be thinned, not clear cut. Further, the tree removal is concentrated in three of the seven total management areas (MA-1c, MA-2c, and MA-2e), all of which are predominantly in the interior portions of Mount Davidson, making the tree removal less visible from surrounding vantage points. The greatest tree removal, both in terms of actual numbers of trees removed and the percentage as compared to the number of existing trees, would occur in MA-1c. Table F-1, provided on SNRAMP p. F-14, shows that 82 percent of the trees in MA-1c would be removed; 31 percent of the trees in MA-2c would be removed; and 23 percent of the trees in MA-2e would be removed; overall, the total tree removal at Mount Davidson, considering the other management areas that would experience no tree removal, would be approximately 15 percent. The commenter is correctly quoting SNRAMP p. F-8, which *incorrectly* states that "the bulk of the tree removal will occur in MA-2e …" Table F-1 provides the correct tree removal information, indicating that the majority of tree removal at Mount Davidson would occur in MA-1c.

One of the commenters requested that "all healthy cypress and pine trees in the MA-1c, MA-2c, and MA-2e areas be allowed to remain." As described on Draft EIR p. 140, all of the invasive trees to be removed at Mount Davidson are eucalyptus; pine and cypress trees are not proposed for removal in this Natural Area. At Mount Davidson a total of 1,600 blue gum eucalyptus trees are proposed for removal over the next 20 years within management areas MA-1c, MA-2c, and MA-2e.

According to Draft EIR p. 92,

> "the SNRAMP defines a tree as any plant having a dominant vertical trunk that is over 15 feet tall; tree species less than 15 feet tall are considered seedlings or saplings in the SNRAMP. Natural Areas Program staff could remove trees that have a diameter at breast height11 (dbh) of six inches or less; Natural Areas Program staff would coordinate with the SFRPD arborist, who would evaluate the removal of larger trees."

Therefore, the number of trees affected at Mount Davidson includes, by definition, trees over 15 feet tall.

In terms of the removal of invasive trees (such as eucalyptus) and/or the removal of overhanging tree limbs, as stated on Draft EIR p. 97:

> "this activity typically occurs in places where trees are expanding into or threatening a native habitat or presenting a safety concern…Typically, no more than 20 trees (or half an acre) are treated at one time. This removal covers saplings and any tree over 15 feet high. Trees over six inches dbh are typically removed by tree crews at a rate of one to a few trees at a time. Trees will be removed manually and limb-by-limb, as described above."

In the short term, tree removals would occur gradually over 20 years and some opening of the canopy at selected areas may be visible from nearby vantage points. However, in the long term, due to the removal techniques, most of Mount Davidson will still support a lush and healthy urban forest, even when tree removals are complete.

Poison oak grows equally well under full sunlight and in shaded areas. In open areas under full sunlight, it forms a dense, leafy shrub usually 1 to 6 feet high. In shaded areas, such as in coastal redwoods and oak woodlands, it grows as a climbing vine, supporting itself on other vegetation or upright objects using its aerial roots.[51] According to SFRPD's website, poison oak is very common in San Francisco natural areas, and NAP staff continuously control poison oak along trails in order to allow safe pedestrian access.[52] Nonetheless, because it grows as a vine, poison oak can grow near trails and, conversely, hikers on social trails or off-trail can come into contact with poison oak. The SFRPD encourages hikers to become familiarized with the plant's appearance to avoid unintentional

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[51] http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7431.html, accessed on July 28, 2014.

[52] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on October 15, 2015.

contact and, since poison oak oils can be transmitted to humans via dog hair, SFRPD recommends dogs are kept on leash and on trail to similarly avoid transmittal.[53] Recommendations related to removal of poison oak have been forwarded to the SFRPD staff and Commission for their consideration.

Refer to Response LU-4, RTC p. 4-216, for a more detailed discussion of the requirements for removal of a street tree, significant tree, or landmark tree. In summary, the removal of any of these trees requires a 30-day noticing period unless the tree is hazardous or poses an immediate emergency concern, in which case removal could occur immediately or under a 15-day noticing period. There are additional requirements if a written objection to the removal of a tree is filed and, in the case of landmark trees, there is a presumption that removal is not required unless it can be demonstrated otherwise. During the noticing period, no trees are to be removed. Further, all vegetation management, including tree removal, would be conducted in accordance with the breeding bird provisions outlined in General Recommendation GR-4b.

No project impacts to the Works Progress Administration features were identified as part of the Draft EIR evaluation.

One of the commenters requested that any activity for implementation of the SNRAMP should not restrict public use of the park or access to the historic area or viewpoints for more than 30 days at a time; it is not possible to include this recommendation, as some activities would require longer than 30 days to complete. SFRPD is committed to ensuring that any disturbance to a park would be as limited as possible. Further, as indicated above, if it is a Capital Project, which could exceed 30 days, there would also be a public input and outreach process, which affords another opportunity for public input.

SNRAMP p. 1-11 also goes on to describe how the SNRAMP will be implemented if changes in conditions are discovered during the 20-year monitoring and management period:

> "If a plant or animal species, plant community or specific wildlife habitat of sufficient import is discovered that is not identified in the management plan, then the Recreation and Park Commission must approve any significant change in allowable uses or tree removal or approve any change in allowable access deemed necessary for protection or enhancement of the newly identified area.
>
> Similarly, if (re)introductions result in a proposed change of management classification from a less restrictive one to a more restrictive one, such as MA-3 to MA-2 or MA-2 to MA-1, then SFRPD will seek approval for any change in Management Areas affecting land use, access, or tree removal to the Commission prior to changing the classification.

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[53] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on October 15, 2015.

> The SFRPD will conduct public outreach programs to local and citywide stakeholders (including park visitors and neighbors) whenever a change is proposed to the allowable land uses, access, or tree removal as delineated in the plan. Outreach techniques and programs may include mailings, signage and on-site meetings. Should conflict with natural area protection lead the Dog Advisory Committee (DAC) to decertify one of the adjacent DPAs, a community meeting in the immediate neighborhood would be hosted by the DAC and the process would be subject to the Dog Policy's rules."

As with all comments, these comments will be considered by decision makers as part of their decision to approve, modify, or disapprove the proposed project, even where they do not pertain to the physical environmental impacts caused by implementation of the SNRAMP.

Comment PD-21 Proposed actions for Pine Lake

The response to Comment PD-21 addresses all or part of the following individual comments:

Form Letter-1-10 Form Letter-1-25 Pfister-1-01

- I walk at Pine Lake with my dog. Please keep it open. [Form Letter-1-10]
- I walk at Pine Lake with my dogs off leash. Chihuahua meetup also there. [Form Letter-1-25]
- PL-7c & PL-7b are inadequate measures to protect the lake from dogs. Dogs do not read signs and cannot be made aware of a prohibition of entering the lake. The leash law must be enforced in this area of the park. Many park visitors with dogs have a tradition of ignoring the leash law and this can only be changed through enforcement. I would also like to see measures enacted to reduce run off into the lake, including from dog feces through enforcement of the statute requiring picking up after dogs. [Pfister-1-01]

Response PD-21

These comments express concerns about the proposed actions at Pine Lake, including proposed limitations on dog access and whether the management actions are sufficient to protect the lake from dogs.

Recommended management actions at Pine Lake include, among others, restricting dog access to the lake (PL-7b) and posting signs informing the public of rules at the lake prohibiting dog access in the lake (PL-7c). These signs would inform dog owners of the prohibition on dog access to the lake, allowing owners to handle their dogs appropriately. This is consistent with SNRAMP General Recommendation GR-14b, p. 5-17, which emphasizes the importance of providing appropriate educational signage in the Natural Areas that explains SFRPD's management activities and goals for these areas, and how they serve to protect natural resources and ecosystem functions. However, while dogs would not be allowed in the lake itself, dogs are permitted on leash within the remaining portions of the Pine Lake Natural Area and at all SFRPD parks. In fact, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately

2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city.

Enforcement of the existing leash laws and other use restrictions is an ongoing City responsibility and is not within the sole management control of the NAP staff.

Comment PD-22 Proposed actions for Tank Hill

The response to Comment PD-22 addresses all or part of the following individual comment:

Gaar-1-02

- Tank Hill. The scores of non-native trees located on the summit are the major threat to Tank Hill's biological resources. The failure of the Natural Areas Management Plan to propose the removal of these trees and the failure of the DEIR to address the long-term environmental impacts of retaining the trees need to be addressed in the final EIR. The eucalyptus and acacia trees will continue to grow thereby cumulatively expanding the shade, leaf litter, fog drip and altering the chemical composition of the soil. These impacts encourage the spread of numerous highly invasive exotic plants (*Erharta erecta, Oxalis pes-caprae, Rumex acetosella* etc). All of these negative environmental impacts will continue to reduce Tank Hill's native plant community and the wildlife that depend on that community. Also, the trees are rapidly spreading to the perpendicular cliff above Twin Peaks Boulevard. The tree roots are breaking apart the chert rock which will continue to destabilize the cliff causing more landslides which destroys habitat and exposes the city to lawsuits. The DEIR fails to discuss these impacts. [Gaar-1-02]

Response PD-22

This comment expresses concern about retaining nonnative species at Tank Hill in terms of the effects on native plant communities and wildlife as well as possible destabilization of the cliff and, perhaps, resulting landslides.

As stated on Draft EIR pp. 146 and 147, the 1.5-acre MA-1 areas are grassland and rock outcrops that support sensitive species. The 0.6-acre MA-2 areas buffer the MA-1 areas. The 0.7-acre MA-3 areas include tree-dominated habitats and steep slopes in the southern portion of the Natural Area. Consistent with the commenter's opinion regarding the need to remove nonnative trees at Tank Hill, site-specific management actions include containing and reducing herbaceous and woody invasive plants; augmenting and reintroducing populations of sensitive plant species; revegetating areas where invasive plants have been removed with appropriate native species; preventing the establishment of invasive tree species; and, following the control of invasive species, installing native scrub and oaks. As stated on SNRAMP pp. 6.14-4 and 6.14-5, while no trees would be removed, the installation of native oaks at the edge of MA-2b would help increase the structural diversity of the Natural Area. Rather than tree removal, the vegetation management activities at Tank Hill are focused on the protection of sensitive species and habitats, typically through the

control of invasive plants and management of sensitive species and vegetation series of limited distribution.

The Maximum Restoration Alternative identified in the Draft EIR considers and evaluates greater tree removal than the proposed project as reflected on Draft EIR pp 495 to 509. Requests for the SNRAMP to consider additional tree removal on Tank Hill have been forwarded to the SFRPD staff and Commission for their consideration.

4.B.6 Other Proposed Modifications

Comment PD-23	**The SNRAMP should consider options to control off-leash dog use other than closing dog play areas**

The response to Comment PD-23 addresses all or part of the following individual comments:

CFDG-1-11	DogPACSF-1-15	SFDOG-2-15
Bartolotta-1-14	Brown-1-12	Demetrious-1-03
Jake-1-04	Kelly-1-06	McCalla-1-02
Naima-1-02	Saino-1-01	Vitulano-1-03

- This EIR does not adequately analyze mitigations short of closing DPAs if any impacts can be proven. [CFDG-1-11]
- The NAP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR. Other mitigations – education, signage, more extensive fencing, etc. – are not discussed. NAP seems to go straight from a single impact to closing the DPA. [DogPACSF-1-15]
- The NAP EIR does not adequately analyze mitigations other than closing the DPA should any impacts from dogs be proven. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR. Other mitigations - education, signage, more extensive fencing, etc. - are not discussed. NAP seems to go straight from a single impact to closing the DPA. [SFDOG-2-15] [Bartolotta-1-14] [Brown-1-12]
- I feel that better information/ signage/education about what areas should not be disturbed and what areas dogs should not be allowed to congregate or play extensively on would mitigate the effect of dogs on the land. Please consider closure of DPAS carefully and consider alternative options with signage and community involvement in maintenance and rehabilitation. [Demetrious-1-03]
- The NARMP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA, even though less draconian measures could be developed. [Jake-1-04]
- The NAP EIR does not adequately analyze mitigations short of closing DPAs if any impacts can be proven. [Kelly-1-06]

- Perhaps the threat of fines could be introduced to discourage bad behavior (people who let their dogs out of their site, bring overly aggressive dogs, do not pick up their dogs waste, etc). [McCalla-1-02]
- If the fear is that dogs will damage plants, wouldn't adding fencing or other means of isolating dogs from vegetation be a more effective solution than to ban off-leash dogs?
  > The NAP EIR provided no evidence that dogs have an impact on plants and wildlife. Is this all from wild speculation or is there any proof that can substantiate such a dramatic change in the city policy.
  > Quite the opposite, the NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife [Naima-1-02]
- I am writing to request that the proposed change of off-leash access to San Francisco parks such as Bernal be modified to allow off-leash access but increase signage warning dogs and people about sensitive plant areas. [Saino-1-01]
- The Plan should be more precise and identify specific problem areas where observations directly attributable to dogs have been made. This is not done. It is especially curious why the small DPA at Lake Merced is proposed for closure. This area is hardly used - mainly because its not big enough – but the City should specifically state what the plans are for this area and how restoration is not compatible with continued recreation with our dogs. Mitigation measures should be explored and evaluated for each area that is proposed to be limited, to see if any documented impacts can be reduced through mitigation before closures are considered. [Vitulano-1-03]

Response PD-23

These comments question whether mitigations, such as the use of fencing or other means of isolating dogs from vegetation, could be a more effective solution than banning off-leash dogs. In addition, one commenter states that the EIR did not provide evidence that dogs could have an impact on plants and wildlife and another commenter requests additional information about the plans for restoration of Lake Merced.

The SNRAMP proposes to restrict dogs from three sensitive habitat areas in the following Natural Areas: McLaren Park, Bernal Hill, and Lake Merced:

- At McLaren Park, the 0.6-acre portion of Gray Fox Creek would be made off limits to dogs and the surrounding 7.7-acre quail and wildlife habitat would be made available for on-leash use only. This would affect a total of 8.3 acres of the existing 61.7-acre Natural Area, with 53.4 acres of off-leash DPAs remaining. It was determined that fencing would not be a necessary or appropriate solution to control dog use at McLaren Park because fencing the creek area could prohibit or discourage wildlife movement.
- At Bernal Hill, areas with steep slopes that are not conducive to dog use, some of which contain locally significant plants, 6.0 acres would be converted to on-leash/on-trail areas in order to prevent erosion caused by dog running; however, 15.0 acres of flat areas would

remain available for off-leash dog play. It was determined that fencing would not be a necessary or appropriate solution to control dog use at Bernal Hill because on-site trails are provided in areas to be converted from off-leash to on-leash dog use.

- At Lake Merced, the 5.0-acre DPA would be closed to protect sensitive dune scrub habitat and because dogs using the DPA located at Lake Merced present a risk to special-status bird species (white-crowned sparrows) by disturbing bird nests. The restoration activities at Lake Merced are described in detail on Draft EIR pp. 134 to 137 and graphically depicted in SNRAMP Figure 6.1-9 on p. 6.1-33. In summary, invasive species would be removed; sensitive habitats would be maintained and enhanced (including bird nesting and foraging habitat); populations of rare plant species would be reintroduced; nonnative turtle species would be occasionally removed to protect the western pond turtle; public access to the East Lake water and shoreline would be restricted from April 1 to August 31 to avoid disturbing breeding turtles; and the DPA would be closed. Habitats to be enhanced generally include oak woodland, diverse coastal scrub with grasslands and open dune gaps, mixed forest, and native scrub; other existing habitats would be maintained.

In total, of the 95.2 acres of existing DPAs within the Natural Areas, the project would convert approximately 20 percent to on-leash dog areas (approximately 19.3 acres), leaving 80 percent available for off-leash dog use (approximately 75.9). The closure and reduction in size of existing DPAs, along with the other management, monitoring, and restoration actions identified in the SNRAMP, comprise the proposed project for purposes of this EIR and this EIR analyzes the potential impacts of these actions as compared to existing conditions. Response RE-13, RTC p. 4-347, fully describes the on-leash and off-leash areas providing throughout the city and why each of the DPAs would be reduced in size or closed.

Also, while additional sensitive habitats have been identified in other Natural Areas, these areas are not currently proposed for a change in dog access, and dogs are welcome, on leash, at all SFRPD parks. In fact, within the 31 parks in San Francisco that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city.

SNRAMP p. 5-11 specifically states that if park users and dogs stay on trails, no further access restrictions or fencing would be required. However, if a lack of enforcement and compliance with leash laws continues and/or damage to sensitive habitat areas is observed, the SFRPD could consider restricting access to sensitive habitat areas, as described in the Dog Policy, which could include the installation of physical barriers. However, permanent physical barriers, such as fencing, are viewed as a last resort to be used only after signage and other soft solutions have been shown to be ineffective. If fences are installed, public access would still be allowed on designated trails.

In terms of the potential closure of DPAs in the future, the Draft EIR included Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, which would

require the SFRPD to evaluate its DPAs in accordance with the SFRPD's Dog Policy and monitor them for adverse effects. If substantial adverse impacts are confirmed, the SFRPD would take actions to protect the impacted resources, including protected species, which may include installing signs, fencing, or protections including, but not limited to, decommissioning DPAs, in accordance with the SFRPD Dog Policy. Additionally, any DPA closure beyond those expressly identified in the SNRAMP may require additional environmental review.

In terms of the reduction in the amount of off-leash DPAs within Natural Areas, the SNRAMP proposes a Project that the EIR, in turn, evaluates; therefore, it is the SNRAMP, and not the EIR, that proposes the reduction of DPAs. Several of the commenters stated that the "NAP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA." The proposed reduction in DPAs is not a mitigation measure, but is part of the proposed SNRAMP project.

Refer also to Response G-25, RTC p. 4-106, for a discussion of potential impacts of dogs on plants and wildlife; Response G-19, RTC p. 4-88, and Response RE-13, RTC p. 4-347, for a discussion of the on-leash and off-leash dog areas provided before and after implementation of the SNRAMP. Response RE-13, RTC p. 4-347, also provides a discussion of recreational impacts caused by the reduction in the amount of DPAs.

Comment PD-24	**Specificity about which dog-related activities would be allowed in specific areas and locations**

The response to Comment PD-24 addresses all or part of the following individual comment:

GGAS-1-13

- Dog-related recreation in the Natural Areas should be limited to areas and activities that are appropriate for each area. (See DEIR, at 110) For example, the walking of dogs on leash around Lake Merced may be appropriate, while permitting a dog to swim in the lake off-leash would not. The DEIR could be greatly improved by a site-specific discussion of which dog-related activities will be allowed. [GGAS-1-13]

Response PD-24

This comment indicates that dog-related recreation in the Natural Areas should be limited to activities that are appropriate for each area.

SFRPD has not established park-by-park or Natural Area-by-Natural Area dog management policies. Generally, on-leash dog use is allowed throughout all Natural Areas, and off-leash use is allowed only within designated DPAs. Dogs are excluded from athletic fields and courts, children's play areas, and sensitive habitat areas and are temporarily barred from restoration areas. Further, each SFRPD park, whether a Natural Area, a DPA, or a neighborhood park, is required to provide signage indicating what type of dog use is acceptable (e.g., on-leash, off-leash, or prohibited) and what is expected for responsible dog ownership (e.g., pick up and remove dog waste, control

excessive barking and noise, prevent digging and destructive behavior, or keeping your dog's vaccinations and license current).

In terms of off-leash dog use, the project proposed by the SFRPD—which is evaluated in this Draft EIR—includes the conversion of 19.3 acres of off-leash DPAs within three Natural Areas to on-leash areas (refer to Draft EIR p. 257) in order to maintain and restore native habitats, while protecting areas of high conservation value. Eighty percent of off-leash areas would remain within the Natural Areas, with more on-leash and off-leash areas provided throughout the city, as further described in Response RE-13, RTC p. 4-347, and Response PD-19, RTC p. 4-189. In addition, refer also to Response PD-23, RTC p. 4-198, for a detailed discussion of which DPAs would be reduced in size or closed and for what purpose.

Comment PD-25 Employ adaptive management for dog-related damage to native grassland and wildflower areas

The response to Comment PD-25 addresses all or part of the following individual comment:

GGAS-1-25

- Specifically, Golden Gate Audubon supports the protections at the Gray Fox Creek area and also recommends that if the native grassland and wildflower areas near Shelley Loop and Geneva DPAs show harm to these plants attributed to dogs then adaptive management action should be implemented to protect the plants. [GGAS-1-25]

Response PD-25

This comment expresses support for the protections at Gray Fox Creek and also recommends an adaptive management strategy if the native grassland and wildflower areas near Shelley Loop and the Geneva DPAs show evidence of dog-related impacts.

The commenter's support of protections at Gray Fox Creek is noted. Refer to Response PD-23, RTC p. 4-198, for a discussion of the SFRPD's policy and process for monitoring DPAs, and Response G-25, RTC p. 4-106, for impacts caused by dogs, as well as the various options available to prevent or reverse those impacts.

The commenter also recommends that if the ongoing use of the DPAs show harm to native grassland and wildflower areas (through the ongoing monitoring identified in Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298), then an adaptive management approach should be employed. Draft EIR p. 90 describes the SNRAMP's Adaptive Management Approach as a strategy for managing Natural Areas that is a flexible learning-based approach to managing complex ecosystems. Adaptive management recognizes that some uncertainty exists about the nature of ecosystems and the organisms and processes that define them. Adaptive management, as applied to natural systems, involves a continuous cycle of systematically monitoring biodiversity and other ecosystem goals, and reassessing the plans,

strategies and goals, methods, and questions that underlie the management approach. Land managers then use this information to evaluate successes and failures of management actions and to refine techniques and approaches. Therefore, the SNRAMP includes, and is based upon, adaptive management principles.

Comment PD-26 Coordinate management actions with adjacent open space managers

The response to Comment PD-26 addresses all or part of the following individual comment:

NPS-1-01

- Plan Objectives (pg. 84): We suggest adding an objective that the RPD will coordinate management actions with adjacent open space managers so that habitat restoration work can be maximized over a larger area. [NPS-1-01]

Response PD-26

This comment relates to the proposed restoration work at Laguna Salada in Sharp Park, which is adjacent to the GGNRA-managed lands at Mori Point. The NAP has worked with the GGNRA cooperatively over the last decade (1) to monitor and research California red-legged frog breeding and movement; (2) to restore areas around Horse Stable Pond, including cleanup of the tire pile; and (3) for the GGNRA's improvements to Mori Point, including the installation of fencing and plants associated with that project. The SFRPD would continue to do so where appropriate.

Comment PD-27 Recreation activities should include community stewardship

The response to Comment PD-27 addresses all or part of the following individual comments:

SFT-1-02, Gerrie-1-02, Langille-1-06, Pfister-1-04, Stringer-1-03, Swenerton-1-03, Wilson-1-03

- Community Stewardship should be included as a recreational use. The hundreds of volunteers who regularly tend the City's significant natural areas not only provide a significant resource to the Recreation and Parks Department, they are receiving a recreational benefit that should be recognized and quantified in this document, which designation perpetuates a fragmented approach to natural resources management. [SFT-1-02]
- This plan should include community stewardship of recreational use of NAP land [Gerrie-1-02]
- For the purposes of the SNRAMP DEIR, recreation should include community stewardship. This would change the balance of purported recreational impacts. [Langille-1-06] [Pfister-1-04] [Wilson-1-03]
- The GGNRA, in their most recent Management Plan, includes community stewardship as a form of recreation in their analysis of alternatives. I encourage you to do the same. Such an

evaluation may change the equation that evaluates impacts to recreation, and ultimately lead to a different conclusion of what is an environmentally superior alternative. [Stringer-1-03]

- My main criticism is the fact that the analysis does not value community stewardship and restoration activities in the Natural Areas as a positive impact on recreation. [Swenerton-1-03]

Response PD-27

These comments express a desire for community stewardship to be included as a recreational use.

As stated on Draft EIR p. 155, the mission of the NAP is two-fold: to restore and enhance remnant Natural Areas and to develop and support community-based stewardship of these areas. In fact, one of the CEQA and SNRAMP objectives is to provide guidelines for educational, research, and stewardship programs. Draft EIR p. 86 articulates the SNRAMP's stewardship goals, which include:

- To develop and support opportunities for public stewardship of Natural Areas;
- To foster neighborhood stewardship and volunteer groups; and
- To provide diverse opportunities for participation by stewardship groups.

The SFRPD and the Draft EIR consider community stewardship as a form of recreation; further, the EIR considers the physical, environmental impacts caused by all forms of recreation, from stewardship to active recreational uses, with an emphasis on whether the SNRAMP would cause a physical deterioration of recreational facilities caused by an increase in use of existing facilities or the construction or expansion of new facilities.

Comment PD-28	**Identify long-term, sustainable solutions of wetland protection and restoration**

The response to Comment PD-28 addresses all or part of the following individual comment:

NPS-1-14

- General Comment (Laguna Salada): We suggest that the plan clearly identify a long-term, sustainable solution of wetland protection and restoration that addresses rising salinity, sustainability of the seawall, and the issues associated with the pumping. [NPS-1-14]

Response PD-28

This comment requests that the SNRAMP identifies wetland protection and restoration activities that address rising salinity, the viability of the seawall, and issues associated with pumping.

The comment is in regards to the merits of the project. These comments have been forwarded to the SFRPD staff and Commission for their consideration. The comment does not affect the adequacy of the analysis in the EIR. However, the following additional information is provided. Regarding salinity, no evidence has been found that average salinity is rising at Laguna Salada.

The Sharp Park seawall is outside the Natural Area boundary and, therefore, outside the scope of the SNRAMP and the proposed project. As stated on Draft EIR p. 103, "[w]hile management options for the Sharp Park seawall, including a naturally managed seawall and shoreline, have been considered by the SFRPD, those options are not proposed as part of the SNRAMP. Thus, they are not addressed in this EIR." SFRPD has not yet proposed a specific management solution for the seawall.

Ongoing pump operations at Sharp Park are handled through the management of the Sharp Park Golf Course and are not considered part of the SNRAMP. However, SFRPD has received a biological opinion from the U.S. Fish & Wildlife Service that addresses certain infrastructure improvements and golf course operations. SFRPD will use this information in developing long-term plans related to pump operations. Short-term pumping associated with the restoration of Laguna Salada is discussed on Draft EIR p. 102. The proposed SNRAMP would not preclude future management actions at Laguna Salada.

Comment PD-29 Management action based on vegetation type

The response to Comment PD-29 addresses all or part of the following individual comment:

NPS-1-17

- SP-3a Recommended Management Action (pg. 144): We recommend this management action be applied based on vegetation type. For example, branches/logs that are contaminated with some invasive species (such as invaded with ripe seeds, cape ivy, untreated [chemically] eucalyptus trees, etc.) should not be retained. [NPS-1-17]

Response PD-29

This comment recommends that Management Action SP-3a is applied based on vegetation type.

The text on Draft EIR p. 144 (seventh bullet) has been changed, as follows:

- SP-3a – Preserve natural or biodegradable elements (branches, trees, and logs) during vegetation management and remove other materials. Elements that are contaminated with invasive species (such as invaded with ripe seeds, cape ivy, untreated [chemically] eucalyptus trees, etc.) would not be retained;

Comment PD-30 Request that Mount Davidson be removed from the SNRAMP if the Maximum Recreation Alternative is not adopted

The response to Comment PD-30 addresses all or part of the following individual comments:

MPIC-1-18 MPIC-2-03

- If the Planning and Recreation and Parks Departments do not adopt the Maximal Recreation Alternative and are not willing to completely implement the above-requested mitigations to the SNRAMP and augmentations to the DEIR, the MPIC requests that these Departments remove Mt. Davidson from the SNRAMP. [MPIC-1-18]

- If these alternatives are approved and implemented, the MPIC will seek to have Mount Davidson Park removed from the Natural Areas Program and returned to its original purpose as a recreational facility subject to all of the maintenance standards required by Proposition C, passed by voters in 2003.

  Therefore, if the Planning and Recreation and Parks Departments do not adopt the Maximum Recreation or Maintenance Alternative, are not willing to fully analyze the additional impacts inadequately addressed in the DEIR, and fail to reduce the scope of the SNRAMP, the MPIC will request that Mt. Davidson Park be removed from the SNRAMP. This would be the only acceptable solution to avoid permanent degradation of this important environmental resource for residents of one of the densest cities in the United States. Mount Davidson Park is a public treasure – not a biological museum. [MPIC-2-03]

Response PD-30

These comments request that if SFRPD does not adopt the Maximum Recreation or Maintenance Alternatives and are not willing to implement the identified mitigation, Mount Davidson should be removed from the SNRAMP.

These comments do not raise any specific environmental issues about the adequacy or accuracy of the EIR's coverage of environmental impacts that require a response in the RTC document under CEQA Guidelines Section 15088. As per the CEQA Guidelines, this EIR is an "informational document" intended to inform public agency decision makers and the public of the significant environmental effects of a project proposal, identify possible ways to minimize the significant effects and describe feasible alternatives to the project to reduce or eliminate those significant effects. Comments in support of an EIR alternative over the proposed project will be considered by decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review proves. Specific comments concerning the adequacy and accuracy of this EIR are addressed in this RTC.

Comments requesting reforestation plans that include measures of the likelihood of success have been forwarded to the SFRPD staff and Commission for their consideration. Refer also to Response AE-1, RTC p. 4-219, for a discussion of the aesthetic impacts of tree removal. Further, Section 6 of the SNRAMP provides the species that are anticipated to be planted in each Natural Area based on the SNRAMP's goals and the desired outcomes for each Natural Area.

Comment PD-31 Success of existing habitat restoration efforts should be evaluated

The response to Comment PD-31 addresses all or part of the following individual comment:

Bowman-1-13

- The success of the NAP existing restorations should be evaluated and incorporated into the EIR. In additions to studying the actual changes in vegetation and wildlife, the studies should include evaluating how the public perceives the changes. As an example, I loved Pine

> Lake the way it was before the fences and the de-vegetation of the area, and I would express that in a survey. I personally feel the Glen Canyon and Sharp Park forests could do with some trimming but find them magical oasis and expect others find them equally unique and special. I equally appreciate the more manicured parks or the vast open spaces up and down the coast that are pre-dominated by coastal scrub like that being promoted. However, I believe the current balance of these areas is appropriate and does not warrant major changes. I cannot find a comprehensive analysis showing that actual monitoring of wildlife in the Sharp Park forested/eucalyptus areas versus the scrub/grassland areas. The analysis seems to be completely speculative. One would expect to see the actual monitoring that has occurred that actually demonstrates that more wildlife is supported by native vegetation than by the non-native plants. [Bowman-1-13]

Response PD-31

This comment suggests that the Draft EIR should consider the success of the NAP's existing (or previous) restoration efforts.

Consideration of past habitat restoration efforts and the public's input regarding modifications to the existing landscape conditions were part of the extensive development process for the SNRAMP that has occurred over a 10-year period. Refer to Response G-10, RTC pp. 4-50, for a discussion of the public outreach process and the public review process. Also, refer to Response G-3, RTC p. 4-19, for a description of what has occurred over the 10-year period in order to complete the final Draft SNRAMP. As an example of where public or technical advisory input influenced the SNRAMP, the plan now includes an adaptive management component that would allow SFRPD to evaluate the success of habitat restoration projects and to take corrective actions. Development of the SNRAMP also considers the native plant species best suited to the environmental and climatic conditions and capable of supporting the desired wildlife populations; those native species are discussed throughout the SNRAMP and Draft EIR, but are particularly highlighted in SNRAMP Section 6, Site-Specific Conditions and Recommendations. That input resulted in the Final Draft SNRAMP, which is the proposed project with amendments as described in the Draft EIR. As previously mentioned, the Draft EIR evaluates the physical environmental impacts of the project, which includes construction activities and certain maintenance activities.

In terms of past restoration and revegetation projects, according to SFRPD staff, some have been successful and some have not, which is an anticipated outcome in an adaptive management framework, which is designed to respond to a variety of environmental and human conditions in order to increase the chance of success. Among the successful revegetation projects are various sites along Islais Creek in Glen Canyon, the entryway plantings at Billy Goat Hill and Grandview Hill, scrub restoration at Corona Heights, Lake Merced, and McLaren Park, and various scrub and oak woodland restoration projects in Golden Gate Park.[54] Refer also to Response PD-10, RTC p. 4-155,

[54] Memorandum from Lisa Wayne to ESA (Terri Avila) regarding revegetation success, September 12, 2014.

and Response PD-11, RTC p. 4-159, for a description of the SNRAMP's and NAP's goal of restoring native habitats in order to increase biodiversity, which includes supporting native wildlife.

Comment PD-32 Native restoration should be allowed in unforested areas

The response to Comment PD-32 addresses all or part of the following individual comment:

Nagle-1-01

- I am writing today to comment on the Draft EIR. In particular my family opposes the Maximum Restoration Alternative and supports the Maintenance Alternative

  I was born in San Francisco in 1968 and have lived here my whole life. My extended family resides here and I have recently had a child who I plan to raise on the west side of San Francisco. My son and I love the trees and forests of this area; we hike on Mount Davidson, walk in Stern Grove and enjoy the peaceful respite that the dense forests give from the hustle and bustle of the city. The trees and urban forests have shaped my existence during my life here, and I would hate to see them drastically change.

  I became aware of the NAP program and their plans to restore native habitat only recently when I observed some cleared areas at Pine Lake in Stern Grove. The cleared and newly planted area was struggling and I wondered why this was done since the nearby forest was flourishing. This piqued my interest and since then I have researched the NAP program and reviewed the Draft EIR, so I feel I have a good understanding of what is at stake here.

  While I understand NAP's rationale in restoring native habitat in general, I disagree with their aggressive plan to remove non-native trees and brush in the majority of open spaces in the city. I object to their practices, including the spraying of voluminous amounts of herbicides to prevent non-native plants from returning. The areas where they have done their restoration appear to be failing in many instances; to allow the restorations to proceed on a city-wide scale would be in effect rewarding failure.

  There are budget concerns as well; can San Francisco truly afford to spend the money to clear and re-plant the amount of forested area envisioned by the NAP EIR? We should spend money on schools, homelessness and a plethora of other pressing matters before we pay to clear forested hillsides.

  A compromise is in order; I think NAP should be allowed to do native restorations in un-forested areas where they have less clearing to do. Please leave the older trees and forested areas alone so that the next generation of San Francisco families can enjoy them as much as I have. [Nagle-1-01]

Response PD-32

This comment expresses general opposition to the proposed project and also asks that native restoration be conducted in unforested areas. These comments on the merits of the project have been forwarded to the SFRPD staff and Commission for their consideration.

With respect to the opposition to the Maximum Restoration Alternative, refer to Response AL-, RTC p. 4-568, and with respect to the support for the Maintenance Alterative, refer to Response AL-, RTC p. 4-585.

Draft EIR Table 5 (provided on p. 114) indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain, consisting of 15,000 trees that would be removed in Sharp Park and 3,448 trees that would be removed in the San Francisco Natural Areas; therefore, under the SNRAMP, nonnative trees and brush would not be removed in the majority of Natural Areas in the city. Also, restoration would be accomplished in both unforested areas, as well as areas where nonnative, invasive species have been removed. As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity, which requires the removal of invasive species. Refer also to Response HZ-1, RTC p. 4-531, for a discussion of SFRPD's herbicide use and practices and Response G-4, RTC p. 4-29, for a discussion of funding sources and cost for implementation of the SNRAMP.

Comment PD-33 Maintenance of city parks

The response to Comment PD-33 addresses all or part of the following individual comment:

Naima-1-01

- Hi, I've been living in SF in the lower haight for 8 years now, and have recently opened a business downtown. My dog and I frequent duboce park, alamo square, crissy field, fort funston, and other offleash dog areas. The large presence of off-leash dog play areas was a very important factor in my decision to move to San Francisco.

  I am writing in response to the solicitation for comments on the proposal to reduce the off-leash dog play areas. I am very opposed to the reduction of off-leash and would like you to consider the following:

  > I feel that biggest negative factor affecting the parks is the maintenance staff of the parks, and the presence of dogs - especially at night - have made the parks a much safer environment by keeping drug dealers, and other unsavory individuals out of the parks (thanks to the responsible owners).

  > Examples I've seen of the problems caused by maintenance staff at the parks:

    - No automated sprinkler system has been installed at duboce park and thus someone needs to turn the sprinklers on/off manually. I've found the park flooded many times by having the sprinkers not turned off
    - Drainage has been a huge problem at duboce park, and although the park service promised to do something about it years ago, no solution has been deployed. the park has recently been aerated, but this is a stop-gap solution and it should have happened years ago.

- The excessive amount of rain from last year caused the ground to be soft (thanks to the lack of drainage). The maintenance staff would mow the lawn after heavy rains constantly, causing huge trenches to form in the grass from the wheels of the mower digging into the ground. My dog suffered a hip injury as he fell into one of these trenches while chasing after a ball.
- Additionally, when the ground becomes damaged, and holes form which can be dangerous to individuals and dogs who can trip in them, they are not filled for weeks.
- A gardener sprayed pesticide/herbicide at a local park that a friend frequents and did not post any signage. The position got into my friend's dog's system and almost killed him.
- There have been reports in the papers of unionized garden workers not planting plants and instead giving them out to friends while taking the day off [Naima-1-01]

Response PD-33

This comment expresses concern regarding the existing maintenance of the City's parks, including flooding and drainage at Duboce Park, which is not a Natural Area, as well as the use of pesticides and herbicides without proper signage. The commenter also questions whether current maintenance staff are planting the required plants and/or working a full day. The commenter also mentions Alamo Square, Crissy Field, and Fort Funston, none of which is designated as a Natural Area under the SNRAMP; however, Duboce Park and Alamo Square have designated off-leash DPAs, and Crissy Field and Fort Funston are available for on-leash dog use.

Drainage

While the commenter references parks that are outside of the Natural Areas, for Natural Area parks, the 1995 SNRAMP includes specific policies and/or management actions that serve to control existing drainage, runoff, and/or erosion prevention in Natural Areas. The objectives from the 1995 SNRAMP provide a framework for the general and park-specific recommendations identified in the 2006 SNRAMP. Further, as described on Draft EIR p. 89, the NAP staff of 10 gardeners (supplemented by volunteer groups that range in size from 10 to 50 people) conduct routine maintenance within the Natural Areas on a daily basis, which can include, but is not necessarily limited to, a review of sprinkler operations relative to rainfall or other environmental conditions, overall drainage conditions, and mowing lawns. However, all of these maintenance operations, and any resulting effects, represent existing conditions, and do not address impacts of the proposed project.

With respect to the proposed project, the SNRAMP includes erosion control measures to be employed as necessary (see Draft EIR Chapter III, Project Description, pp. 93 to 94) and Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, includes a variety of additional measures that are specifically designed to reduce unintended

drainage channels, erosion, and/or areas of sedimentation caused by implementation of the proposed project. Further, the Draft EIR, on pp. 376 to 382, indicates that there would be no significant programmatic, project-related, or cumulative impacts related to flooding or drainage.

Pesticides and Herbicides

Refer to Response HZ-1, RTC p. 4-531, for a discussion of pesticide use within the Natural Areas.

Maintenance Staff

The effects of a proposed project are only considered significant if there are associated physical effects on the environment. There would be no project-related physical effects on the environment related to plantings that did or did not occur in the past, or with respect to how maintenance workers spent their time in the past while being paid by the City. All of these maintenance-related conditions, and any resulting effects, represent existing conditions, and do not address impacts of the proposed project.

Comment PD-34 Elimination of 18,000 trees

The response to Comment PD-34 addresses all or part of the following individual comment:

Naima-1-05

- > I'm also shocked that the NAP is planning on cutting down 18,000 healthy trees because they are not-native. Sounds very much like something that happened in germany many years ago to non-native peoples. why? are you going to replace them with 18,000 native trees? [Naima-1-05]

Response PD-34

This comment indicates that the Plan would result in the elimination of 18,000 healthy trees and questions whether they will be replaced. This is a comment on the merits of the project and has been forwarded to the SFRPD staff and Commission for their consideration.

Draft EIR Table 5 (provided on p. 114) indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain. Of the 117,433 trees within the Natural Areas, approximately 63,433 trees are located within the City and approximately 54,000 trees are located within Sharp Park. Of the 18,448 trees that would be removed, approximately 3,448 would be removed within the Natural Areas in the City and approximately 15,000 would be removed at Sharp Park. Therefore, the proposed tree removal represents only five percent of all of the trees within the Natural Areas located within the City (calculated as 3,448 trees out of 53,433 trees located within the city [which is 117,433 total trees minus 54,000 trees within Sharp Park]).

As stated on Draft EIR p. 144, at Sharp Park, the SNRAMP would remove approximately 15,000 invasive blue gum eucalyptus of the estimated 54,000 invasive trees to maintain and enhance native

habitats. Further, as stated in SNRAMP Appendix F, p. F-7, at no one location will all the trees, or, for that matter, more than 15 percent of the existing trees be removed from Natural Areas within the city.

As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to identify and prioritize restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity. In order to accomplish this objective, certain areas would be subject to invasive tree removal that is limited to a prescribed number of acres or trees in compliance with forestry statements (SNRAMP Appendix F). In general, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding.

As stated in Draft EIR Chapter III, Project Description, p. 92, invasive trees that are removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area. In a memorandum from Lisa Wayne, Open Space Manager, SFRPD, to Jessica Range, Environmental Planner, San Francisco Planning Department,[55] the SFRPD indicated that each year, the NAP propagates and plants over 10,000 plants in restoration sites throughout the city, with at least 200 of those plants being trees.

4.B.7 Correction to Project Description

Comment PD–35 Draft EIR inaccurately describes the acquisition date for Mori Point

The response to Comment PD–35 addresses all or part of the following individual comment:

NPS-1-15

- General Description (pg. 143): There is a statement that makes reference to the Mori Point site being recently acquired. The property was acquired by the NPS in 2004 and has undergone major restoration efforts, including efforts to enhance habitat for the San Francisco Garter Snake and California Red-Legged Frog. [NPS-1-15]

Response PD-35

The comment corrects information in the Draft EIR regarding the acquisition of Mori Point by the NPS.

The commenter is correct. The text on Draft EIR p. 143 (line 14) has been changed, as follows:

> Mori Point, ~~recently~~ acquired by the GGNRA in 2004, borders the southwestern edge, and the Sweeny Ridge GGNRA borders the park on the southwestern and eastern edges.

[55] Lisa Wayne, Open Space Manger, "Tree Removal and Replacement," memorandum to Jessica Range, Environmental Planner, San Francisco Planning Department, November 27, 2012.

4.C PLANS AND POLICIES [PP]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter IV, Plans and Policies.

Comment PP-1	**Consistency with plans and policies**

The response to Comment PP-1 addresses all or part of the following individual comment:

Hayes-1-02

- Furthermore, [the SNRAMP] is consistent with the direction for sustainable management of San Francisco's open spaces as detailed already through the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan. [Hayes-1-02]

Response PP-1

This comment expresses the opinion that the SNRAMP is consistent with City plans and policies. These comments do not raise any specific environmental issues about the adequacy or accuracy of the EIR's coverage of environmental impacts that require a response in this RTC document under CEQA Guidelines Section 15088.

4.D ENVIRONMENTAL IMPACTS

4.D.1 Land Use and Land Use Planning [LU]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.B, Land Use and Land Use Planning.

Comment LU-1	**Applicability of Pacifica Logging Ordinance and San Mateo County Tree Ordinance**

The response to Comment LU-1 addresses all or part of the following individual comment:

SFPGA-3-02

- Implication of Pacifica, San Mateo County, and Local Coastal plans on the logging questions. For the reasons described in paragraph 1 [SFPGA-3-01], it is incorrect to say that the Pacifica Logging Ordinance and the San Mateo County Significant Tree Ordinance are not applicable. Likely one or both plans are made applicable to that part of Sharp Park lying east of the Coast Highway by the Local Coastal Plan. The DEIR acknowledges that logging presents the risk of additional runoff into Sanchez Creek (and hence to Sharp Park Golf Course). Even if this were only a one-time event, this would have potentially significant consequences for the historic golf course, the neighborhoods, and the endangered species habitat. Accordingly, this must be analyzed as a significant risk, and mitigation and avoidance options must be discussed and analyzed. [SFPGA-3-02]

Response LU-1

This comment states that local tree ordinances are applicable to the activities at Sharp Park and requests that the Draft EIR analyze the impacts of downstream flooding as a result of logging activities proposed at Sharp Park.

Under the doctrine of intergovernmental immunity, the City's actions at Sharp Park are not subject to the building and zoning laws of the City of Pacifica or San Mateo County, including the City of Pacific Logging Ordinance (Ordinance No. 636-C.S.) and the San Mateo County Significant Tree Ordinance (Part Three of Division VIII of the San Mateo County Ordinance Code).

The CCC has retained jurisdiction over the portions of the Sharp Park Natural Area and the Golf Course located west of Highway 1; there is no CCC jurisdiction east of Highway 1. Therefore, restoration of the Laguna Salada wetlands, raising and/or narrowing of the fairways, and potential relocation of one or two holes west of Highway 1 could be subject to coastal development permit requirements from the CCC, and any tree removal proposed within the coastal zone would similarly be subject to the terms and conditions of any coastal development permit obtained for those activities.

The potential effects of tree removal on flooding in Sharp Park are addressed in Draft EIR Section V.H, Hydrology and Water Quality, p. 376. The Draft EIR concludes that while removal of eucalyptus trees in the upland area of Sharp Park would increase the rate of runoff into Sanchez Creek, the increase would not be substantial in relation to the size of the drainage area when considering the normal range of runoff volume. The Draft EIR also notes that the area would be revegetated following tree removal and that the long-term effect of the project would be to reduce surface runoff and increase infiltration. Also refer to Response HY-1, RTC p. 4-486. Furthermore, as discussed in Draft EIR Chapter III, Project Description, p. 93, the SNRAMP includes best management practices (BMP) for erosion control which includes the use of straw mulch, rolled erosion control products, wood mulch, silt fences, fiber rolls or straw bales. These erosion control BMPs would be employed as needed to control erosion within the Natural Areas. In addition, the Draft EIR determined that programmatic projects implemented under the SNRAMP, including large-scale tree removal, could result in significant impacts to water quality and identified Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, which requires that programmatic projects implement storm water pollution prevention measures, including among them, a list of erosion and sediment controls. SFRPD would employ applicable erosion control measures into the design of programmatic projects, including large-scale tree removal proposed at Sharp Park. The San Francisco Planning Department would evaluate the proposal and, if applicable, erosion control measures identified in Mitigation Measure M-HY-1 would be implemented. Erosion control measures would further reduce run-off from large scale tree removal activities that were determined to result in less than significant with mitigation flooding impacts on Sanchez Creek.

Comment LU-2 Effects on existing community

The response to Comment LU-2 addresses all or part of the following individual comment:

Borden-1-04

- In Glen Canyon, Natural Areas closed the only trail that enters the park from O'Shaughnessy Blvd., cutting off access for all of the neighborhoods west of the park. That trail started near the end of Del Vale Ave. and dropped down to the Silver Tree day camp facility. The closest entry points to the park are now at Turquoise Way or at Bosworth Street. This is a clear example of how implementation of the NAP has physically divided an existing community. See LU-1 on page 177 of the DEIR. [Borden-1-04]

Response LU-2

This comment expresses concern about the previous closure of a trail at Glen Canyon, asserting that it physically divides an existing community.

The trail to which the commenter refers (at the entry to the park from O'Shaughnessy Blvd.) was closed prior to the commencement of the environmental review for the SNRAMP. This unofficial path was deemed unsafe, due to a significant presence of poison oak. A low post-and-cable fence was installed near Silver Tree camp and day care center to discourage use. This trail closure is not part of the SNRAMP project.

As discussed in Draft EIR Section V.B, Land Use and Land Use Planning, with respect to the broader SNRAMP, none of the proposed activities are anticipated to result in the physical division of an existing community. Although some access points or social trails would be removed, the SNRAMP would maintain public access to all Natural Areas. Therefore, as discussed on Draft EIR p. 177, the proposed project would not result in significant impacts associated with dividing an established community.

Comment LU-3 Effects on existing character

The response to Comment LU-3 addresses all or part of the following individual comment:

DogPACSF-1-16

- The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the DPAs and portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There

> are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate. [DogPACSF-1-16]

Response LU-3

This comment requests an analysis of impacts on the social community of people who walk with their dogs in the DPAs, suggesting it defines the "existing character" of the park, which is a threshold that the EIR identifies.

As defined under CEQA Guidelines Section 15382, "significant effect on the environment" means a substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. As such, for the purposes of environmental impact analysis under CEQA, the term "existing character" is taken to mean the character of the physical and land use features within the area affected by a proposed project. The social effects described in the comment, which include negative social effects experienced by people who walk dogs, such as a loss of community, would not be considered a substantial or potentially substantial adverse change on the physical environment. Refer also to Response G-26, RTC p. 4-114, for a more detailed discussion of the manner in which economic or social changes could lead to adverse physical changes to the environment, particularly related to the reduction and closure of DPAs. Comments about the relative merits of the proposed project will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. That consideration is carried out independent of the environmental review process.

The Draft EIR concludes that because the proposed programmatic projects under the SNRAMP and the Sharp Park restoration project would not result in changes to the existing character of the vicinity, the impact would be less than significant (Draft EIR p. 182).

In addition, the commenter's statement that the SNRAMP proposes to close 80 percent of the off-leash dog space in City parks is incorrect. The SNRAMP proposes to close one DPA, the Lake Merced DPA (approximately five acres) and would reduce the DPA acreage in two other Natural Areas (Bernal Hill and McLaren Park) for a total closure of 19.3 acres of DPAs (or 20.3% of the existing DPA acreage within the Natural Areas). As discussed on Draft EIR p. 258, the DPA at Lake Merced is not heavily used and the Bernal Hill and McLaren Park DPA reductions represent a small

portion of otherwise large DPAs. Further, there are existing DPAs outside of Natural Areas but within other City parks.

The DPAs at Buena Vista Park, McLaren Park, and Golden Gate Park Oak Woodlands are proposed for monitoring. It would be speculative, at this point, to determine the acreage of DPAs that could be reduced or eliminated based on future monitoring reports. Should those DPAs be recommended for closure based on results from monitoring reports, additional environmental review may be required at that time. In addition, on-leash dogs would continue to be allowed access to all Natural Areas. Refer to Response RE-13, RTC p. 4-347, fully describes the on-leash and off-leash areas providing throughout the city and why each of the DPAs would be reduced in size or closed, and Response G-26, RTC p. 4-114, for a discussion of the social impacts of dog ownership and reduced dog play areas.

Comment LU-4	**Applicability of San Francisco Urban Forestry and Landmark Tree Ordinances**

The response to Comment LU-4 addresses all or part of the following individual comment:

MPIC-2-10

- The MPIC finds the conclusion in the DEIR that converting 10.2 acres of the park from forest to prairie reed grass will have a less than significant impact to be based on inaccurate and incomplete documentation. The DEIR (page 408) states that the total number of trees would not change within the Natural Areas. It further states that San Francisco trees are protected by the San Francisco Urban Forestry Ordinance (page 410). This is inaccurate and inconsistent with Table 5 (page 114), which says that a total of 18,448 trees will be lost in the Natural Areas if the proposed project is implemented. **The DEIR further states that one-for-one replacement trees can be planted anywhere in San Francisco, rather than in the Park or the specific location of trees removed and it specifies replacement of trees removed with slow-growing oaks rather than the historic forest species.** The actual goal of SNRAMP project – to eliminate, not thin or rejuvenate – the historic forests in these parks should be factually stated, although we strongly object to this goal. The DEIR states that no landmark trees will be removed; however, no trees in the SNRAMP areas are currently protected by landmark status. We must ask, do the Urban Forestry or Landmark Tree ordinances even apply to trees in City parks or Natural Areas? If not, references in the DEIR to these ordinances should say so, in order to avoid misleading readers into thinking that these historic trees are eligible for and subject to these protections. [MPIC-2-10]

Response LU-4

This comment requests clarification as to whether San Francisco's Urban Forestry Ordinance applies to trees in City parks or the Natural Areas. As stated on Draft EIR p. 157, this ordinance outlines protections for street trees, significant trees, and landmark trees. More specifically, the Urban Forestry Ordinance includes both Section 806 and Section 810. Section 806 governs the removal of street trees under the Department of Public Works (DPW) jurisdiction, which includes trees on

dedicated public right-of-ways. Section 810, which set forth the landmark tree procedure, can apply to any tree within the territorial limits of the City. Landmark trees have been designated by the Board of Supervisors as special due to the rareness of the species, their size or age, extraordinary structure, ecological contribution, or historical or cultural importance. Trees that are designated by the city for landmark status are protected from physical damage and removal. There is only one designated landmark tree within SFRPD property, a blue elderberry (*Sambucus mexicana*) within the Bernal Hill Natural Area. This tree would not be removed as part of the SNRAMP.

A significant tree, which is described in Section 810A of the Urban Forestry Ordinance, is a tree either on property under the jurisdiction of the DPW or on privately owned-property with any portion of its trunk within 10 feet of the public right-of-way, and that satisfies at least one of the following criteria: (1) a diameter at breast height in excess of twelve (12) inches, (2) a height in excess of twenty (20) feet, or (3) a canopy in excess of fifteen (15) feet. The Director may deem a significant tree a hazard tree if such tree satisfies the provisions of Section 802(o). A landmark tree shall not be treated as a significant tree even if the landmark tree meets one or more of the abovementioned criteria.

Should SFRPD propose the removal of any street tree, significant tree, or landmarks tree subject to the requirements of Sections 806, 810, or Section 810A of the Urban Forestry Ordinance, respectively, the Urban Forestry Ordinance would apply to those trees.

In terms of noticing the removal of street and significant trees, Section 806(a) of the Urban Forestry Ordinance indicates that Public Works shall provide 30 days prior written notice to the owner of the property abutting the affected tree, all interested San Francisco organizations and, to the extent practical, all owners and occupants of properties that are on or across from the block face where the affected tree is located. In addition, 30 days prior to the removal date, a notice shall be posted on the affected tree. If a street tree or significant tree is considered hazardous, the notification timeline is reduced to 15 days. If a street tree or significant tree could cause manifest danger, it can be removed immediately, with noticing occurring after the fact. In addition, if a written objection is received for the removal of any street tree or significant tree, a hearing to consider public testimony concerning the proposed tree removal shall be held. Written notice of the date, time, and place of the hearing shall be posted on the affected tree, provided in a newspaper of general circulation, and sent to the objecting party, the owner of the property abutting the affected tree, and all interested San Francisco organizations, not less than seven days prior thereto.

As outlined in Section 810 of the Urban Forestry Ordinance, the removal of landmark trees shall not be authorized unless certain removal criteria are met (e.g., the tree constitutes a hazard) and written findings are prepared describing the landmark tree and the conditions that require its removal; a public hearing is held; and the same noticing requirements as required for the removal of a street tree or significant tree are provided.

The discussion on Draft EIR p. 157 (in Land Use) was provided to inform readers that there are no inconsistencies between the proposed project and the Urban Forestry Ordinance.

The commenter is correct in that the SNRAMP proposes tree removal and also proposes to replace trees removed in San Francisco Natural Areas (with the exception of the Sharp Park Natural Area) at a one-to-one ratio, but not necessarily in the same location or within the same Natural Area, as described on Draft EIR p. 92.

The discussion on Draft EIR p. 410 regarding the protection of trees under the Urban Forestry Ordinance appears in the cumulative analysis (Impact AF-7). The cumulative analysis determined that other projects, including private development projects, might result in the removal of individual trees and indicates that those trees are protected by the Urban Forestry Ordinance, which requires the replacement of removed trees. Additionally, as required by Public Works Code Section 806(d)(2), new developments are required to have one tree for every 20 feet of street frontage. The analysis concludes that cumulative impacts to forest resources would be less than significant. The text on Draft EIR p. 410 (line 20) has been changed for clarity, as follows:

> Further, San Francisco landmark, significant, and street trees are protected by the San Francisco Urban Forestry Ordinance, which requires the replacement of removed trees on a one-to-one basis.

4.D.2 Aesthetics [AE]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.C, Aesthetics.

Comment AE-1	**Aesthetic impacts of tree removal**

The response to Comment AE-1 addresses all or part of the following individual comments:

MPIC-1-06 MPIC-2-17 Burgard-1-03
Wade-1-02

- Furthermore, the project map (see Exhibit A) indicates that areas where tree removal would be concentrated are the most visible areas within the Park, which is a major scenic and historic resource for Park visitors as well as residents of surrounding communities. Clear-cutting these highly visible areas along major trails and sightlines within the Park will be very detrimental to enjoyment of the Park by its users. Of crucial concern is not the impact on views of the forest from outside of the park – shown on page 193-194 of the DEIR, or the impact on distant views to and from the Park, but the view and experience of the historic forest up close from within the Park: along the trails, roads, and historic monuments within the MA-1 and MA-2 areas where substantial tree removal is proposed. [MPIC-1-06]
- While the DEIR acknowledges that Mount Davidson has high natural resource and recreational values for the citizens of San Francisco, including City views, high levels of recreational use, and extensive urban forest, the conclusion that the SNRAMP would have less than significant impact on scenic vistas is incorrect. The DEIR on page 190 states "While

the one-to-one replacement ratio would not increase the total trees present … in some locations, trees would be replaced by native scrub or grassland species." This is inconsistent with statements with Table 5, Page 114, and SNRAMP Appendix F page 14 that list a net loss of at least 1600 trees.

In addition to the many references to the importance of beauty as a rationale for saving the forest in the previous section on the history of the park, of crucial concern is not only the impact on views of the forest from outside of the park – pictured on page 193-194 of the DEIR – or the impact on distant views to and from the Park, but the **view and experience of the historic forest up close from within the Park by park visitors**: along the trails, roads, and historic monuments within the MA-1 and MA-2 areas, where substantial tree removal is proposed. This concentrated tree removal, up to 82% of the area around the plateau, road, and Juanita trail, will be extremely noticeable. This impact is significant and should be acknowledged in the final EIR, or the scope of the tree removal should be reduced to prevent this adverse effect on the aesthetic experience inside the forest area of the park.

Tree topping and removal from the MA-1c and MA-2e areas has already resulted in unsightly stumps, remnants, and debris along the most accessible and visible areas in the park, which substantially degrade the visual character of this public park. (See Exhibit B attached). The MPIC requests that any trees killed for SNRAMP be totally removed – all the way to the ground – so that no unsightly stumps are left to negatively impact the aesthetic view from within the park. As demonstrated above, the DEIR's argument that leaving the trunks will help stabilize the slopes is a scientific fallacy. Also, to date non-native vegetation and tree parts removed by City staff have been left in unsightly debris heaps along the public trails. This significantly negatively impacts the Park as a scenic resource for those wishing to enjoy the beauty of nature along the Park trails. The MPIC requires that the debris created by the SNRAMP maintenance work be collected and dumped away from public view or removed from the park all together. [MPIC-2-17]

- The drastic measure of taking down long standing mature trees to replace them with natives that will take years to establish themselves will undoubtedly have a negative impact on the aesthetics of the park area. Moreover, it will devastate a thriving ecosystem based on the microclimate created by the existing forest. [Burgard-1-03]
- There is also the important visual environment for city dwellers and removal of tall trees (usually eucalyptus are the target) in many parks such as Buena Vista will significantly alter the vistas and unique visual aspects of some of our signature parks. [Wade-1-02]

Response AE-1

These comments suggest that tree removal proposed under the SNRAMP could affect views, scenic vistas, and the aesthetics of park areas and also questions the aesthetic impacts of stumps and vegetative debris. Exhibit A in the first comment above refers to SNRAMP Figure 6.23-5 Management Areas and Trail Plan for Mount Davidson, included in the Draft EIR in Appendix B; Exhibit B in the second comment refers to a photograph titled "Debris and Remnants from Tree Removal," which appears to have been taken by the commenter.

As discussed in Draft EIR Chapter III, Project Description, pp. 92 to 93, and Draft EIR Section V.C, Aesthetics, pp. 191 and 195, tree removal would be accomplished through selective thinning of individual trees and small clusters of trees rather than clear cutting. Further, tree removal would be conducted over time and not simultaneously in any particular area. Table 5 on Draft EIR p. 114 shows existing trees, trees that would be removed (including approximately 1,600 trees in the Mount Davidson Natural Area), and the resulting number of trees; however, it does not show the precise location of trees that would be replaced on a one-to-one basis because the replacement tree locations have not yet been determined. To make this concept clearer in the Draft EIR, a footnote has been added to Table 5 on Draft EIR p. 114 to indicate that the replacement locations have not yet been determined:

> *The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.
>
> **The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.
>
> ***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.
>
> ****The acreage of the management areas within McLaren Park have been revised to reflect the exclusion of a portion of the Amazon Reservoir Tract that is under the jurisdiction of the SFPUC. Information regarding the number of trees, trails, or DPAs within the SFPUC Amazon Reservoir Tract and SFRPD McLaren Park is not available.
>
> Note: All trees removed would be replaced, although not necessarily with the same species or within the same Natural Area.

Trees would be removed through selective thinning or in small clusters and would be replaced with native vegetation, either grassland or scrub vegetation. Draft EIR p. 191 acknowledges that tree removal would be noticeable and include diminished number of trees and an altered composition and structure of vegetation. The Draft EIR concludes that the proposed tree thinning would not substantially damage scenic resources because (1) the overall visual character of the affected areas would remain intact; (2) no landmark trees would be removed; (3) trees would be removed gradually over time, thereby making the loss of trees visually less perceptible; (4) trees that are removed would be replaced, although not necessarily within the same location or with the same species; and (5) where trees are replaced with scrub or native grasslands, the relatively short maturity time of these habitats reduces the time required for the area to become revegetated. The above factors collectively reduce the overall visual effect of proposed tree removal activities and, as shown in Figure 6, Mount Davidson at Edgehill Way, Draft EIR p. 194, the visual impact of tree

removal activities at Mount Davidson from long-range vantage points would be virtually unnoticeable. The Draft EIR does analyze the visual effects of tree removal from close-range vantage points (Draft EIR p. 195) and concludes that while the visual impact of tree removal from inside the Natural Areas would be more noticeable than impacts from long-range view points and include openings in the forest canopy as well as a change in vegetative structure, tree removal is not expected to result in a demonstrable adverse change and impacts to scenic resources would be less than significant. Also see Response AE-3, RTC p. 4-224.

Forest thinning results in an increase in the average diameter of the residual trees, promotes tree growth, and improves forest health through the removal of suppressed trees. More importantly, thinning allows promotion and establishment of a native understory and diversity and decreases the site dominance of invasive tree species, improving the overall health of the forest by relieving overcrowding and promoting habitat for a large array of wildlife.[56]

Typically, trees would be removed limb-by-limb, rather than felling an entire tree; limb-by-limb removal techniques would always be applied in areas adjacent to other trees or sensitive habitat unless this technique is not feasible or practical from a safety perspective. Tree removal would be conducted manually by someone climbing the tree or someone on a mechanical cherry picker next to the tree. If tree removal occurs in an area that is roadway-accessible, the limbs and trunk sections typically would be transported from the area by a flatbed truck, preferably for use in other areas onsite. If onsite use is not available or practical, the removed tree materials would be transported to SFRPD's green waste/composting facility in Golden Gate Park or to Recology's green waste site on Tunnel Road when SFRPD facilities cannot accommodate the debris. Greenwaste generated at Sharp Park would be transferred to the Sharp Park organic dump. Where removal of tree materials is not possible, the limbs and trunk sections would be left in place on the ground in a manner that protects trail access. As stated on Draft EIR p. 93, Section III, Project Description, tree removal would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance. Stumps may be ground to below grade where necessary to avoid tripping hazards and erosion impacts. Refer to Response AE-2, RTC p. 4-223, for a discussion of the aesthetic impacts of brush piles and remnant plant materials (stumps and debris).

In addition, larger scale tree removal activities (defined on Draft EIR p. 93 as tree removal exceeding 0.5 acre or more than 20 trees on average) may require subsequent project-level environmental review to determine whether the project would result in any significant environmental impacts not identified in this EIR. Generally, SFRPD would spread tree removal across targeted portions of Natural Areas and would not concentrate tree removal activities in a particular location. Larger-scale tree removal (that exceeds half an acre or on average more than 20 trees), identified and analyzed as long-term programmatic projects in this EIR, would remove trees within urban forests

[56] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on August 6, 2014.

(MA-2 and MA-3) over time and not simultaneously in one portion of a Natural Area. The SFRPD's Tree Removal Procedures require that all trees designated for removal have a notice posted at least 30 days before removal. While individuals and neighborhood organizations are not notified directly of the proposed removals, the posting includes a contact number for questions or concerns, which allows the public an opportunity to provide additional comment. Further, no trees are to be removed during this 30-day period. In addition, the Urban Forestry Ordinance has noticing requirements for the removal of street trees, significant trees, and landmark trees; however, as stated on Draft EIR p. 157, no landmark trees are proposed for removal under the SNRAMP. The comments have not presented substantial evidence that proposed tree removal activities would result in a more severe or significant, aesthetic impact than that disclosed in the EIR.

In a memorandum from Lisa Wayne, Open Space Manager, SFRPD, to Jessica Range, Environmental Planner, San Francisco Planning Department,[57] the SFRPD indicated that each year, the NAP propagates and plants over 10,000 plants in restoration sites throughout the city, with at least 200 of those plants being trees.

Comment AE-2 Aesthetic impacts of brush piles and brown vegetation

The response to Comment AE-2 addresses all or part of the following individual comments:

DogPACSF-1-21	MPIC-1-09	SFDOG-2-22
Bartolotta-1-20	Brown-1-18	Hess-1-05

- The NAP EIR does not consider the negative impact on aesthetics of NAP management decisions. For many people, brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing. For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green not brown half the year. Because these impacts were not considered, the NAP EIR is inadequate. [DogPACSF-1-21] [SFDOG-2-22] [Bartolotta-1-20] [Brown-1-18]
- Finally, tree removal from the MA-1c and MA-2e areas as part of building and native plant restoration has already left unsightly stumps, remnants, and debris along the most accessible and visible areas inside the forest sectors of the park (See Exhibit B attached). The MPICs require that any trees killed for SNRAMP be totally removed – all the way to the ground – so that no unsightly stumps are left to negatively impact the aesthetic view from within the park. Also, non-native vegetation and tree parts removed by City staff thus far has been left in unsightly debris heaps along the public trails. This significantly negatively impacts the Park as a scenic resource for those wishing to enjoy the beauty of nature along the Park trails. The MPIC requires that the debris created by the SNRAMP project be collected and dumped away from public view or removed from the park all together.

[57] Lisa Wayne, Open Space Manger, "Tree Removal and Replacement," memorandum to Jessica Range, Environmental Planner, San Francisco Planning Department, November 27, 2012.

Furthermore, any trees cut down should be completely removed to ground level and all remnants taken away in order to maintain the aesthetic quality of the forest and park. [MPIC-1-09]

- (5) In our conversations with Greg Gaar of NAP he was not provided an answer to our question regarding whether tree stumps will be removed immediately if at all. Leaving behind stumps would certainly blight the area. [Hess-1-05]

Response AE-2

These comments suggest that the Draft EIR does not consider the aesthetic impacts of brush piles, brown vegetation, and remnant plant materials (stumps and debris). Exhibit B (provided as part of Comment MPIC-1-09) depicts a portion of the Mount Davidson Natural Area after tree removal activities showing an open canopy and debris pile.

As discussed on Draft EIR p. 188, a visual quality analysis is somewhat subjective and considers the project in relation to the surrounding visual character. Visual impacts would be considered significant if the proposed project were to result in a substantial demonstrable adverse change. Impact AE-4, Draft EIR pp. 191 to 195, provide examples of activities under the proposed project that could affect scenic resources within the Natural Areas, including contouring the topography of an area differently, and removing and replanting shrubs, bushes, grasses and trees. Impact AE-8, Draft EIR pp. 197 to 198, describes routine maintenance activities that could affect the visual character or quality of the Natural Areas, including invasive weed and tree removal, planting of vegetation, and maintenance of trails, catchment basins, and sediment dams. The effects related to the placement of brush piles and other remnant plant materials on scenic resources and the visual quality and character of the Natural Areas would be similar in nature, extent, and magnitude to the effects of the types of activities described in the Draft EIR under Impact AE-4 and Impact AE-8. While the aesthetic impact of large woody debris piles and brown vegetation, as described by the commenter, may be considered adverse to those sensitive to visual changes, the Draft EIR determined that changes to the visual character of the Natural Areas would be less than significant. With respect to brush piles specifically, the visual impact of brush piles would be temporary and would diminish as replanted vegetation matures, or as brush piles decompose. Additionally, because these activities already occur within the Natural Areas, the project would not substantially damage scenic resources or substantially degrade the visual character or quality of the affected sites or surroundings. Debris from vegetation removal is typically used for wildlife habitat enhancement, erosion control, or trail maintenance. Any large woody debris not used for these purposes would be transported and composted at either Golden Gate Park, Recology's Green Waste Facility on Tunnel Road, or in the case of Sharp Park, at the Sharp Park organic dump.

As discussed in Draft EIR Chapter III, Project Description, p. 93, to minimize subsurface disturbance, tree stumps and root balls would be left intact unless they pose a tripping hazard, in which case they

could be ground to below grade. The text on Draft EIR pp. 191 and 197 has been changed, as follows:

- Draft EIR p. 191 (line 14):

  The proposed project would alter scenic resources within the Natural Areas. This would involve, for example, placement of brush piles and large woody debris, contouring the topography of an area differently and removing certain invasive vegetation to enhance habitat and establish native vegetation.

- Draft EIR p. 197 (last paragraph):

  Routine maintenance activities involving invasive weed and tree removal, placement of brush piles and large woody debris, plantings, and maintenance of trails, catchment basins, and sediment dams are described in Section III.F.2.

Comment AE-3 Tree removal simulations

The response to Comment AE-3 addresses all or part of the following individual comments:

Bose-1-06 Bowman-2-04

- Pg. 192-193: Pictures purporting to show the before and after effects of tree removal are the same pictures with superimposed red ovals. This cannot be considered a good-faith effort to show the impact of tree removal. [Bose-1-06]
- Real depictions should be used to demonstrate the results of the deforestation on the Natural Areas instead of the unrealistic and misleading pictures used for Impact AE-4 in the DEIR, which don't show the removal of any trees particularly for visitors within the park. Because the aesthetics of a park are so significant to visitors and has been highlighted by speakers at many public meetings, the aesthetics environmental impact section should also include realistic pictures, such as those from Pine Lake, that demonstrate realistic changes that will result from the adoption of the SNRAMP. [Bowman-2-04]

Response AE-3

These comments suggest that the before and after photographs of tree removal are unrealistic and misleading.

The photographs used for the visual simulations (Draft EIR pp. 192 to 194) are from public viewing locations. All viewpoints were chosen from public rights-of-way that gave the best overall perspective of the landscape. With respect to Mt Davidson, the viewpoints that were chosen were higher in elevation so that the entire hill could be seen, as well as the area anticipated to have the most tree removals. At Sharp Park, the most frequently used public access area is the seawall on the western side of the property, which is also the area with best view of the tree removal areas.

The photo simulations were prepared using accepted methodologies for CEQA aesthetic impact analysis and reflect the anticipated effects of the proposed tree removal based on the project description. As described on Draft EIR pp. 185 to 198, the visual simulations illustrate the long-term

changes to the landscape from scenic vista points, including both tree removal and replanting over 20 years. As discussed in the Draft EIR, tree removals are not anticipated to be concentrated in any one area; further, intact forest would remain surrounding the tree removal areas, and the tree removals would occur over time. Because there would be minor changes in tree canopy as seen from these public viewing locations, "ovals" were used in the EIR figures to help the reader identify these locations, which also supports the conclusion in the Draft EIR that most of the impacts of tree removal would be indistinguishable from distant viewpoints.

The aesthetic experience and views from inside some Natural Areas could change as a result of tree removal described in the proposed project. Over time, blue gum eucalyptus trees would be replaced with smaller statured trees and shrubs. However, as stated on Draft EIR p. 195, the overall vegetated character of the areas would be retained. In order to clarify, the first partial paragraph on Draft EIR p. 195 is revised as follows:

> From close-range locations, the aesthetic experience for some visitors using trails in Natural Areas would change in some locations as some plants are removed and others planted. For example, areas where blue gum eucalyptus trees would be removed and replaced with smaller statured trees and shrubs would appear different over time. However, landscapes in the Natural Areas change over time, and the overall vegetated character of the areas would be retained.

Comment AE-4 Impacts of fence on Sharp Park berm

The response to Comment AE-4 addresses all or part of the following individual comments:

Bowman-1-04 Lorenz-1-03

- The EIR does not account for the significant impact on the aesthetics and land use at Sharp Park. I often talk to people that have been going there for 30 some years, and the berm is definitely as much of the historic value of the Sharp Park as the golf course. The fence is ugly and creates a psychological barrier between the people on the berm and the golf course that completely changes the aesthetics for the hundreds of people that walk along the berm each day. This change is not even recognized as such in the EIR.

  As a frequent walker and runner with my dog and family at Sharp Park, I am quite concerned about the ugly fence that was installed, the potential of a permanent barrier, and prohibiting people and dogs from the lagoon. Before the addition of the ugly fencing along the berm, the lagoon was a favorite end to our runs and a lovely quiet magical place. [Bowman-1-04]

- We also frequently visit Sharp Park, and the EIR does not address the significant impact of the unsightly fence and the proposed barrier between the golf course and the berm. People have been enjoying a small portion of the lagoon for generations and that is part of the historic design of the course. Just because the walkers aren't organized is no reason to ignore the aesthetic and usage impact of this major change to the park's design and usage. From what I observe, more people use the berm for recreation than use the golf course, and the

berm is just as important to aesthetics and recreation as maintaining any other historical aspect of the course.

The EIR needs to do a comprehensive evaluation of the addition of any barrier and not present it as not having any impact. [Lorenz-1-03]

Response AE-4

These comments indicate that the Draft EIR does not account for significant impacts on recreation, aesthetics, and land use at Sharp Park, particularly an existing temporary fence that was previously been installed.

The temporary fence that the commenter mentions has been replaced with another temporary fence that is made of galvanized mesh with wooden posts. The purpose of this fence is to limit access to sensitive species habitat in compliance with the Biological Opinion for the Sharp Park Pumphouse Project and to discourage human and pet intrusion into the restored habitat area. This fence is located along the top of the seawall, just east of the existing trail, running the entire length of the SFRPD property. After Hole 12 is closed and restored as coastal scrub/grassland habitat to support the San Francisco garter snake, the temporary fence would be removed and a permanent post-and-rail (or split rail) fence would be installed. The permanent post-and-rail fence would encircle the lagoon, as illustrated by Figure 3 of the Draft EIR, and would similarly limit access to sensitive species habitat in compliance with the Biological Opinion for the Sharp Park Pumphouse Project.

Draft EIR p. 196 discusses impacts of the proposed Sharp Park restoration activities on the visual character and quality of the environment. Draft EIR p. 196 states that:

> "The proposed project would alter scenic resources, for example, by recontouring some of the golf course holes and portions of the wetland complex and by converting vegetated areas to open water habitat. Changes in vegetation include removing certain invasive vegetation to enhance habitat and establish native vegetation. Changes to scenic resources involving vegetation would be noticeable and include diminished vegetation cover and altered composition and structure. These adverse impacts on scenic resources would diminish as the planted vegetation matures. Establishing more locally-native vegetation as a result of the Sharp Park restoration would improve scenic resources by emphasizing mature native vegetation more consistent with the local native landscape desired by the Natural Areas Program. Also, because the vegetation is better suited to local conditions, it is expected to require less maintenance and, therefore, less intrusion on the natural landscape by maintenance personnel and equipment. As a result, there would be ***less than significant*** impacts on scenic resources from Sharp Park restoration."

The analysis goes on to say that "After implementation of projects under the SNRAMP, the overall visual setting of the Natural Areas would still be characterized as undeveloped, used for various designated purposes, and surrounded by an urban environment. However, during construction, the visual setting of the Natural Areas would be altered by the presence of construction equipment. Construction-related impacts are short term, temporary and would not result in long term adverse

impacts to the visual character of the Natural Areas." This analysis specifically focused on the visual changes resulting from the primary restoration activities (including dredging Laguna Salada, recontouring the shoreline, creating a habitat corridor and upland habitat). The replacement of the existing temporary fence with a permanent post-and-rail fence would not constitute a substantial change from existing visual conditions, which provides the baseline against which potential impacts are evaluated; the analysis and conclusions provided in the Draft EIR covers this activity. Also, refer to Response CP-4, RTC p.4-255, for discussion of impacts related to installation of the post-and-rail fence on historic resources.

Comment AE-5 Analysis of proposed tree management at Grandview Park

The response to Comment AE-5 addresses all or part of the following individual comment:

GGHNA-1-03

- The analysis of impacts from NAP tree management is inadequate…

  The NAP EIR does not adequately consider the impacts on aesthetics, or on wind and impacts of wind on neighboring properties, or on the trees themselves of the extensive "limbing" planned by NAP staff.

  Grandview Park is one of the few parks where tree removal is planned by the NAP. The people in our neighborhood have always loved the trees atop Grandview. Indeed, our association initially formed to fight development of Grandview Park, and the park and its trees make up our logo. We have expressed repeated concerns about the removal of any trees in Grandview, especially since there are so few remaining. At a March 2010 public meeting on the Grandview Trail Restoration Project, attendees were told there would be no tree removals at Grandview. Then, when the final Trail Restoration Project was announced several months later, it included removing "hazard" trees. While we support removing hazardous trees because of public safety concerns, we are concerned about the mixed messages we have gotten from RPD and our inability to find out what will really be done.

  The Trail Restoration Project released in 2010 indicated that NAP will "limb" the remaining cypress and eucalyptus trees in Grandview, with no indication of how much pruning would actually be done. We have seen at other parks, such as Tank Hill, that this "limbing" can be extreme, resulting in ugly-looking trees that appear misshapen and do little to slow down the wind. The NAP EIR does not adequately consider the impacts on aesthetics, or on wind and impacts of wind on neighboring properties, or on the trees themselves of the extensive "limbing" planned by NAP staff. [GGHNA-1-03]

Response AE-5

These comments indicate that the Draft EIR does not adequately consider impacts related to aesthetics, wind, and tree removal at Grandview Park.

As shown in Table 5 on Draft EIR p. 114, Grandview Park currently has a total of 25 blue gum eucalyptus and cypress trees. The SNRAMP proposes to remove five of these nonnative trees.

Following tree removal, 80 percent of the nonnative trees would remain. The scale of this activity is not sufficient to substantially alter the visual character or quality of the Natural Area and would have little effect, if any, on wind conditions for neighboring properties. The commenter does not provide evidence to support the claim that the EIR does not adequately consider aesthetic and wind impacts associated with limbing and other tree removal.

As part of routine maintenance activities described in the Draft EIR, SFRPD staff may prune existing trees. Because SFRPD staff routinely prunes trees, tree pruning would not constitute a substantial change from existing conditions, and Draft EIR p. 196 concluded these maintenance activities would result in no impact. While aesthetic impacts can be subjective, because tree removal would not result in a demonstrable adverse change, the Draft EIR concludes in Impact AE-8 (on Draft EIR p. 195) that routine maintenance would not sufficiently degrade the visual character of the Natural Area.

The impacts associated with wind from routine maintenance activities are discussed in Draft EIR Section V.E, Wind and Shadow. Draft EIR pp. 244 to 251 analyzes the proposed project's potential to affect wind conditions, including alterations in wind patterns and impacts of ground-level wind hazards on pedestrians. While this analysis specifically focuses on those natural areas where more tree removal is proposed, removal of five trees would result in substantially less wind impacts than those described in the Draft EIR for other Natural Areas.

As discussed in Draft EIR Section V.E, Wind, tree removal would not substantially change wind patterns; therefore, Draft EIR p. 389 concludes that tree removal under the programmatic projects would result in less than significant windthrow effects on public safety. In general, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Removing trees may benefit public safety because damaged and dying trees may be at greater risk of falling and injuring visitors or residents. Draft EIR pp. 248 and 249 similarly concludes that because the bulk of the tree stands would remain intact, tree removal would not result in significant windthrow impacts.

The Grandview Trail Restoration Project, to which the commenter refers, was approved by the San Francisco Parks & Recreation Commission on July 15, 2010 and has since been completed; it is a separate and independent project from the project and activities proposed under the SNRAMP. The management actions proposed at Grandview Park under the SNRAMP are primarily focused on routing users away from eroding areas and sensitive habitats to designated trails, and installing soil retaining boxes on the downhill side of the landings to help minimize erosion.

Comment AE-6 Impacts of poor maintenance

The response to Comment AE-6 addresses all or part of the following individual comments:

SFFA-3-21 Bartolotta-1-19 Jake-1-09

- **6. Poor Maintenance**

  The 2012 work plans for the Natural Areas Program (see Attachment IV-A, obtained by public records request) help us to understand why the natural areas are such a mess. The work plans inform us that NAP and its volunteers and contractors plan to spend a total of 358.5 days taking care of 1,075 acres of natural areas in 2012. Each acre of natural area will therefore receive one-third of one day of maintenance for the entire year. Some natural areas have not been scheduled for any maintenance and several as few as one day for the entire year.

  There are countless stories of volunteers who spent long hours planting in NAP areas, only to see absolutely no maintenance performed once the plants were in the ground. Not surprisingly, many of these plants die, creating unsightly vistas of dead or dying plants. People are much less likely to want to walk in natural areas that are poorly maintained, a negative impact on recreation that is not addressed in the DEIR.

  Poor maintenance is important because NAP is exempt from the Maintenance Standards mandated by Proposition C passed by San Francisco voters in 2003. Prop C required the Recreation and Park Department, with help from the Controller's Office, park advocates and the general public, to develop maintenance standards for parks. The standards define the desired conditions of park features such as lawns, trees, and trails, and are used to assess and evaluate conditions in San Francisco parks each year. In the San Francisco Park Maintenance Standards Manual (August 2006), there is a single maintenance standard for open space-cleanliness, defined as: "From a 10 feet distance (i.e., from the nearest path), open space is free of litter and debris." The manual goes on to say that the standard is met if no more than 15 pieces of litter are visible in a 50' by 50' area or along a 200' line, and that the standard is not met if needles, condoms, broken glass, and/or feces are present.

  Certainly people in natural areas, including those walking on trails, have a right to expect the natural areas to meet such a simple cleanliness standard. However, the Manual goes on to say: "Open space-natural areas are not included in this standards manual, and therefore, are not inspected." The DEIR should consider the impact on aesthetics and recreation of the woeful lack of maintenance in natural areas.

  The final EIR should also consider the mitigation of scaling NAP back to a few areas that it can adequately maintain with its existing staff and budget, compared to the current plan to spread maintenance hours so thin because they are trying to cover too many natural areas. One of many reasons why the Natural Areas Program is controversial is that it is too big. It has claimed hundreds of acres in which there were no native plants whatsoever. It has bit off more than it can chew. Much of what is now on its plate should be taken back and returned

to its "natural state," i.e., without pesticides, without fences, without moonscapes created by eradicating existing vegetation.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Analyze impacts on aesthetics and recreation of poor maintenance of natural areas** [SFFA-3-21]

- The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland. The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis. [Bartolotta-1-19]
- The NARMP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. As a search in the entire EIR for relevant words (finance, financial, budget) provides only a few results, it is evident there is no rigorous financial analysis of anything. This failure to consider costs of usage changes can lead to serious adverse environmental impacts. [Jake-1-09]

Response AE-6

These comments suggest that SFRPD staff (along with volunteers) have not adequately maintained Natural Areas, which has led to the existing adverse impacts on aesthetics and recreation.

Consistent with standard CEQA practice, the Draft EIR assumes implementation of the proposed management actions, including maintenance actions, as presented in the project description. The proposed project consists of both programmatic and project activities to be implemented at each of the existing Natural Areas; it does not propose to convert additional portions of San Francisco parkland to Natural Areas with the exception of portions of the Sharp Park Golf Course that would be converted to a Natural Area following restoration activities (also see Response PD-12 on RTC p. 4-168). Generally, the level of daily routine maintenance under the proposed project would be similar to the activities currently conducted by the NAP because, as described in Draft EIR Chapter III, Project Description, p. 89, the NAP staff is composed of biologists, ecologists, and natural resource managers that conduct routine maintenance within the Natural Areas on a daily basis. The NAP staff of approximately ten gardeners would continue to conduct the management actions within the Natural Areas; therefore, existing staffing levels are anticipated to be similar to

current levels, and maintenance activities are not expected to increase substantially. The NAP also utilizes volunteer groups that range in size from 10 to 50 people; therefore, it is not anticipated that routine maintenance activities, which are substantially similar to current activities, would result in a need for SFRPD to hire additional staff. As also discussed on Draft EIR p. 89, larger projects, identified as programmatic projects in the Draft EIR, would be implemented by the SFRPD's Capital Division.

The aesthetic impacts from routine maintenance would be unlikely to change under the SNRAMP; therefore, the proposed maintenance actions under the SNRAMP would not represent a substantial change from baseline conditions. The purpose of this EIR is to evaluate the impacts of the project as compared to baseline conditions, and if the maintenance activities remain the same under the project (the SNRAMP) as compared to what currently occurs, significant project-related impacts would not result, which is what the EIR concluded. The Draft EIR determined that routine maintenance would have less than significant aesthetic impacts (refer to Draft EIR pp. 190, 195, and 197).

Consistent with the commenters suggestion to scale back the NAP, the No Project Alternative and the Maintenance Alternative identified in the Draft EIR both consider the effects of reduced management actions relative to the proposed project (refer to Draft EIR pp. 468 and 513). The Draft EIR concludes that neither of these alternatives would have a significant impact on aesthetic resources relative to existing conditions.

The SNRAMP does not propose any change in the total acreage aside from a minor increase at Sharp Park due to the Restoration Project of Natural Areas as compared to existing conditions. In fact, aside from Sharp Park, the acreage of Natural Areas would remain the same under all of the alternatives, whether No Project, Maximum Recreation, Maximum Restoration, or Maintenance; the only difference would be the activities that occur within the existing Natural Areas. Refer also to Response G-4, RTC p. 4-29 for a discussion of the financial considerations associated with the SNRAMP.

4.D.3 Cultural and Paleontological Resources [CP]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.D, Cultural and Paleontological Resources.

Comment CP-1	**Support determination that Sharp Park Golf Course is a historical resource**

The response to Comment CP-1 addresses all or part of the following individual comments:

BDunes-1-01	GCSAA-1-01	GHCC-1-01
NGCOA-1-01	PGA-1-01	SFPGA-1-01
SFPGA-2-01	SFPGA-2-02	SFPGA-2-03
SFPGA-2-04	SFPGA-2-06	Bowman-1-05
Gleichenhaus-1-01	Horn-1-01	Lee-Y-1-01
Levins-1-01	Links-1-01	Links-2-01
Mansbach-1-01	Tully-1-01	PH-Bryant-01
PH-Links-01	PH-Mozingo-02	

- I am writing to express my complete and enthusiastic support for designating the incomparable Sharp Park Golf Course a "historical resource." Its architect, Alistair MacKenzie, is one of the great masters of the 700 year old craft and Sharp Park is one of his masterpieces. It is truly a work of living art. As the owner of two golf resorts, Bandon Dunes in Bandon, Oregon and Cabot Links in Nova Scotia, I have a very strong opinion that Sharp Park should not only be preserved but maintained to the very highest standard. [BDunes-1-01] [SFPGA-2-01]

- On behalf of the Golf Course Superintendents Association of America (GCSAA) I am writing in support of the "historical resource" designation for the Sharp Park Golf Course. Sharp Park Golf Course is a historical and cultural resource, and is recognized as such by local, state and national entities. Not only was Sharp Park designed by Alister MacKenzie, one of the greatest golf architects of all time, but it is also unique because it is one of the few municipal courses he designed.

  Thank you for your time and for allowing GCSAA to express support of the San Francisco Planning Department's determination that Sharp Park Golf Course, designed by Alister MacKenzie and opened for play in 1932, is a "historical resource" under the California Environmental Quality Act. [GCSAA-1-01]

- Sharp Park Golf Course is one of only a handful of golf courses that the general public can play that was designed by the worlds most famous golf architect, Dr. Alister MacKenzie. It is indeed a national treasure, and although only 14 of the original MacKenzie holes remain they are indeed MacKenzie "gems". Sharp Park opened to great fanfare 80 years ago and MacKenzie was so proud of the layout that he highlighted it in his book "The Spirit of St. Andrews."

  There are amazing parallels that Sharp Park shares with a nearby MacKenzie designed course, Green Hills Country Club (Originally the Union League Golf and Country Club of San Francisco). Green Hills was designed by Alister MacKenzie and was formerly the site of an orchard, where flowers were grown and used by John MacLaren for the 1915 Worlds Fair. John Maclaren hired Alister MacKenzie to design Sharps Park. John Maclaren, one of the most famous horticulturists of the time, planted the cypress trees that line the fairways of

Sharp Park. Similar Cypress trees are present at Green Hills. Green Hills original clubhouse was designed by Willis Polk Architects, a company that helped to restore much of San Francisco after the great earthquake and fire of 1906. The architect that designed the original Green Hills clubhouse for Willis Polk was Angus McSweeney. Sharp Park's clubhouse was also designed by Angus McSweeney.

When Green Hills was opened in 1930 MacKenzie praised the layout and called it one of the best golf courses on the west coast. Interestingly, when MacKenzie wrote the "Spirit of St. Andrews" Green Hills was only mentioned in one sentence. On the other hand Mackenzie devoted much of a chapter to his pride in Sharp Park and the seaside links design philosophy. This public golf course was indeed one of the works MacKenzie was most happy with in California (which is significant when one looks at the magnificent layouts, almost all private, that he is responsible for. They include Cypress Point, The Valley Club, The Meadow Club, Green Hills, Pasatiempo and others).

Those that say that Sharp Park is no longer a MacKenzie layout are grasping at straws. Fourteen of the original holes are still in use (two modified somewhat) and the four replacement holes to the east of Highway One were designed by Fleming.

Closing Sharp Park would be a travesty and would forever prevent the average person from playing golf at a course designed by the worlds most famous golf architect. [GHCC-1-01]

- We are writing to you to inform you that we support the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. As you know, this course was one of the final designs by Alister MacKenzie prior to his death. He is regarded by many as the finest golf course architect in the history of the game with courses like Augusta National and Pasatiempo in Santa Cruz to his credit. Unlike those courses, Sharp Park is affordable and accessible to people from all walks of life from the community and beyond. There have been many great players like San Francisco's own Ken Venturi and Johnny Miller who developed their games on municipal courses. Take away the public course option and many great and not so great players will never have the chance to pursue this great lifetime sport. In an urban environment, golf courses provide a unique venue for healthy outdoor recreation. Unlike other sports, golf is one that can be pursued by anyone regardless of age, size, or speed. Entire multi-generational families can play this game together. [NGCOA-1-01]
- We are writing to you today to voice The PGA of America's wholehearted support for the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. [PGA-1-01]
- The San Francisco Public Golf Alliance supports the determination[1] of the San Francisco Planning Department that Sharp Park Golf Course (hereinafter "Sharp Park," or "golf course"), designed by Dr. Alister MacKenzie and opened for play in 1932, is an "historical resource" under the California Environmental Quality Act.[2]

I. SHARP PARK GOLF COURSE MEETS CEQA CRITERIA FOR "HISTORICAL RESOURCE" DESIGNATION

Sharp Park Golf Course is a well-known Pacifica historical site. Both the golf course and its clubhouse are separately identified as "historical sites" by the City of Pacifica[3] General Plan, adopted in 1980.[4,5] The Pacifica Historical Society, official historian of the City of Pacifica, by unanimous resolution dated June 14, 2011, designated Sharp Park Golf Course as an "historical and cultural resource".[6]

The golf course is also nationally recognized as one of America's "culturally significant landscapes at risk for alternation or destruction," by the Cultural Landscape Foundation of Washington, D.C.'

The criteria for a property to be designated as an "historical resource" under the California Environmental Quality Act, as set forth in 14 California Code of Regulations, Section 15064.5(a)(3), include the following:

> "(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage" and
>
> "(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values."

1. Sharp Park is the work of Master Architect Dr. Alister MacKenzie

Sharp Park meets the criteria as "historical resource" under CCR 15064.5(a)(3)(C), because it was designed by Dr. Alister MacKenzie, the best-known, most influential, and arguably the greatest golf architect in history.

His other courses include Augusta National, home of the annual Masters Tournament, and the Cypress Point Club on the Monterey Peninsula; these two courses are currently ranked as No. 1 and No. 4 on Golf Digest Magazine's list of "America's Greatest Courses."1° A third MacKenzie course – Royal Melbourne in Australia--is regularly mentioned with Augusta and Cypress among the 10 "greatest" golf courses in the world. Dr. MacKenzie was the first architect inducted into the World Golf Hall of Fame, and is recognized by golf architecture authorities as the historic architect who had the greatest influence on modern golf course design.

Dr. MacKenzie proclaimed his design principles in two books: "Golf Architecture" (1920), and "The Spirit of St. Andrews" (published posthumously, 1995). In a nutshell, Dr. MacKenzie prescribed that golf should be both challenging and enjoyable by players of all abilities, and that the golf course itself should be beautiful. "while always keeping uppermost the provision of a splendid test of golf, I have striven to achieve beauty," Dr. MacKenzie said. "This excellence of design is … constantly exercising a subconscious influence upon [the golfer] and in course of time he grows to admire such a course as all works of beauty must be eventually felt and admired. "

Dr. MacKenzie explained that he left the practice of medicine for golf architecture, out of a "firm conviction of the extraordinary influence on health of pleasurable excitement, especially when combined with fresh air and exercise."

2. Sharp Park is a Rare Public Seaside Links.

Sharp Park meets a second "historical resource" criterion listed in CCR 15064.5(a)(3)(C): it "embodies the distinctive characteristics of a type of construction". Sharp Park is a true seaside links, a rare and historically significant type of golf course.

Among the scores of beloved golf courses built by Dr. MacKenzie around the world, Sharp Park is one of his very few public courses. With the Eden Course at St. Andrews, Scotland (which he co-designed with his London partner, H.S. Colt), Sharp Park shares the distinction as Dr. MacKenzie's only public seaside links in the world.'

Although a rarity in America, the seaside links type of course has particular significance to the sport of golf, because the sport originated on seaside links courses in Scotland. In recognition of the historic significance of seaside links, the British Open Championship--one of golf's four annual major championships--is played exclusively on links courses.

Dr. MacKenzie was an expert on seaside links, which he considered "the type of land easily the most suitable for the game." Before immigrating to Northern California in the mid-1920's, he was consulting architect at St. Andrews, Scotland, where he was the first to map the famous mounds, swales, pits, and bunkers of the Old Course, the birthplace of golf.

At Sharp Park, Dr. MacKenzie and his construction team intentionally created a Scottish-style seaside links on what had originally been an artichoke farm surrounding the brackish Laguna Salada (Spanish for "salty lake") at Salada Beach, in what is today the Sharp Park District of Pacifica. Construction superintendant Chandler Egan marveled at the site's "remarkable seascape," prompting news reporters to hail Sharp Park as "a seaside municipal course of outstanding character akin to those of the English and Scottish coasts," and "a second St. Andrews and the finest municipal golf course in America."

3. Sharp Park's Place in California And San Francisco History

Sharp Park also meets the "historical resource" criterion set forth in CCR Section 15064.5(1)(3)(A): it "is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage."

Sharp Park has long been known as "the poor man's Pebble Beach," and its opening in 1932 was part of a broad movement to extend the sport of golf to the American public. "I hope to live to see the day when there are the crowds of municipal courses, as in Scotland, cropping up all over the world," Dr. MacKenzie said. Sharp Park's tradition of low greens fees has made it a favorite over the years of low-income golfers, racial minorities, juniors, and seniors. In 1955, Sharp Park hosted the initial championship tournament of the Western States Golf Association, one of America's oldest African-American golf associations.

Sharp Park also reflects San Francisco's tradition of great public architecture. From City Hall and the Beaux Arts palaces at Civic Center to the Golden Gate Bridge, Bay Bridge, and

Golden Gate Park, San Francisco proclaimed itself a world cultural and artistic center through its public architecture. The hiring of the world's preeminent golf architect to build a public seaside links golf course in the spirit of St. Andrews is in keeping with this aspect of San Francisco's personality.

4. Sharp Park Has Retained Its Integrity.

Seventy-nine years after its opening in 1932, 12 of Sharp Park's current 18 holes are MacKenzie originals -being holes numbers 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17, and 18; two other holes (numbers 12 and 16) lie in original fairways, but do not have the original greens. Four new holes were built east of the highway in 1941, after Dr. MacKenzie's death, by his assistant John Fleming, when the original strand holes were replaced by a seawall.

In the years since its opening in 1932, trees have grown and come down, some sand traps have grassed-in and others have built-up, mowing patterns on some greens have changed, and the old course has suffered other insults of the aging process. Notwithstanding, Sharp Park retains Dr. MacKenzie's routing, character, and artistry. His trademark heaving, tumbling greens can still be seen on current holes 1, 2, 3, 9, 10, 11, 13, 14, 15, 17, and 18. The rolling fairways and mounds on current holes 1, 3, 10, 14, 16, and 17 mimic the famous fairway bumps and hollows at the Old Course at St. Andrews, where MacKenzie once served as consulting architect. At current Holes 1 and 14, there are classic examples of MacKenzie "deception bunkers," placed some distance in front of the greens in such a way as to camouflage the actual distance between bunker and the green.

Overarching all is the great beauty of the golf course as a work of art. MacKenzie's ability to create beautiful natural-appearing landscapes that simultaneously function as playing fields for the full range of golfing abilities was his true genius. This beauty is a constant at Sharp Park, where Dr. MacKenzie's design principles and hallmarks remain visible to this day.

As a result, Sharp Park is a living public museum of golf architecture. In the words of San Francisco favorite son and 1964 U.S. Open golf champion Ken Venturi, this golf course is "Dr. MacKenzie's great gift to the American public golfer."

Today, the course is at the same time beautiful, challenging, and playable for players of all abilities. Golf architecture historian Geoff Shackelford sums up Dr. MacKenzie's design at Sharp Park as follows: "no municipal course design has ever come close to matching the overall package of beauty and affordable links-style golf." Dr. MacKenzie's beautiful cultural landscape is enjoyed not only by golfers, but as well by passersby who view the course from the California Coastal Trail, which borders the course atop the seawall.

Dr. MacKenzie, an international master golf architect with unparalleled expertise in seaside links courses, designed Sharp Park in the style of the historic Scottish public links. In this way, he tied American golfers to the roots of the Scottish game. It is one of only three public seaside links courses in California, and one of the few places in the world where MacKenzie's work is available for use and enjoyment by the general public.

For all these reasons, the San Francisco Public Golf Alliance and its more than 5,000 members, support the determination of the San Francisco Planning Department that the

Sharp Park Golf Course is an "historical resource" under the California Environmental Quality Act. [SFPGA-1-01]

- In addition to what the San Francisco Public Golf Alliance has already laid out in making its case for Sharp Park Golf Course, I acknowledge that I have read and strongly agree with the determination that Sharp Park Golf Course be considered a "historical resource" under the California Environmental Quality Act. [SFPGA-2-02]
- I am writing to you in support of the preservation of Sharp Park Golf Course as we know it today. Sharp Park Golf Course, designed by Master Architect, Dr. Alister MacKenzie, is an historical property, an important part of San Francisco's history, and should be safeguarded from any significant modifications that will change its architectural integrity.

  The San Francisco Public Golf Alliance, in a letter to you dated September 20, 20 II, comprehensively outlined all of the reasons it supports the determination of the San Francisco Planning Department that the Sharp Park Golf Course is an "historical resource" under the California Environmental Quality Act. [SFPGA-2-03]
- We are writing to you today to voice The PGA of America's wholehearted support for the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. We feel strongly that as one of renowned architect Alister MacKenzie's final designs prior to his death, it holds true historic value not only for your region but for the U.S. golf industry as well. [SFPGA-2-04]
- On behalf of the Golf Course Superintendents Association of America (GCSAA) I am writing in support of the "historical resource" designation for the Sharp Park Golf Course.

  Sharp Park Golf Course is a historical and cultural resource, and is recognized as such by local, state and national entities. Not only was Sharp Park designed by Alister MacKenzie, one of the greatest golf course architects of all time, but it is also unique because it is one of the few municipal courses he designed. [SFPGA-2-06]
- However, I fully support that Sharp Park is an historic course that is lovely for even those of us that don't golf. [Bowman-1-05]
- I support the designation of Sharp Park as a historical resource. [Gleichenhaus-1-01]
- I am writing to endorse the decision to designate Sharp Park Golf Course as an "historical resource." Sharp Park is a fine representation of the mastery of course architect Dr. Alister MacKenzie. The course today boast many of the aspects of course design espoused by Dr. MacKenzie, perhaps the greatest course architect in history, when it was created nearly 80 years ago. Over the years, like all things, the course has lost some of its luster, but the underlying beauty remains. I am gratified that the City and County of San Francisco support Sharp Park Golf Course as a public resource worthy of preservation. For all these reasons, as well as those expressed in the Francisco Public Golf Alliances's letter dated September 20, 2011, I am proud to support the designation of Sharp Park Golf Course as an historic resource under the California Environmental Quality Act. [Horn-1-01]

- I am writing this letter to fully support the decision to designate Sharp Park Golf Course as a "historical resource." [Lee-Y-1-01]

- I am not a golfer, so my support for the Historical Resource Designation pending comes from a slightly different point of view. I wholeheartedly support the designation because of the unique, historic and wonderful asset San Francisco has - an authentic Alister MacKenzie 18-hole golf course. This is truly a treasure that should be preserved. As a long-term San Franciscan resident, moreover, I believe having this public golf course available at reasonable rates to people of all walks of life is what San Francisco is all about.

  I vote, and I support this Historic Resource Designation. [Levins-1-01]

- I am writing to fully support the decision to designate Sharp Park Golf Course as an "historical resource."

  Sharp Park is the functional equivalent of fine art - it represents the work of an unquestioned master (Dr. Alister MacKenzie, renown the world over as perhaps the greatest golf course architect in history) and the course today still contains the vast majority of timeless features Dr. MacKenzie created almost 8o years ago. While the course needs restoration work, that fact alone does not diminish its importance. Our Cable Cars needed work in order to save them, too. And so do many of our fine buildings, which are architectural landmarks themselves.

  The fact is, Sharp Park is a part of our collective history. It is living breathing organism that requires our tender, loving care. And golfers around the world know of the course and appreciate its beauty and what it represents as an outstanding example of golf course architecture in the game's "golden age." In a sense, Sharp Park stands as does the Palace of Fine Arts as a reminder of a time long ago, and something worth preserving for generations to come. The extra bonus in this case is that the golf course itself has always been -- and remains today -- a vital recreational resource for modest income people who love the game of golf. It is used by diverse group of people who, quite literally, have no place else to play the game at affordable rates. The course has been recognized far an wide as an historic property and has demonstrated that golfers and endangered species can get along with each other in a healthy environment.

  I am gratified that the City and County of San Francisco has joined the chorus to support Sharp Park Golf Course as a public resource worthy of preservation. This decision is clearly correct on the historic record, and is another reminder that San Francisco is the City that knows howl.

  For all these reasons, as well as those expressed in the San Francisco Public Golf Alliance's letter dated September 20, 2011, I am proud to support the designation of Sharp Park Golf Course as an historic resource under the California Environmental Quality Act [Links-1-01]

- I write this letter in support of the San Francisco Planning Department's designation of Sharp Park Golf Course as an "historical resource" under the California Environmental Quality Act.[2] I also write this letter to point out several serious factual errors in the October 27, 2011,

letter of Wild Equity Institute's "historic landscape architect" Chris Pattillo, which errors discredit Mr. Pattillo's analysis.

I also wish to comment on the issue of Sharp Park's qualification for historical status under Criteria All, association with significant historical times and events. Sharp Park was designed and built during the so-called "Golden Age of Golf" in the United States and California, during which history's greatest golf architects, including Alister MacKenzie, were building courses and expanding the reach of the sport in the United States and around the world.[18] During this period, golf was expanded, by construction of Sharp Park and other public courses, to the urban masses. Sharp Park has always fulfilled its role as the "poor man's Pebble Beach": great architecture for the common people. In this connection, in 1955 Sharp Park was the site of the inaugural tournament of the Western States Golf Association[19] one of the country's oldest and largest African-American golfing societies. Sharp Park thus played a significant role in the racial integration of American public recreation. [Links-2-01]

- This letter is written to support the decision to designate the Sharp Park golf course as a "Historical Resource". [Mansbach-1-01]
- I have read and strongly agree with the determination that Sharp Park Golf Course be considered a "historical resource" under the California Environmental Quality Act. [Tully-1-01]
- It is significant that Sharp Park was built by history's greatest golf architect, Alister MacKenzie. Most of MacKenzie's courses include the most famous ones, like Augusta National, the site of the annual Master's Tournament, and Cypress Point. These are private and inaccessible to common people. Sharp Park is part of San Francisco's legatorian tradition of providing great classical architecture for its public places. This is the spirit of San Francisco. [PH-Bryant-01]
- I wanted to add some historical words and specifically to say the staff got it a hundred percent correct in the draft EIR designating this precious golf course as an historic resource. This is the legacy of John McLaren. It was his vision, and he brought in one of the greatest architects in the history of the world, Alister MacKenzie, to create this very special asset for the City and County of San Francisco even though it's on property in Pacifica. This is clearly the work of a master. It's the equivalent of a Rembrandt that would hang in a museum, and the fact that it's old and maybe a little faded doesn't take away its luster. People come from all over the world to walk it, to play it, to see it, to admire it, to know it, to understand it. It's a symbol of golf's golden age. It's part of our historic legacy just the way Sharp – the way Coit Tower is, the way the cable cars are. [PH-Links-01]
- It is a historical construction by a -- one of the great architects of golf courses ever. [PH-Mozingo-02]

Response CP-1

These comments express support for the conclusions documented in the EIR, and some comments provide additional background materials in support of the determination in the EIR. These comments do not present any new evidence that would change the conclusions in the EIR.

Comment CP-2	**Opposition or uncertainty about determination that Sharp Park Golf Course is a historic resource**

The response to Comment CP-2 addresses all or part of the following individual comments:

HPC-1-01	Sierra Club-1-09	WEI-1-03
Anonymous-1-01	Keitelman-1-01	Pattillo-1-01

- The HPC did not have consensus on the historical integrity of the Sharp Park Golf Course. Some commissioners thought that the property does not retain sufficient integrity to convey the property's historical significance per the National Register of Historic Places and/or California Register of Historical Resources, while others thought that the property does retain sufficient integrity. [HPC-1-01]

- **3. Inappropriate designation of golf course as a Significant Historical Resource.**

  We recognize that while the Sharp Park golf course is not represented in either the Federal Register or the State Historic Resources Inventory, CEQA gives discretionary authority to the Lead Agency to treat locally significant historical structures or landscapes as an historical resource for CEQA purposes. However, the key term here is "discretion." In general, only those resources which are eligible for listing under the State Historic Register are permitted to be treated as such for CEQA purposes (California Public Resources Code; Sections 5020–5029.5). Here is the relevant section of the Code pertaining to eligibility requirements for listing on the State Inventory:

  Chapter 11.5. California Register of Historical Resources

  Section 4852. Types of Historical Resources and Criteria for Listing

  The criteria for listing historical resources in the California Register are consistent with those developed by the National Park Service for listing historical resources in the National Register, but have been modified for state use in order to include a range of historical resources which better reflect the history of California. Only resources which meet the criteria as set out below may be listed in or formally determined eligible for listing in the California Register.

  Among the criteria which are used to determine whether a resource can be deemed historically significant is "integrity," defined in subsection (c):

  (c) Integrity. Integrity is the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the California Register must meet one of the criteria of significance described in Section 4852(b) of this chapter and retain

enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Historical resources that have been rehabilitated or restored may be evaluated for listing. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Extrapolating from these criteria and general CEQA practice regarding historical resources, it is hard to see how the golf course can be considered an historical resource because it lacks integrity, having been altered many times in the past through both natural and human interventions. Indeed, the proposed project will alter the course even more by relocating and shortening additional holes. What the report is saying, in effect, is that the general concept of an 18 link golf course is a significant historical resource, a designation which in our view is improper. [Sierra Club-1-09]

- **The Historic Resource Assessment for Sharp Park Golf Course is erroneous.**

  As explained in the attachment, the Sharp Park historic resource assessment is fundamentally flawed. The golf course clearly no longer retains integrity – review of the comments submitted by PGA Design (also attached here), by the comments of the Historic Preservation Commission, and by independent analysis, the golf course lacks historic integrity today. See the attached Wild Equity Institute assessment for a link-by-link assessment of the course's integrity.

  The assessment relies almost entirely for its argument on the position of uncredentialed individuals associated with the San Francisco Public Golf Alliance to support its view. But this view has never been adopted by any public body – including the City of Pacifica, despite the DEIR's assertion to the contrary. In particular, the City of Pacifica has never moved Sharp Park Golf Course onto a list of protected historic sites – only the golf course Club House has been so protected. Indeed, the golf course receives the same protection under Pacifica's general plan historic element as Laguna Salada itself and the surrounding habitat areas. Yet these areas are excluded entirely from the historic resource assessment.

  Moreover, the City's assertion that the era in which the golf course was created was somehow significant is unsubstantiated and not adequately documented. There is simply no evidence that there was a "golden era of golf" in San Francisco when the golf course was constructed – indeed, the evidence indicates that golf course demand was on the wane when Sharp Park was constructed. Without additional documentation that the era was significant, there is simply no basis under any criterion to declare Sharp Park Golf Course an historic resource under CEQA, as explained in the attached comments by PGA Design. Absent more information about this era and its relationship to the time period around this period of significance, the City has no basis for declaring Sharp Park Golf Course historic. [WEI-1-03]

- Sharp Park today bears no resemblance to Alister MacKenzie's original design. The water features on five MacKenzie holes east of Laguna Salada, original holes 1, 9, 15, 16, & 17, have been culverted, eliminating crucial water hazards essential to his design. Five holes west of Laguna Salada, including original holes 3, 4, 6, 7, & 8 were destroyed completely by massive coastal storm surges and the subsequent construction of the berm, and two others, original

holes 2 & 5, were severely damaged and modified to eliminate additional water features and other elements of their design. Now the site of hole 12, the original hole 2 was shortened by 60 yards and a stroke while the strategic features-including its proximity to a much larger Horse Stable Pond than exists currently-are almost completely irrelevant to the hole's play today. Hole number 5, which was considered by Jack Fleming to be "one of the most interesting holes on the course, similar to Dr. MacKenzie's 'ideal golf hole,'" is now the current site of hole 17, but other than occupying the same space the hole bears absolutely no resemblance to the original hole 5: a tee shot over Laguna Salada has been removed, and dual fairways have been combined into one, eliminating strategy alternatives integral to MacKenzie's design. Original holes 10 and 11, now the location of holes 14 and 15, have likewise been modified with changed greens and fairways that bear no resemblance to MacKenzie's layout. Indeed, Daniel Wexler argued that the original hole 10 was perhaps the course's best link, but its essential feature–a double fairway–no longer exists. Original hole 12, now the location of hole 18, has had sand traps removed from the design. In addition, original hole 13 (now 3), and original holes 14 and 15 (now the location of holes 8 and 2) described by Wexler as "not among the layout's finest" to begin with, have likewise had hazards reconfigured, as has the final original hole, 18 (now the location of hole 10). In addition, the theory of the course-the creation of a links-type, seaside course-was entirely upended when the berm was built separating the course from the ocean. In short, every link has been changed at Sharp Park-in many cases radically, and many holes have been lost completely. It is misleading to claim that any historical integrity exists at the course, let alone that 12 of these radically altered holes are "original" MacKenzie links. [Anonymous-1-01]

- But golf advocates are trying to do an end-run around this planning process, claiming Sharp Park should be landmarked because Alister MacKenzie designed it. But history is not on their side.

  Mackenzie helped revolutionize golf architecture in the last century by insisting that courses "imitate the beauty of nature," rather than be in conflict with it. But MacKenzie ignored his own maxim when he designed Sharp Park. The project required dredging and filling this delicate coastal landscape for a staggering fourteen months in order to create enough dry land for an 18-hole golf course. And in perhaps his greatest ecological mistake, MacKenzie leveled a coastal barrier that provided Sharp Park with natural protection from the surging Pacific Ocean, replacing it with seven links so that golfers could view the sea.

  The flaws in this design became evident almost immediately. Opening day of the golf course was delayed twice due to excess water on the course. Then a massive coastal storm surge, no longer held at bay by the natural barrier MacKenzie destroyed, inundated the course and severely damaged several of MacKenzie's signature beach-side holes. The subsequent routing of Highway 1 through Sharp Park destroyed another MacKenzie link, permanently bifurcating MacKenzie's original design.

  San Francisco eventually decided to alter what remained of MacKenzie's layout. The City constructed a levee along the coastal edge of Sharp Park, in places 30 feet high, destroying the ocean views MacKenzie designed. And in 1972 Robert Muir Graves redesigned Sharp Park, moving several links into an upland canyon.

But rather than solving the flooding problem, the levee and redesign exacerbated it. The new design blocked the natural water seeps and outflows through Sharp Park to the ocean, and the course now floods annually during normal winter rains.

Currently San Francisco attempts to prevent the freshwater flooding of the golf course by pumping water through the levee, but this is killing the threatened California red-legged frog – also known as Twain's Frog, because it is the central character in Mark Twain's short story "The Celebrated Jumping Frog of Calaveras County." In addition, the operation of the golf course threatens the endangered San Francisco garter snake – considered the most beautiful serpent in North America – as mowing operations kill the snakes while they bask in the sun on the course's fairways. The United States Fish and Wildlife Service warned San Francisco in 2005 to stop harming these species or face potential civil and criminal liabilities. The golf course managers responded by leaving standing water on the course for most of the year, causing further damage to the course.

Consequently, there is simply no MacKenzie legacy at Sharp Park today. A San Francisco golf program employee wrote a history of San Francisco golf in 1978 and explained that MacKenzie's design "would never be the same" after the coastal storms decimated the course, and claimed the Robert Muir Graves redesign was like "taking a house with a beach view and turning it 180 degrees to face a mountain slope." Daniel Wexler, writing in his book "missing links," noted that MacKenzie's Sharp Park was "shortly lived" and "washed into oblivion by a coastal storm." He concluded that "no appreciable trace of [MacKenzie's] strategy remains in play" at Sharp Park today. [Keitelman-1-01]

- The *Historical Resources Evaluation Report* (HRER) prepared by Tetra Tech, Inc. describes many alterations made to the course since 1932. Comparing the course layouts depicted in the two exhibits included in the Evaluation Report one finds very few similarities between how the course was designed and how it exists today.

  1. The original hole 1 (now hole 11) was a long, straight shot. The reconfigured hole doglegs to the right.
  2. The original hole 2 (now hole 12) was a dogleg that wrapped around the south end of the course. Hole 12 is now a lot shorter with no dogleg.
  3. The original holes 3, 4, and 8 were destroyed in a big storm and not replaced.
  4. The original hole 5 offered multiple fairway options – a unique design feature of Mackenzie. Hole 17 which replaced 5 is a single straight shot.
  5. The original hole 6 that ran east-west at the north boundary no longer exists.
  6. The original hole 7 appears to be similar to current hole 16 identified on Figure 2 as having been built after 1941, after the period of significance.
  7. The original holes 9 and 10 each offered double fairways. The replacement holes 13 and 14 eliminated these special features.
  8. The original hole 11 – a short run - appears to be similar to current hole 15.

9. The original hole 12 was a long straight shot. It has been replaced by hole 18 that is longer with a dogleg.
10. The original holes 13, 14 and 15 were on the east side of the county road and generally paralleled the road running north-south. Today this area has four holes that all run east-west.
11. The original hole 16 was a dogleg left replaced by hole 3 a straight shot.
12. The original hole 17 ran east-west and was a long shot with a dogleg. Hole 8, a short, straight fairway replaced it.
13. The original hole 18 was a dogleg. This hole has been replaced by hole 2, a straight shot.

Other major changes implemented since the period of significance include:

A. Elimination or reconfiguration of several sand traps.
B. Construction of a seawall in 1941 to prevent flooding of the golf course. This eliminated views to the beach and Pacific Ocean and the essence of the links design concept. C. Filling a portion of the lagoon as part of the reconfiguration of hole 10.
D. Installation of concrete golf cart paths along the back nine holes in 1996 where none existed previously.
E. Culverting of water features on five holes and the elimination of water hazards – an important component of the original design.
F. Installation of a 4000-gallon pump to help with annual flooding of Laguna Salada.
G. Alternations made between 1985 and 1994 to accommodate female players such as shortening of the fairways.

Adding together all of these alterations it is apparent that Sharp Park Golf Course lacks sufficient integrity to qualify as a historic resource under criterion C/3. The course no longer reflects the work of Alister Mackenzie. The land use remains a golf course but otherwise there are few similarities between the course that existed during the period of significance and what remains today.

The Evaluation Report notes that Alister Mackenzie attained status as a master golf course architect. Appendix C on page 4-7 notes, "George Shackelford, in his book *Grounds for Golf*, describes Mackenzie as a master designer and offers that Mackenzie's secret to creating unique courses was his talent for routing." Regrettably, today nothing remains of Mackenzie's unique routing. He continues to explain that his work "was known for its original and distinctive bunkers, with irregular shapes and each with its own design." And "Distinctive bunkering, the use of small hillocks around greens, and exciting hole locations were Mackenzie's trademark".

Another of Mackenzie's trademarks was his talent for working with natural landform and subtlety integrating his courses with a site's topography to take full advantage of the unique qualities of each site. Quoting from the HRER, "Mackenzie felt that the success of golf course construction depended entirely on making the best use of natural features and devising

artificial ones indistinguishable from nature." The HRER continues with, "while many architects try to create a special course, Mackenzie could figure out how best to fit holes into a property and situate a golf course to evoke a comfortable, settled, connection to the ground. His course routings are always functional and original but rarely do they fight the contours of the property."

In summary, defining characteristics of Mackenzie's design style included unique course routing, a talent for adapting a course to fit the land, an ability to offer challenge to players of varying skill levels, distinctively designed bunkers, and inclusion of multiple fairway options – offering advantage to those to took greater risks in their play. The vast majority of these features have been eliminated from the course. According to Wexler, in a recently published article "no appreciable trace of his strategy remains in play."

Unfortunately, Sharp Park Golf Course began to fail even before the course opened in 1932 because Mackenzie failed to fully understand the forces of nature at this site. Page 4-3 of the Evaluation Report notes that the opening was delayed twice due to "drainage problems on the course due to winter rains." Shortly after the course opened a major storm washed out a large portion of the course and necessitated construction of the seawall in 1938 intended to prevent similar damage in the future. This type of damage has continued – as recently as 1982 a major storm wiped out several holes. In 1990 another breach killed many of the cypress trees on the course. Few of the golf courses designed by Alister Mackenzie remain intact today. It would be ironic and misplaced if this course – one that represents a failure in design – became a lasting representative of his life's work by being officially designated as a historic property.

The determination of historic significance is tied to a site's level of integrity. According to *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*[4] "The historic integrity of a cultural landscape relates to the ability of the landscape to convey its significance." And "Historic integrity is assessed to determine if the landscape characteristics and associated features, and the spatial qualities that shaped the landscape during the historic period of significance, are present in much the same way as they were historically." Emphasis added.

The guide continues, "Historic integrity is determined by the extent to which the general character of the historic period is evident, and the degree to which incompatible elements obscuring the character can be reversed". In the case of Sharp Park Golf Course the changes to the course were not the result of the normal evolution of a living landscape – maturing trees and other plantings, but rather major changes that were forced to solve functional problems that resulted from flaws in the original design – a failure to fully understand the power of nature and it's ability to wreak havoc. The changes made to Sharp Park Golf Course cannot be reversed because doing so would recreate the conditions that necessitated that the alterations be made in the first place.

Page 5-2 of the HRER notes, "Because landscape features change over time, a landscape need not retain all of the original features it had during its period of significance, but it must retain the essential features and characteristics that make its historic character clearly recognizable."

> In essence for a site to meet the criteria of historic significance most of the designed features must look as they did during the period of significance. This may be true for the Clubhouse and maintenance building which are not addressed here, but it is not the case at Sharp Park Golf Course and no doubt explains why "None of the state or national registers identified Sharp Park Golf Course as a historical resource" as noted on page 4- 1 of the HRER.
>
> By making the finding that the existing golf course represents a historic resource under criterion C/3 it seems that Tetra Tech failed to appreciate not only the subtleties of golf course architecture but its essential features. Just because there was a golf course present in 1932 the fact that there is still a golf course present today, does not qualify the current course as a historic resource.
>
> Sharp Park Golf Course lacks integrity. While a golf course at this site is consistent with the historic land use, that fact is insufficient evidence for a finding of historic significance. Failure to demonstrate significance voids eligibility for historic resource status. I urge you to consider this as you plan for the future use of Sharp Park. [Pattillo-1-01]

Response CP-2

The WEI-1 comment letter included, as an attachment, a copy of the Pattillo-1 comment letter. The individual comments of Pattillo-1 have been considered and addressed in this response. These comments express disagreement with the EIR's conclusion that the Sharp Park Golf Course retains adequate integrity to be determined a historic resource for purposes of environmental impact evaluation under CEQA. Several comments remarked on the adequacy of the analysis of the Sharp Park Golf Course and the determination that it is eligible for listing in the NRHP and CRHR as stated in the HRE and the EIR, specifically questioning whether the golf course retains historic integrity.

The Planning Department acknowledges that two of the seven members of the San Francisco HPC disagreed with the historic eligibility determination for the Sharp Park Golf Course. The assessment of potential impacts to historic resources at Sharp Park, as presented in the EIR are based on the analysis and conclusions of the Historic Resource Evaluation Response (HRER) and the Historical Resources Evaluation (HRE) conducted for the proposed project. HRE Section 5.2 (included in EIR Appendix C) provides a full analysis of the historic nature of the Sharp Park Golf Course, including the integrity of the resource, and the impacts of the proposed project on the golf course as a historic resource. The golf course and its associated structures (such as the clubhouse) were evaluated using the criteria for identifying historical resources under CEQA Guidelines Section 15064.5(a)(2)–(3), which provide the criteria from California PRC Section 20524.1. The evaluation was also conducted using the NPS *National Register Bulletin 18*, "How to Evaluate and Nominate Designed Historic Landscapes," which defines a historic designed landscape as one that:

> "has significance as a design or work of art; was consciously designed and laid out by a master gardener, landscape architect, architect, or horticulturalist to a design principle, or an owner or other amateur using a recognized style or tradition in response or

> reaction to a recognized style or tradition; has a historical association with a significant person, trend, or event, etc. in landscape gardening or landscape architecture; or a significant relationship to the theory or practice of landscape architecture."

As part of the analysis conducted for the HRE, a records search was conducted of the Northwest Information Center, the National Register of Historic Places, and the California Register of Historical Resources. The HRE states that the Sharp Park Golf Course was not listed on any federal or state registers; this does not indicate that the course is not eligible for listing, rather it indicates that the course had not yet been evaluated for historical significance and eligibility for listing on federal or state registers prior to the preparation of the HRE and the EIR. CEQA Section 21084.1 states:

> "[t]he fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in Section 5024.1(g) shall not preclude a lead agency from determining whether the resource may be a historic resource for purposes of this section."

In conjunction with this EIR, the Sharp Park Golf Course was evaluated and determined eligible for the California Register of Historical Resources (CRHR) (and the National Register of Historic Places (NRHP)) as a designed historic landscape for the reasons detailed in the HRE and described on Draft EIR pp. 207 to 209.

The HRER and EIR acknowledge that alterations to the Sharp Park Golf Course have occurred over time, as is expected with landscape cultural resources. Also, HRE Section 4.3 explains:

> "Golf courses have been called living things in the sense that they are mostly constructed of living elements, such as grass and trees, which grow and change over time. Soil erodes, changing the pitch of slopes; trees grow or are replanted, and the holes cannot be played as they were originally. Advancements in playing equipment also change the game. Courses are redesigned, replaced, or remodeled for two reasons; the first is to improve the layout of the course, the second is to adjust the course for advances in golf technology. Redesigning golf courses involves rerouting and adjusting holes. In golf course architecture, restoring courses is considered to be the act of bringing a course back to, or closer to, its original state. At the same time, there are technological advances in the game of golf (balls, clubs, and mowing techniques) that advance and, therefore, result in alteration of the course to maintain playability. By the late 1920s, golf course designers accepted the idea that both natural and technological advances are factors, among others, that make it necessary to continuously improve golf courses, in order to maintain the strategy of the game."

HRER Section 4.3.1 (included in EIR Appendix C) states:

> "there has been a strong desire to maintain the original design layout of the course to the greatest extent. Many of the alterations have been forced by the natural changes in the landscape, with only a few changes made to accommodate advanced technology in golf

> clubs and ball construction. The goal has been to make the necessary modifications while preserving Sharp Park's function as a golf course, laden with elements of challenge and surprise, and to maintain playability."

In describing the history of the Sharp Park Golf Course, the HRE also acknowledges changes that have been made to the golf course, including the construction of the seawall or berm in 1941.

With respect to whether the Sharp Park Golf Course retains historic integrity, the HRE finds:

> "[a]lthough the course has been modified over time, the golf course is in its historic location and retains much of its historic appearance, except that the ocean is no longer visible from the course. Still present are the lagoon, the east and west locations of the holes, and the fairway, which were all elements of the original design. Mackenzie designed the course with interesting challenges for golfers, regardless of their skill level, which is still true of the current course. Man-made features that have been added, such as the seawall, do not diminish the historic integrity of the course because the land and its location were important to Mackenzie's design; thus, the course is still authentic to Mackenzie's plan. The course retains its integrity of design, workmanship, and materials, which provide it with a similar sense of feeling and association to its period of significance."[58]

Some commenters suggest that the golf course was not constructed during the period of significance and that it was constructed when golf course demand was waning. The HRE describes the period of significance as between 1910 to 1930 because this period was often called the "golden age of golf." The Sharp Park Golf Course was constructed from 1929 to 1932.

Comments have been received both in support and opposition to the historic resource designation of the Sharp Park Golf Course. As stated in CEQA Guidelines Section 15151, assuming that the comments express the view of a qualified expert, "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. The courts have looked not for perfection but for adequacy, completeness and a good faith effort at full disclosure." Accordingly, the following paragraph has been added after the last paragraph on Draft EIR p. 208, as follows):

> The Planning Department acknowledges that two of the seven members of the Historic Preservation Commission disagree with the EIR's conclusion that the Sharp Park Golf Course retains sufficient integrity to be designated a historic resource. While many comments were received on the EIR in support of the conclusion that the Golf Course is a historic resource, other comments suggest that the golf course does not retain sufficient integrity and question the identified period of significance (1910-1930). A disagreement among experts does not make an EIR inadequate, but these points of disagreement are discussed here in compliance with CEQA Guidelines Section 15151. In instances where a potential resource has strong evidence of historical

[58] Tetra Tech, *Historic Resource Evaluation Report for the Sharp Park Golf Course, Part of the Natural Areas*, January 2011.

significance, the San Francisco Planning Department takes a conservative approach to its determinations, thereby ensuring that preservation is appropriately administered. These points of disagreement do not change the conclusions in this EIR.

The main points of disagreement relate to whether the property retains sufficient integrity to convey the property's historical significance, with the commenters contending that the City's determination of significance is unsubstantiated, not adequately documented, and prepared by individuals that do not possess the proper qualifications. The HRER and Draft EIR analysis relative to the Golf Course's designation as a historic resource provides the required substantiation and documentation, and it was prepared by the City's Historic Preservation Specialists.

The revisions to the text, as described above, do not change any of the conclusions of the EIR.

One commenter also expressed concern that the operation of the golf course threatens the endangered San Francisco garter snake. Operation of the golf course would not change over the long term as a result of the SNRAMP; however, the SNRAMP does propose changes to the management actions at Sharp Park. Consistent with the requirements of CEQA, the Draft EIR evaluates the potential effects of the proposed change in SNRAMP management actions at Sharp Park. Continued operation of the golf course is a separate activity and, accordingly, is not evaluated in this EIR.

As discussed on Draft EIR pp. 322 to 324, the proposed management actions at Sharp Park would result in long-term benefits to sensitive species, including the California red-legged frog and San Francisco garter snake. As an example, as stated on Draft EIR p. 146, the SFRPD would continue to use pumps to manage water levels in Horse Stable Pond to conserve the California red-legged frog by conducting post-rainfall inspections of the pond for California red legged frog egg masses and making any pumping changes necessary to prevent stranding and other impacts to egg masses, if egg masses are present. Similarly, Draft EIR p. 374 states that the operation of pumps to control water levels in Horse Stable Pond and Laguna Salada would be designed to maintain water levels for the protected species (meaning, San Francisco garter snakes and California red-legged frogs), which would also reduce the frequency of flooding of the golf course. Water levels in Laguna Salada and Horse Stable Pond would not be drawn down more than necessary to prevent flooding, which would be beneficial for the golf course, as well.

Comment CP-3	**Agree with significant impacts and mitigation measures regarding the Sharp Park Golf Course Historical Resource**

The response to Comment CP-3 addresses all or part of the following individual comments:

SFPGA-1-02	SFPGA-1-03	SFPGA-1-04
SFPGA-3-04	SFPGA-3-05	SFPGA-3-06
Holzman-1-05		

- 1. We agree with the conclusion of the Planning Department that closure of Hole 12 would cause a significant impact to the historical resource. [SFPGA-1-02]

- 2. We agree with the Planning Department's conclusion that, if Hole 12 is going to be lost, the preferred mitigation alternative would be restoration of one of MacKenzie's long-abandoned original holes west of Highway One and near the ocean. [SFPGA-1-03]
- 3. We agree with the Planning Department's conclusion that shortening or narrowing Holes 10 and 13 would constitute significant impacts to the historical resource. We believe that "10" is a typographical error, and that the Department intends to say Hole 9; we are looking into this. [SFPGA-1-04]
- Closure of Hole 12 would constitute "significant impact" upon the historical resource of the Sharp Park Golf Course. [SFPGA-3-04]
- (a) Our first preference is that Hole 12 be kept in play; move the green 20-30 yards to the northwest of the current green, at the foot of the sea wall, and replace the first 75 yards west of the connective channel (nearly to the current green location) with native plantings, and convert the newly native-planted area to upland habitat for the frog and snake; the new natural area would be completely off-limits to golfers; the current cart path would be replaced by a wooden bridge similar to the newly constructed wooden walkways at Mori Point. The bridge would access the green area and the current 13th tee, which in turn would be connected to the 13th fairway by another long wooden bridge over the expanded connective channel. [SFPGA-3-05]
- (b) If the determination is made to close Hole 12, this would constitute a significant negative impact on the historical golf course. To best mitigate this effect, we believe the hole should be replaced by resurrecting and restoring an original MacKenzie-designed hole on the west side of Laguna Salada. There are two candidates for this: (i) Original Hole No. 4, a south-to-north 3-par hole of about 150 yards, whose green was located where the back tee on current Hole 17 is today located; and (ii) original Hole No. 6, an east-to-west 3-par hole of about 170 yards located at the northern end of the golf course, whose tee was located to the north of the current 17th green, and whose green was located to the southwest of the current 16th tee. Original holes ## 4 and 6 were abandoned in or about 1941, when the Coast Highway was built through the golf course and four new "canyon holes" were built in a canyon to the east of the then-new highway. Both Original Holes ## 4 and 6 appear on the as-built routing map of Sharp Park Golf Course, published in the San Francisco Chronicle in or about April, 1932. (A copy is attached as Exhibit "A"; Original Holes ## 4 and 6 are marked in yellow.) Because restoration of Hole 6 would be problematic due to crowding problems with the current 17th green and 16th tee (which crowding can be plainly seen by comparing the as-built routing map, Exhibit "A", with an aerial photo of the current golf course (see Exhibit "B" hereto), it is our belief that restoration of original Hole No. 4 would be the preferred mitigation for the loss of Hole 12. [SFPGA-3-06]
- There are two potential impacts addressed in the DEIR that I think may deserve some consideration. Those two areas of impact were Sharp Park Golf Course historical resources and lessening recreation opportunities. The impacts anticipated to Sharp Park Golf Course in reference to historical resources seem well worth the preservation and restoration of the endangered species present at the location. Clearly in this case, the global benefits of

biodiversity outweigh any "historical" impacts particularly since those impacts to historical resources temporally minute compared to the evolutionary history of these endangered species such management would benefit. [Holzman-1-05]

Response CP-3

These comments express support for the analysis documented in the Draft EIR and suggest ways to restore the Sharp Park Golf Course to 18-playable holes. Another commenter states that the biodiversity benefits of restoration efforts should outweigh impacts to historic resources and, also, this commenter expressed concern about lessened recreational opportunities at the Sharp Park Golf Course.

The Sharp Park Restoration Project, as described in the EIR, requires expansion of the Sharp Park Natural Area into the Sharp Park Golf Course and would result in the loss of Hole 12, as documented in Impact RE-6 on Draft EIR pp. 260 to 261. To address the significant recreational impact, Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, requires that SFRPD retain the playability of the Sharp Park Golf Course as an 18-hole course and identifies two options for doing so, one of which closely matches a suggestion described in the comments above. Option 1 would replace Hole 12 on the west side of Highway 1 and Option 2 would replace this hole on the east side of Highway 1. Draft EIR pp. 264 to 269 describe the general environmental impacts that could result from implementing this mitigation measure. However, as described on Draft EIR p. 264, the determination of where the replacement hole is constructed and whether additional holes require moving may require additional environmental review. The options for re-design of the 18-hole golf course, as described by the commenters, have been forwarded to the SFRPD staff and Commission for their consideration. Some comments prefer that Hole 12 remain, suggesting an alternative to the EIR and would be similar to the No Project, Maintenance, and Maximum Recreation Alternatives identified in the EIR. An alternative that keeps Hole 12 in its place would not meet one of the primary objectives of the proposed project, which is to restore the Laguna Salada wetland complex for the benefit of special-status species; the proposal as described in the EIR was developed in close coordination with the USFWS, CDFW, and consulting biological experts and determined to be appropriate for the recovery of the San Francisco garter snake population. In accordance with CEQA Guidelines Section 15126.6, an EIR need not evaluate every conceivable alternative to a proposed project, rather the EIR alternatives analysis must describe a reasonable range of alternatives that would feasibly obtain most of the basic project objectives and would avoid or substantially lessen the significant environmental impacts of the project.

Refer also to Response PD-11, RTC p. 4-159, for a discussion of the SNRAMP's goal to increase biodiversity within the Natural Areas.

Comment CP-4	**Disagree with significant impacts and mitigation measures regarding the Sharp Park Golf Course Historical Resource**

The response to Comment CP-4 addresses all or part of the following individual comments:

HPC-1-04 SFPGA-1-05 SFPGA-1-06
SFPGA-3-07 SFPGA-3-08 SFPGA-3-09
SFPGA-3-10

- The HPC suggests that implementation of the Sharp Park restoration activity to construct a post and rail fence along the seawall of the golf course described in I-CP- 8 (Page 14) would cause a substantial adverse change in the significance of the Sharp Park Golf Course. [HPC-1-04]

- 4. We disagree with the Department's conclusion that raising Holes 10, 14, 15, and 18 "would not cause a significant impact" on the historic resource. Rather, we believe that raising these fairways, or portions of them, has the potential to cause significant impacts; if done properly, we suspect that a good restoration golf architect could design raised fairways, or portions thereof, that would not necessarily constitute significant impacts. We cannot determine this in the abstract, but only upon a review of specific architectural and site plans for such work. [SFPGA-1-05]

- 5. We disagree with the Department's conclusion that new fencing along the berm and the border of the protected wildlife area would not constitute significant impact upon the historic resource. Similarly to No. 4 [SFPGA-1-05], above, we believe that fencing has potential to cause significant impacts; but if designed and located properly, it is possible that fencing might have less-than-significant impact. It depends upon the specific architectural plans and the exact location for this fencing; the plans and construction of the fencing should be done in conjunction with the golf restoration architect. [SFPGA-1-06]

- **4. Hole 13 Should be Retained as a 5-par hole, with its tee to the west of the connecting channel.**

  (a) Regardless the decision as to whether or not to retain Hole 12, it is our position that the existing Hole 13 tee should be retained on the western side of the connecting channel, so that the hole will continue to play as a 5-par hole. This can be accomplished by means of a wooden footbridge from the vicinity of the current 11th green/12th tee across the connecting channel to the location of the existing 13th tee. Hole 13 is one of the original MacKenzie-designed holes; it appears on MacKenzie's 1930 routing map as the 9th hole of the original course, a 580-yard 5-par hole; on the 1932 as-built map, the hole is described as a 538-yard 5-par hole. To shorten this hole to a 4-par hole would constitute significant alteration of the original historic design of both this particular hole, and the golf course as a whole.

  (b) An additional reason to maintain the 13th tee in its existing location is that this tee constitutes a continuing presence of golfers and golf maintenance personnel at the southwestern corner of the golf course. The golfers and golf maintenance personnel serve a policing function to defend the wetlands and sensitive habitats from trespassers, vagrants, and dogs. [SFPGA-3-07]

- **(5) Raising Holes 9, 14, 15, and 16 poses the threat of significant adverse change to the historical resource of the Sharp Park Golf Course.**

  (a) We disagree with the DEIR's characterization of Impact CP-6 (at page 13 of the DEIR Summary), which says that "raising holes 10, 14, 15, and 18 would not result in a substantial adverse change" to the historic Sharp Park Golf Course.

  (b) As a preliminary matter, we believe that the DEIR's reference to "Hole 10" is a mistaken reference. We believe that the Department intends to refer to existing Hole #9, which is the 5-par hole that extends for approximately 480 yards along the golf course's southern fence line; this hole's tee is just south of the green of Hole #1; its green is just to the south of the Hole #12 tee. The Department's confusion, we believe, arises from Figure 14 (following page 39) of the Recreation and Park Department's Sharp Park Conceptual Restoration Plan http://www.sf-recpark.org/ftp/uploadedfiles/wcm recpark/SharpParkGC/Tetratechfinalrpt 110609.pdf), which identifies this 5-par hole as number 10 on the city's plan to restore the golf course. However, it is Hole 10 on the Figure 14 map (copy attached as Exhibit "B") because the city's golf consultant inserted between current holes ## 6 and 7 on his conceptual map of the remodeled course a new-to-be-constructed hole to the east of the Coast Highway; the insertion of the new, not-yet-constructed hole would result in renumbering of all holes thereafter. Because that proposed new hole between current ##6 and 7 is not yet part of the golf course, and in fact may never be built, we believe it makes sense to refer to the golf holes by their current number, as they are being played as of October, 2011. Therefore, we prefer to refer to the southern boundary 5-par hole by its current hole number, which is Hole 9.

  (c) Because it is an historic golf course, designed by a great master architect, Alister MacKenzie, any remodeling of Sharp Park must be handled extremely carefully. This property is a master's work. Restoration work must be done by contemporary master architects and craftsmen who can give appropriate respect to the master's work. If Holes 9, 13, 14, 15, and 18 are to be raised, then this work must be done very carefully, by a master can do this work in a manner that will properly respect MacKenzie's original work. If done in this careful way, using a contemporary master architect, San Francisco Public Golf Alliance believes that the holes can be raised in such a way that the impact on the historic quality of the golf course would be less-than-significant. However, without this high degree of care, it is equally possible that significant damage could be done to the historical resource. Hole 15, a one-shot 3-par hole is particularly vulnerable to being damaged by less-than-highest-quality architectural restoration in the event the ground level is raised, precisely because it is a one-shot hole. [SFPGA-3-08]

- **(6) Installation of permanent fencing along the seawall and along the wetland border on the golf course has potential to cause significant adverse change to the historic Sharp Park Golf Course.**

  (a) We disagree with the DEIR comment Impact CP8 (DEIR, Chapter 1, at page 14) that construction of a fence alongside the seawall would not cause significant change to the historic golf course.

(b) This is a matter similar to the issue of raising the height of certain fairways, discussed in Paragraph (5), above. To begin with, it is clear from maps of the proposed restoration project that fencing is proposed not only for the seawall, but also along the boundary between the golf playing area and the wildlife habitat area. The locations of both fences has the potential to interfere with the design of the reconfigured golf course at Current Holes Nos. 9, 11, 13, 14, 15, 16, and 17, and at the site of original Hole #4 (which is a potential site for reconstruction of an original MacKenzie-designed hole to replace Current hole #12, as discussed above in Paragraph 4 of this letter).

(c) Accordingly, the location and design of the fencing must be done in conjunction with, and as a function of, the golf architect's work in designing the restored golf course. As discussed above in Paragraph 4, we strongly recommend that this work be done by a preeminent golf architect, credentialed to work on restoration of an historic golf course designed by master architect Alister MacKenzie.

(d) Yet an additional consideration in the location of the fence is the issue of the California Coastal Trail, which currently occupies the top of the sea wall which forms the western boundary of the Sharp Park Golf Course. We want to eliminate potential conflict between the recreational use of the California Coastal Trail and the historical resource of the Sharp Park Golf Course. The location of the fence alongside the sea wall will need to take these two uses into consideration. This needs to be under the supervision of the restoration golf architect. Issues of public trails along the tops of seawalls adjacent to golf courses is a commonly-occurring issue at the seaside links golf courses of Scotland, such as North Berwick, Lundin Links, and others. These public uses can be reconciled. [SFPGA-3-09]

- **(7) Modifications to Holes Nos. 9, 11, 13, 14, 15, 17, and 18, including but not limited to raising the ground level, and shortening, narrowing, or expanding the sizes of the golf playing areas, has potential to adversely affect the historic golf course. Accordingly, this restoration and remodeling work must be done only by the most highly qualified and experienced golf restoration architects.**

  (a) For the reasons discussed above in Paragraphs 5 and 6, a top restoration architect, familiar with and experienced in historic golf architectural restoration work, must be involved in the renovation work. The work must be done under his/her direction and supervision.

  (b) Specifically in the areas where the Sharp Park Restoration Plan will have habitat areas suitable for the frog and snake adjacent to golf playing areas (including but not limited to current Holes 9, 11, 13, 14, 15, and 17) there will be a need to have a neutral or sterile buffer area between the habitat and golf areas, so as to physically separate the golf playing areas from the habitat areas. Wide expanses of open sand would constitute such a neutral/sterile area. We recommend that strong consideration be given to a ribbon of sand stretching the entire length of the golf/habitat border. In fact, this fits the exact description of Current Hole 13 - original Hole No. 9 - as provided by MacKenzie's assistant Jack Fleming, published in the San Francisco Call-Bulletin shortly before the golf course opened on April 1, 1932. Hole 9

was described by Fleming as follows: "A lakeside hole with wide, sandy beach on water side." (Copy attached as Exhibit "C".) [SFPGA-3-10]

Response CP-4

Comments were received regarding the impacts to historic resources caused by raising, modifying, or moving holes at the Sharp Park Golf Course or installing the permanent post-and-rail fence. Also, one of the commenter's indicated a preference for using the existing hole numbering rather than the proposed hole numbering. Because the Draft EIR consistently used the proposed hole numbering, we are keeping that convention in this Responses to Comments document; however, the below list correlates the existing and proposed hole numbering to allow either system to be used.

Existing Hole Number	***Proposed Hole Number (used in the SNRAMP Draft EIR and the SNRAMP RTC document)***
1	1
2	2
3	3
4	4
5	5
6	6
	7 (new hole)
7	8
8	9
9	10
10	11
11	12
12	Replaced: Option 1 would replace Hole 12 on the west side of Highway 1, and Option 2 would replace Hole 12 on the east side of Highway 1.
13	13
14	14
15	15
16	16
17	17
18	18

Impacts Caused by Raising, Modifying, or Moving Holes at the Golf Course as a Result of Restoration Activities

With respect to raising Holes 10, 14, 15, and 18 (in terms of historic resources), Impact CP-6, provided on Draft EIR pp. 221 and 222 states that:

> "As discussed in Section V.D.2, Sharp Park Golf Course meets the criteria for listing on the NRHP and CRHR for its significance under Criteria A and C and for listing on the CRHR under Criteria 1 and 3.
>
> At Sharp Park, excavated dredged spoils appropriate for use as golf course substrate materials would be used on-site to raise Holes 10, 14, 15, and 18 and to create the upland habitat on the east edge of Laguna Salada. Although Holes 10, 14, 15, and 18 are included in Sharp Park Golf Course's character-defining features because these holes are some of the original features and design of the clubhouse, raising Holes 10, 14, 15, and 18 would not have a significant impact on the historical character-defining features of the golf course because the holes would remain in place and alterations would be made only to elevate the holes, which would not impact the historic integrity of the fairways. The holes would retain their appearance and therefore there would be a ***less than significant*** impact on the golf course from raising holes at the Sharp Park Golf Course. "

With respect to modifying Holes 10 and 13 (in terms of historic resources), Impact CP-9, provided on Draft EIR p. 224 states that:

> "Modifying approximately 13 acres of the golf course to create upland habitat along the east side of the lagoon to provide San Francisco garter snake upland habitat would require slightly shortening or narrowing Holes 10 and 13. The habitat corridor would be approximately six acres, bringing the total of modified area at the golf course to about 19 acres. These changes would substantially alter historic character-defining features, Holes 10 and 13. Implementing Mitigation Measure M-CP-7 would record the golf course in its existing condition and reduce the magnitude of this impact; however, M-CP-7 would not reduce it to less than significant. No additional feasible mitigation measures have been identified; therefore, shortening and narrowing Holes 10 and 13 would result in a ***significant and unavoidable*** impact on the Sharp Park Golf Course. "

With respect to closing Hole 12 (in terms of historic resources), Impact CP-7, provided on Draft EIR p. 222 states that:

> "The closure of Hole 12 at Sharp Park would have significant impacts on the historic character-defining features of the golf course because it would eliminate an original hole and fairway on the west side of the course, along the ocean. Hole 12 was originally designed as a 262-yard fairway. The hole was shortened in the early 1960s and was renumbered. Although Hole 12 has been altered from its original design, its closure and conversion to a habitat corridor would be a significant impact on the golf course because Hole 12 was included as part of the golf course design since its inception. The hole had always been at the edge of the lagoon or backed against the seawall. Using the area for

habitat conservation and not as part of the golf course changes the boundaries of the golf course and its historic design. Therefore, closing Hole 12 would be a significant impact to the Sharp Park Golf Course. While replacing Hole 12 elsewhere on the course could be seen as a potential mitigation measure in that it would retain the course as an 18-hole facility, replacing it in a location other than its current location still diminishes its historical integrity as a character-defining feature of the golf course and would not sufficiently reduce the impact to less than significant. Implementing Mitigation Measure M-CP-7 would reduce the magnitude of this impact, but it would not sufficiently reduce it to a less than significant level. No additional feasible mitigation measures have been identified; therefore, closing Hole 12 would result in a ***significant and unavoidable*** impact on the Sharp Park Golf Course. "

Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, Draft EIR p. 264, was identified to restore the playability of the Sharp Park Golf Course as an 18-hole course, while preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources by identifying two options for replacing Hole 12. Option 1 would replace Hole 12 on the west side of Highway 1, and Option 2 would replace Hole 12 on the east side of Highway 1.

With respect to the relocation of Hole 12, the text on Draft EIR p. 262 has been changed as follows to affirmatively recognize the importance of preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources:

M-RE-6: Restoration of the Sharp Park Golf Course to 18 Playable Holes

The SFRPD shall coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf Course, while documenting and preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources; this ~~which~~ would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway to retain playability and flow of the course, thereby increasing the number of holes west of the highway to 15 and decreasing to three the number of holes to the east. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increase to five the number of holes to the east. The determination of where the replacement hole is constructed and whether additional holes need to be moved ~~would~~may require additional environmental review.

Section IV.D, Cultural and Paleontological Resources, contained an incorrect reference to Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, as M-RE-1, which doesn't exist in the Draft EIR. Accordingly, the text on Draft EIR p. 238 and 239 has been changed as follows:

Mitigation Measure M-RE-6~~1~~ would require SFRPD to coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf course while documenting and preserving the historic character-defining features of the course and

> avoiding impacts to sensitive biological resources. However, if any reconfiguration of the course resulted in additional holes east of Highway 1, this would result in a significant impact on the historical significance of Sharp Park Golf Course, further contributing to significant cumulative impacts. Reconfiguration of the golf course holes to resemble its original layout (replacement holes west of Highway 1) would reduce cumulative impacts on the golf course. This reconfiguration would result in a total of 15 holes on the west side of Highway 1 and three holes on the east side. Mitigation Measure M-RE-~~6~~1 would be beneficial to the Sharp Park Golf Course because it would restore some of the elements in the original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where holes were situated in the original design, and would be in keeping with the historic boundaries of the golf course. While impacts to cultural resources were determined to be significant and unavoidable in terms of modifying Holes 10 and 13 and closing or replacing Hole 12, recreation impacts would be reduced to a less-than-significant level by retaining the golf course as an 18-hole course, as required by Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, Draft EIR p. 264.

Refer to Response CP-2, RTC p. 4-246, for a detailed discussion of the determination that the Golf Course retains its historic integrity, even with the modifications that have occurred over time. Refer also to Response AE-4, RTC p. 4-226, for a discussion of the aesthetic impacts associated with the Sharp Park Restoration project, and Response CP-2, RTC p. 4-246, for a discussion of what this proposed project entails (that is, golf course operations would not change over the long term as a result of the SNRAMP, however, the SNRAMP does propose changes to the management actions at Sharp Park in order to implement the proposed restoration activities).

Impacts Associated with Installation of the Temporary Fence

The temporary fence that the commenter mentions has been replaced with another temporary fence that is made of galvanized mesh with wooden posts. The purpose of this fence is to limit access to sensitive species habitat in compliance with the Biological Opinion for the Sharp Park Pumphouse Project. Draft EIR p. 223 specifically states that the purpose of the fence is to "discourage human and pet intrusion into the restored habitat area." This fence is located along the top of the seawall, just east of the existing trail, running the entire length of the SFRPD property. After Hole 12 is closed and restored as coastal scrub/grassland habitat to support the San Francisco garter snake, the temporary fence would be removed and a permanent post-and-rail (or split rail) fence would be installed. The permanent post-and-rail fence would encircle the lagoon, as illustrated by Figure 3 of the Draft EIR, and would similarly limit access to sensitive species habitat in compliance with the Biological Opinion for the Sharp Park Pumphouse Project. The Draft EIR evaluated the potential for impacts to historic resources as a result of installing a permanent post-and-rail fence. Impact CP-8, provided on Draft EIR p. 223, determined that while construction of a fence would add a modern element to the course, it is not an original feature of the golf course and would not alter a historic character-defining feature of the course; therefore, impacts to the historic Sharp Park Golf Course would be less than significant.

One commenter also expressed concern about the potential conflict between the recreational use of the California Coastal Trail, which currently occupies the top of the sea wall, and the historical

resource of the Sharp Park Golf Course. As previously described, a temporary fence has been constructed along the eastern side of the sea wall, for the entire length of the SFRPD property, to prevent access to the Golf Course. This fence will be replaced with a permanent post-and-rail fence surrounding the lagoon, which would similarly prevent access to the Golf Course.

Disagreement Among Experts Regarding Impact Conclusions

Comments have been received disagreeing with the EIR's conclusion that raising Holes 10, 14, 15, and 18 or installation of new fencing would not constitute significant impact upon a historic resource. The main point of disagreement relates to the historic resource impact conclusions, with the commenter and the City coming to different conclusions presented with the same evidence contained in this record.

As stated in CEQA Guidelines Section 15151, assuming that the comments express the view of a qualified expert, "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. The courts have looked not for perfection but for adequacy, completeness and a good faith effort at full disclosure." This EIR summarizes the points of disagreement and provides substantiated conclusions in Impact CP-6, Draft EIR pp. 221 to 222, and Impact CP-8, Draft EIR p. 223, for the determination that raising Holes 10, 14, 15, and 18 and installing a new fence would result in less than significant impacts on cultural resources.

Comment CP-5 Modifications to mitigation measures

The response to Comment CP-5 addresses all or part of the following individual comments:

HPC-1-02 HPC-1-03

- The HPC suggest that the mitigation measure described in M-CP-1 (Page 11) should be modified to specify that the future historic resource evaluations should be completed by a qualified professional landscape architectural historian. [HPC-1-02]
- The HPC suggests that the mitigation measure described in M-CP-7 (Page 13) should be modified to specify that a qualified professional landscape architectural historian should be retained to document the cultural landscape. [HPC-1-03]

Response CP-5

These comments suggest modifications to two Draft EIR mitigation measures: M-CP-1, Consultation with the San Francisco Planning Department, p. 219, and M-CP-7, Documentation of the Sharp Park Golf Course, p. 222.

As requested by the HPC, the text on Draft EIR pp. 11 and 219 and 13 and 222 to 223 has been changed, as follows:

- Mitigation Measure M-CP-1 on Draft EIR pp. 11 and 219:

  M-CP-1: Consultation with the San Francisco Planning Department

  The SFRPD would coordinate with the San Francisco Planning Department's Historic Preservation ~~Specialists~~ Planners and would submit plans before constructing stabilizing and erosion control measures that require installation of structures, such as gabions, near ~~any~~ potentially eligible resources. Should it be determined that a Historic Resource Evaluation is required, that evaluation shall be completed by a qualified professional landscape architectural historian. The Planning Department would assist in determin~~ing~~ if any proposed construction or other activities would impact identified historic resources under CEQA on a site-by-site basis; if such impacts may occur, the project would be required to be redesigned to avoid significant impacts to historic architectural resources. The Planning Department would also assess potential impacts on any historic landscapes that are present.

- Mitigation Measure M-CP-7, Documentation of the Sharp Park Golf Course, on Draft EIR pp. 13 and 222 to 223:

  M-CP-7: Documentation of the Sharp Park Golf Course

  The SFRPD ~~would document, or~~ would retain a consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie to document~~,~~ and preserve the historic character-defining features of the Sharp Park Golf Course before wetland restoration activities take place. The National Park Service has published guidance for preserving cultural landscapes in Preservation Brief 36: Protecting Cultural Landscapes, Planning, Treatment, and Management of Historic Landscapes and in the more complete Secretary of the Interior's Standards for the Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes. The appropriate level of documentation would be selected by a qualified professional landscape architectural historian who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation would consist of the following:

  - Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course;
  - Digital photographs of the Sharp Park Golf Course;
  - A written history and description of the Sharp Park Golf Course and its alterations.

  The professional landscape architectural historian would prepare the documentation and submit it for review and approval by a San Francisco Planning Department Preservation Specialist. The documentation would be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.

Comment CP-6 Research recommendations for archaeological resources analysis

The response to Comment CP-6 addresses all or part of the following individual comment:

NAHC-1-01

- The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any

project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines Section 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

> Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - o If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - o If any known cultural resources have already been recorded on or adjacent to the APE.
  - o If the probability is low, moderate, or high that cultural resources are located in the APE.
  - o If a survey is required to determine whether previously unrecorded cultural resources are present.

> If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - o The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - o The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

> Contact the Native American Heritage Commission for:
  - o A Sacred Lands File Check. USGS 7.5 minute quadrangle name. township, range and section required.
  - o A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. Native American Contacts List attached.

> Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - o Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological

sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.

- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
- Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. [NAHC-1-01]

Response CP-6

This comment from the Native American Heritage Commission suggests what is required to adequately assess and mitigate project-related impacts to archaeological resources.

As stated in the Draft EIR, impacts on Native American burials are considered under California PRC Section 15064.5(d)(1). The SFRPD's treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity would comply with applicable state laws and Draft EIR Mitigation Measure M-CP-18, Human Remains, Associated or Unassociated Funerary Objects, p. 236.

The Native American Heritage Commission (NAHC) was contacted to determine the presence of sacred sites within or near the proposed project areas that could qualify as historical or unique archaeological resources or contain human burials. The NAHC responded on June 19, 2008, that no such resources were identified in their files; however, the NAHC did provide a list of five Ohlone/Costanoan groups and individuals traditionally affiliated with the region that may be able to identify undocumented resources. SFRPD mailed consultation letters to the suggested contacts on July 17, 2008. No responses to the consultation letters were received.

As stated in the Draft EIR, in order to determine project impacts on the various types of cultural resources, records searches were conducted in June and October 2008 from the California Historical Resources Information System's Northwest Information Center (NWIC) at Sonoma State University (File Nos. 07-1792 and 08-0414). A third records search was requested in November 2009 for the Everson/Digby Natural Area (File No. 09-0630).

The potential for, and the degree of, impacts on archaeological resources included in the EIR were based on the archaeological sensitivity of each Natural Area, weighed against the varying types of activities proposed in the SNRAMP and the severity of surface disturbance involved. Draft EIR Mitigation Measure M-CP-10, Archaeological Monitoring Program for Programmatic Projects in Natural Areas with High Archaeological Sensitivity, Routine Maintenance Activities at Tank Hill and Lake Merced, and the Sharp Park Restoration Project, p. 225, was included in the EIR to address potential archeological impacts to resources of high sensitivity. This mitigation measure includes an

archaeological monitoring program (AMP) to avoid any potential adverse effect to archaeological resources as defined in CEQA Guidelines Section 15064.5(a)(c). The full text of this mitigation measure is included in Draft EIR Section V.D.3, Impacts, p. 225. Additionally, Draft EIR Mitigation Measure M-CP-11, Accidental Discovery, p. 229, was also included in the EIR to address potential resources in Natural Areas with moderate to low archeological sensitivity. Draft EIR Mitigation Measure M-CP-12, Annual Archeological Sensitivity Training for Natural Areas Program Staff Involved with Routine Maintenance Activities in All Natural Areas, p. 231, would require SFRPD to provide training to staff on the archeological sensitivity levels of each Natural Area, the potential to encounter archeological resources, instructions for reporting observed looting, an overview of the AMP and accidental discovery procedures, and an overview of Mitigation Measure M-CP-18, Human Remains, Associated or Unassociated Funerary Objects, p. 236, for the treatment of human remains and associated or unassociated funerary objects.

The Draft EIR mitigation measures, which the proposed project is required to adhere to, include the actions recommended by the NAHC in their comment above.

Comment CP-7 Preservation of the Sharp Park Golf Course

The response to Comment CP-7 addresses all or part of the following individual comment:

WGF-1-01

- I am writing to you in support of the preservation of Sharp Park Golf Course as we know it today. Sharp Park Golf Course, designed by Master Architect, Dr. Alister MacKenzie, is an historical property, an important part of San Francisco's history, and should be safeguarded from any significant modifications that will change its architectural integrity.

  Please do not allow the proposed alteration projects to occur. [WGF-1-01]

Response CP-7

This comment expresses support for a project that does not result in modifications to the Sharp Park Golf Course. The EIR analyzes three alternatives to the proposed project that would not modify the golf course: No Project, Maximum Recreation, and Maintenance Alternatives. These alternatives and their potential environmental impacts are addressed in Draft EIR Chapter VII, Alternatives, beginning on p. 461.

As identified in the Draft EIR, modifications to the Sharp Park Golf Course as a result of the Sharp Park restoration project would cause significant and unavoidable adverse impacts to the course, a historic resource. Draft EIR Mitigation Measures M-CP-7, Documentation of the Sharp Park Golf Course, p. 222, and M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, have been identified, though they would not sufficiently reduce the impacts to a less-than-significant level. As such, the Draft EIR determined that impacts to the Sharp Park Golf Course would be significant and unavoidable. Prior to approving the restoration project at Sharp Park, the

Recreation & Park Commission would be required to adopt a statement of overriding considerations in order to approve the project as proposed.

These comments do not raise any specific issues about the adequacy or accuracy of the EIR's coverage of environmental impacts that require a response in this RTC document under CEQA Guidelines Section 15088. Comments in support of an EIR alternative over the proposed project will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

Comment CP-8 Impacts of tree removal on historic Mount Davidson Area

The response to Comment CP-8 addresses all or part of the following individual comments:

MPIC-1-05 MPIC-2-04 MPIC-2-09

- The SNRAP project described in the DEIR will significantly negatively impact this historic forest because (1) it proposes that replacement trees can be planted anywhere in San Francisco, rather than in the Park in the location of trees removed; (2) it specifies replacement of trees removed with oaks rather than the historic forest species; and (3) it lacks any plan for replanting the remaining trees (i.e., those trees not subject to planned removal) as the existing historic species reach the end of their lifespan. [MPIC-1-05]
- The DEIR's conclusion that the tree removal on Mount Davidson Park would have less than significant impact on this historic landscape and forest is based on incomplete analysis. Much of the inaccuracy of the analysis is stated on page 191 of the DEIR:

  > "The assumption that the SFRPD intends to spread the overall tree removal across the forested portion of a Natural Area and would not concentrate it in a particular location … Removing clusters of 20 or more trees over half an acre would still leave the surrounding forest and its aesthetic value intact. Also no Landmark Trees would be removed or altered."

  This assumption is inconsistent with Appendix F of the SNRAMP, page 14, which indicates plans to remove trees in a concentrated area of 10.2 acres in order to convert 1/3 of the current 30.1 acre forest into a grass and scrub landscape. It indicates that a substantial amount equal to 82% of the trees in the 3.5-acre MA-1c zone would be removed. Two other zones within the 10.2-acre relandscaping area would lose 23-31% of their trees. This 10.2 acres would in fact lose substantially more than 40 trees per acre, as stated in the DEIR page 195. The MA-1c zone would lose 286 trees per acre, MA-2c 111 trees per acre, and MA-2e 82 trees per acre. These areas would be substantially reduced from the current 350 trees per acre to as low as 63 trees per acre in what amounts to deforestation – not thinning. Statements that only sick and dead trees would be removed are inconsistent with the reality that any person looking at this area of the park could not agree that 82% of the trees are in this condition now.

Removing the trees over a 20-year period would not mitigate the substantial, cumulative, negative environmental impact. There are errors in the SNRAMP that were not addressed or corrected, as on Appendix F, page 8, for example: "The bulk of the tree removal [on Mount Davidson] will occur in MA-2e …" – inconsistent with page 14, which lists 23% for MA-2e, the least planned tree removal. [MPIC-2-04]

- MPIC agrees with the DEIR that a major reforestation effort should be undertaken by the City to rejuvenate Mt. Davidson Park's historic forest canopy. This should be a higher budget priority than tree destruction. The DEIR is deficient in documenting the scientific source for its statement that the proposed concentrated tree removal on Mt. Davidson will in fact make the remaining forest areas healthier than would improved maintenance – such as clearance of ivy, trimming of potentially hazardous branches, and replanting of new trees of the same species to rejuvenate the forest, rather than allowing it to die from neglect. The DEIR should include as detailed a forest management plan for the MA-3 area of the park as it does for the vegetation of the MA-1 and MA-2 areas. It should further recommend that management of the MA-3 zones be transferred to the Recreation and Park Department's Urban Forestry Division, because Natural Areas Program staff lack the arborist and forestry expertise necessary to properly maintain the forest. [MPIC-2-09]

Response CP-8

These comments express concern about impacts on the historic forest at Mount Davidson by the proposed SNRAMP activities. Some commenters suggest that a major reforestation effort, including a detailed forest management plan, should be undertaken by SFRPD to rejuvenate Mount Davidson Park's historic forest canopy.

As stated in Appendix F of the SNRAMP (SNRAMP Table F-1, p. F-14), the tree removal proposed for Mount Davidson represents less than 15 percent of the existing invasive, nonnative trees, calculated as 1,600 trees to be removed out of 11,000 existing trees; the trees within the existing forest stands would be thinned, not clear cut. Further, the tree removal is concentrated in three of the seven total management areas (MA-1c, MA-2c, and MA-2e), all of which are predominantly in the interior portions of Mount Davidson, making the tree removal less visible from surrounding vantage points. Refer to Response PD-20, RTC p. 4-192, for a discussion of where the greatest tree removal would occur within Mount Davidson.

As discussed under Impact CP-2 of the Draft EIR, and as further discussed in Response CP-9, RTC p. 4-270, invasive tree removal and planting activities would not materially affect their significance as historic resources. Impacts to these potential historic resources through tree removal, which is detailed in Chapter III and the Urban Forestry Statements in Appendix F of the SNRAMP, "could be beneficial to potential historic urban forests or historic landscapes because removing trees (through thinning and group selection) while maintaining the existing forest (which would occur in MA-3) would improve the health of the forest by relieving crowding and encouraging growth." Similarly, on Draft EIR p. 220, Impact CP-2 concludes that "invasive tree and vegetation removal would not

result in a substantial adverse change in the significance of historic landscapes or historic forests and this impact would be ***less than significant***."

As discussed in Draft EIR Chapter III, Project Description, p. 92, the SFRPD would consider views from Natural Areas when locations are being selected for new trees; in fact, the location of replacement trees in San Francisco Natural Areas would be selected to preserve and maintain views from important points, as identified in several of the SNRAMP's management actions. The trees planned for removal are invasive species and are not native species or landmark trees. Some of the replacement trees would be oak species because oak woodland habitat is dominant within the region, and is also native. Other species would include, but are not limited to, California Bay laurel and California wax myrtle.

The stated goals of SNRAMP are to reestablish native community diversity, structure, and ecosystem function while also developing aesthetically pleasing landscapes that are consistent with surrounding landscapes and that create natural transitions. The SNRAMP also contains goals which include active monitoring of the Natural Areas in order to detect changes in species richness as well as to continually monitor the health and status of native communities and sensitive habitats. The SNRAMP provides a framework for adaptive management of the Natural Areas which would allow the SFRPD to replace native trees when needed. There is no plan to replant invasive eucalyptus trees as they die, which would be the case either with or without the project and, therefore, is not an impact of the project itself.

Comment CP-9 Inadequate/Incomplete HRER for Mount Davidson

The response to Comment CP-9 addresses all or part of the following individual comments:

MPIC-2-05 MPIC-2-15

- While The Historic Resource Evaluation Report (HRER) in the DEIR declares the landscape historic, the analysis is limited to the retaining walls and steps. A cultural landscape study is required to evaluate the historical significance of the forest landscape and the impact of the project on this significant resource, as requested by the MPIC letter regarding the SNRAMP Initial Study. All of the environmental impact conclusions of the DEIR regarding Mt. Davidson Park require additional analysis to address the concentrated historic tree clearing actually proposed in the SNRAMP for Mt. Davidson.

  III. Cultural Landscape and Recreational Resource

  The Historic Resource Evaluation Response (HRER) for the SNRAP confirms that Mt. Davidson Park is an historic landscape resource and potentially eligible for listing under the CA Register as an ethnographic landscape, but this study focuses primarily on the retaining wall and steps. A cultural landscape study is also required to address the significant historic resource created by the forest planted by Adolph Sutro, and how its existence led to the Easter sunrise event and the creation of a public park to protect the forest. This forest is also a significant part of the cultural landscape of the West of Twin Peaks District. Historic trails

should be documented and preserved for public access in the SNRAMP. The cultural landscape study should be completed by a cultural landscape architect, as described in National Park Service Preservation Brief 36:

> "Protection of Cultural Landscapes: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; development of a cultural landscape preservation approach and treatment plan; development of a cultural landscape management plan and management philosophy; the development of a strategy for ongoing maintenance; and preparation of a record of treatment and future research recommendations."

The cultural landscape study should reference and consider the content of the pre-existing rating and survey report to the San Francisco Landmarks Board dated 2/5/1997 regarding the Mount Davidson Cross and Park, as follows.

> "In San Francisco, where row-housing predominates and vegetation in any degree of positive impact – if existent at all – is found principally in shallow front yards or strips, or on the interior of blocks where it is screened from public view by allees of eucalyptus trees on the slopes of Mount Davidson. Below the summit itself nestle domestic architecture in a sustained garden-like setting which climbs ever higher to culminate in 32 acres of park-like wilderness. The simplicity of the monument is played artfully against the natural appearing surroundings. Its setting significantly contributes to the definition of the West of Twin Peaks locale." (Section 11. Setting)

The cultural landscape study should also consider the analysis done in April 1991 by Marie Bolton for the City Attorney as part of the lawsuit regarding the cross at the summit of Mt. Davidson, "The Contemplative Ideal in a Public Space: The Cross at Mt. Davidson Park, San Francisco, 1923-1990." Ms. Bolton documents that:

> "On Feb. 23, 1910 members of the Sierra Club hiked into was what then called 'the little wildernesses of the Sutro Forest,' and held a ceremony renaming the peak in honor of George P. Davidson, who had been greatly respected for his incorruptibility as a surveyor and for his many contributions as a geologist. noted surveyor and naturalist, at the request of the Sierra Club.
>
> "… The Sierra Club was supportive of the park because it was concerned about development, which threatened to obliterate the trees planted by Adolph Sutro … In creating this park, the city was building on its earlier tradition of setting aside land for parks and recreational purposes … At the dedication ceremony in 1929, three Monterey pines were planted to honor [Mayor Rolph, John McLaren, and Mrs. Edmund Brown]."

[MPIC-2-05]

- The HRER is incorrect as to the date of the concrete cross construction. It was 1934, not 1929 (earlier wood crosses had been erected since 1923).

  Bolton further documents:

  > "Decatur [the founder of the annual Easter sunrise event] described the 'solitude of the forest' on Mt. Davidson as conveying 'a sense of vastness quite as real as one would experience among the age-old monarchs of the High Sierras'… Decatur was moved to make Mt. Davidson serve as a place of tranquility for the citizens of the Bay Area, a refuge from what was often seen in the 1920s and 1930s as the increasingly debilitating effects of city life."

  San Francisco is now has 100,000 more residents and plans to further increase the city's residential density.

  The HRER conclusion that the SNRAMP project will not result in a substantial adverse changes to this historic cultural landscape and forest is based on incomplete analysis. The SNRAMP project will significantly negatively impact this historic forest because (1) Appendix J of the DEIR states that replacement trees can be planted anywhere in San Francisco, rather than in the Park or at the specific location of trees removed; (2) SNRAMP specifies replacement of trees removed with oaks rather than the historic forest species; and (3) it lacks any plan for restoring the remaining forest in the MA-3a zone as the existing historic species reach the end of their lifespan. Furthermore, the project map (see Exhibit A) indicates that areas where tree removal would be concentrated are the most visible areas as seen from **within the Park**, which is a major scenic and historic resource for Park visitors as well as residents of surrounding communities. Concentrated tree removal in these highly visible areas along major trails and sightlines within the Park will be very detrimental to enjoyment of the Park by its users. This goal is also inconsistent with historic Park uses and purpose. The purpose of the acquisition of the land by the City as a public park was to preserve the forest and provide for the recreation needs of the West of Twin Peaks District. A report to the Finance Committee of the Board of Supervisors dated 4/29/1927 confirms this:

  > "At the request of your Committee made at the last session, we are submitting herewith a report of such data as we have been able to get in reference to the Mount Davidson Park Project, together with our recommendations.
  >
  > (1) Purposes of Acquisition: As stated to your Honorable Committee at the last meeting the purpose of the proposed acquisition of lands on the summit of Mount Davidson is for a public park serving the needs of the West of Twin Peaks District and also serving as a recreation center and **forest play ground** for the whole city. **The acquisition will also preserve for all time the beautiful tree covered slopes of the mountain** as an attractive scenic land mark in the city and will help perpetuate the annual Easter Pilgrimage tradition."

  The HRER does not document the significance of what may be the first grass-roots campaign in San Francisco to preserve as a public park an area zoned for development. Led by Madie Brown and San Francisco's Women's Clubs, this campaign to preserve the area as a public

park in 1926, was an example of the open-space movement that Richard Walker documents in his book *The City in the Country* (2008): "Out of 4.5 million acres in the 9-county region, more than 3.5 million are open space – thanks to a century-old environmental movement – primarily led by women … Every acre of land and water has been fought for, often, in campaigns lasting years." The campaign by Mrs. Edmund Brown and the Mt. Davidson Conservation Committee that began "when the subdividers' axe and steam shovel were heard on Mt. Davidson's lower slopes, destroying in ruthless fashion the beauties of nature," took three years. The 4/26/1927 *Examiner* wrote an editorial in support of purchasing the land for park … "As the residential area advances, **the forest** goes down before the axe. In another year, it will be too late for the beauty of the summit to be preserved…" The 6/24/1927 *Examiner* reported on the ground breaking ceremonies for the park and quoted the president of the West Park Association as pointing out that "the plan [at Mt. Davidson] is to **preserve as many of the trees as possible**." The April 1928 issue of *The Municipal Employee*, a city publication, described the purpose of the campaign as: "to preserve for San Francisco this **wooded** hill, Mt. Davidson …"

The *San Francisco Chronicle* report on the dedication of the park on 12/9/1929 described how Mrs. Edmund Brown had researched the history of the site and

> "brought to light the fact that the mountain was not always covered with **stately trees** … it was but a barren, rocky hill … [when] "part of the property owned by Adolph Sutro, Joaquin Miller, the poet who was enthusiastically planting trees on 'The Heights' in the east bay, envisioned the beauty that might be created by trees on the San Miguel Hills and suggested the plan to Sutro … [who] planted thousands of tiny trees: cedars, pines, and eucalyptus."

Richard Walker credits Joaquin Miller as being one of the first to promote preservation of the forests in the Sierra Nevada. The San Francisco Garden Club published vignettes of early San Francisco homes and gardens in December 1935. It quoted from the notes of Emma Sutro:

> "There is an account in Joaquin Miller's Poetical Works of the first Arbor Day in San Francisco, celebrated on Nov. 27, 1886. The celebration was promoted by Joaquin Miller, Adolph Sutro, General Vallejo and General O. O. Howard … Adolph Sutro, as his contribution to the first Arbor Day, gave 50,000 trees to be planted by the school children of Oakland and San Francisco. Climate has been modified and many a sandy bare monotone in San Francisco has been beautified by the massed dark accent of Mr. Sutro's trees."

Mount Davidson Park, among the last remnants in San Francisco of this historic forest that once extended from Ocean Avenue north to Mt. Sutro and was planted to celebrate CA's first Arbor Day and to beautify the City, has been preserved in a City park. The forest has significant historical associations and defines the character of the surrounding neighborhoods. The size and age of the trees are significant and they provide a prominent landscape feature in West of Twin Peaks, especially for Miraloma Park residents. The experience of the forest led to initiation of the historic Easter sunrise event and the residents' campaign to preserve it as public park. Without the forest, there would be no native plants

left to protect and the land would be covered with housing. The forest in Mount Davidson Park meets most criteria for protection by the Landmark Tree Ordinance: visual, cultural, ecological, and locational characteristics The Recreation and Parks Department should fulfill its stewardship responsibility and recommend to the Urban Forestry Council designation of the 30.1 acre forest in Mt. Davidson Park for Landmark status.

A structural engineer should evaluate the historic retaining walls before embarking on the 2008 Park Bond work planned for this area. The HRER notes that the mature vegetation growing on these walls and stairs is historic. The trees along these features should therefore be protected. The forest is also holding the steep slopes of Mt. Davidson intact. The DEIR on page 219 acknowledges that extensive erosion control structures would create an additional substantial adverse impact on this cultural resource. Whether these structures would be necessary if the concentrated tree clearing is implemented should be addressed in the EIR. [MPIC-2-15]

Response CP-9

These comments question the adequacy of the HRER for Mount Davidson, citing concerns about the scope of the report (and the fact that it should be expanded to address cultural landscapes); whether additional data and analysis should be considered, such as the pre-existing rating and survey report dated 2/5/1997 and the analysis completed in 1991 by Marie Bolton for the City Attorney as part of the lawsuit regarding the cross at the summit of Mount Davidson; whether a structural engineer should evaluate the historic retaining walls before any work proceeds; and generally question the impact conclusions.

Historic Resources Evaluation Response

A Historic Resources Evaluation Response (HRER) (January 12, 2011) was completed by Shelley Caltagirone (Historic Preservation Planner, San Francisco Planning Department) to identify whether any historic resources are present at Mt. Davidson and to address potential impacts caused by implementation of the SNRAMP.

With respect to the urban forest at Mount Davidson, the HRER states that:

> "Tetra Tech also prepared a memorandum describing the history of the urban forest located at Mount Davidson and the establishment of the city park in this location. Based upon this information the Planning Department finds that the Mount Davidson natural area is potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape. Although further research is required to establish a full historic context for the site, Mount Davidson is a prominent topographical feature in San Francisco that has historically held special natural and cultural significance for the city. The site is associated with local philanthropist Adolph Sutro, with an annual Easter ceremony established in 1923, and with the early development of natural areas dedicated to recreational use within San Francisco. For

> these reasons, the natural area will be considered a historic resource for the purposes of this review."

Importantly, the historic resources evaluation of the urban forest at Mount Davidson was conducted for the whole of Mount Davidson and identifies the resource's character-defining features. The HRER for the urban forest at Mount Davidson states that "The character-defining features of the Mount Davidson historic landscape appear to be the WPA-era hardscape retaining walls and stairs; the Sutro forest, composed of pine, cypress, and eucalyptus; and the Mount Davidson Cross." Additionally, the WPA-era retaining walls and staircases (or steps) were separately found to be individually eligible for listing on the California Register under Criteria 1 (Event) and 3 (Architecture) for their association with WPA/New Deal Construction. The HRER further acknowledged that the SNRAMP proposes no changes to the retaining walls, the steps, or the Cross. The HRER also concluded that the Mount Davidson cross, which was erected in 1929 and has been privately owned since 1997, is not considered part of the Mount Davidson Natural Area.

In terms of the integrity of the historic landscape, the HRER states that "the historic landscape also appears to be intact and to display the same range of vegetation first established in Sutro Forest in 1885. As is expected in a living landscape, the forest has grown over time; however this change does not diminish the integrity of the site." From a long-range visual perspective, the landscape appears to be largely unchanged when comparing historic photographs of the site (taken in 1934) with more recent photographs of the site (taken in 2006), as provided on the Found SF website (http://foundsf.org/index.php?title=Mt_Davidson). However, closer range views of the site show that the forest has grown over time, resulting in a predominance of nonnative eucalyptus trees, rather than a historic balance of tree species.

The proposed thinning of the Sutro forest, identified in the HRER as a character-defining feature of the Mount Davidson historic landscape, would not result in a substantial adverse change such that the significance of the landscape would be impaired (PRC Section 5020.1(q)). The HRER concludes that:

> "Staff has reviewed the proposed project and found that the work will not result in any significant changes to the historic landscape or its hardscape features. The selective tree removal will help to restore the historic balance of tree species within the forest and will preserve its historic character. Moreover, the historic landscape's use as a public park will be preserved. Therefore, the project will not cause a substantial adverse change in the significance of the resource."

The same conclusion was reached in the analysis provided in Impact CP-2 on Draft EIR p. 219, which concludes that:

> "Impact AE-1 in the Aesthetics section addresses the tree removal at Mount Davidson and Sharp Park and concludes that invasive tree and vegetation removal would not be noticeable at these Natural Areas and therefore it would not materially affect their

> significance as historic resources. Impacts to these potential historic resources through tree removal, which is detailed in Chapter III and the Urban Forestry Statements in Appendix F of the SNRAMP, could be beneficial to potential historic urban forests or historic landscapes because removing trees (through thinning and group selection) while maintaining the existing forest (which would occur in MA-3) would improve the health of the forest by relieving crowding and encouraging growth."

Similarly, on Draft EIR p. 220, Impact CP-2 concludes that "invasive tree and vegetation removal would not result in a substantial adverse change in the significance of historic landscapes or historic forests and this impact would be ***less than significant***." Figures 5 and 6 of the Draft EIR, provided on Draft EIR pp. 193 and 194, further substantiates this conclusion.

The HRER goes on to provide additional information supporting the conclusion that the site is potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape:

> "Sutro, known for his Comstock Lode engineering and as a philanthropist, and specifically his conservationist activities, purchased the Mount Davidson (then known as Blue Mountain) property in 1881 and began planting the forest circa 1885. This activity occurred around the same time that Sutro was helping to organize the first California Arbor Day held in 1886. The original forest was planted with pine, cypress, and eucalyptus trees; however, over time the eucalyptus have begun to dominate and have occasionally been thinned to retain the diversity of the forest. The property was transferred to A.S. Baldwin in 1909. During this time the mountain was given the name 'Mount Davidson', and the first public trails were established on the property. In 1923 the first Easter ceremony was held at the top of the mountain, beginning the tradition which continues through today. The property was finally purchased by the City in 1927 and the land was dedicated as a city park in 1929. In the same year as the park dedication, a permanent cross was constructed at the mountaintop for the yearly Easter services. As noted above the park became the site of a WPA-era work project between 1936-1943. Based upon these facts, the period of significance for the potential historic landscape would appear to be 1885-1943, beginning with the forest planting and extending through to what appears to be the last major improvement project for the park."

As the commenter states, the Park is also associated with what may be the first grass-roots campaign in San Francisco (led by Madie Brown and San Francisco Women's Clubs) to preserve an area that was otherwise slated for development. This effort was documented in a 2008 book by Richard Walker entitled "The City in the Country," and the campaign was also documented in an editorial and news report in the *San Francisco Examiner* in 1927 and in *The Municipal Employee*, another City publication in 1928. All of this information further supports the potential eligibility for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape.

The commenters also mentioned two studies: one, the pre-existing rating and survey report to the San Francisco Landmarks Board dated 2/5/1997 regarding the Mount Davidson Cross and Park and the other, the analysis done in April 1991 by Marie Bolton for the City Attorney as part of the lawsuit regarding the cross at the summit of Mt. Davidson, titled "The Contemplative Ideal in a Public Space: The Cross at Mt. Davidson Park, San Francisco, 1923–1990." The first study, addressing the Mount Davidson Cross and Park, indicates that the simplicity of the monument significantly contributes to the definition of the West of Twin Peaks locale. As previously mentioned, the Cross is not part of the Natural Area and the vast majority of the thinning would occur to the west of the Cross, where views of the Cross are not predominant. The simplicity of the Cross as a background setting looking to the west from the eastern portion of the city would remain after implementation of the SNRAMP.

The analysis completed in April 1991 by Marie Bolton made several statements that are supported in the HRER for Mount Davidson. Ms. Bolton stated that "[i]n creating this park, the city was building on its earlier tradition of setting aside land for parks and recreational purposes." Other statements by Ms. Bolton reflected the importance of the trees planted by Sutro; the dedication of three Monterey pines in honor or Mayor Rolph, John McLaren, and Mrs. Edmund Brown; and the recognition of Mount Davidson as a place of tranquility, as originally reflected by Decatur, who founded the annual Easter sunrise event. All of this information was considered in the HRER and led to determination that the urban forest at Mount Davidson is a historic landscape and is potentially eligible for the California Register as an ethnographic landscape. Further, the commenter's quotes from the San Francisco Landmarks Board (2/5/1997) and Bolton (1991) are now contained in the record for this project and, accordingly, will be reviewed and considered by the decision makers prior to approving or denying the project.

In summary, the HRER identified and evaluated the urban forest at Mount Davidson as potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape and treated it as a historic urban forest or historic landscape, as the commenter notes. The Draft EIR concluded that impacts were less than significant because the project would not cause a substantial adverse change in the significance of the resource.

Also, the comment that the HRER is incorrect as to the date of concrete cross was constructed, which was 1934 rather than 1929, is noted.

Cultural Landscapes

There are four types of cultural landscapes according to the Cultural Landscape Foundation[59] (and a site can fall under more than one category):

- **Historic Site (or Historic Landscape):** a landscape significant for its association with a historic event, activity, or person.
- **Ethnographic Landscape:** a landscape containing a variety of natural and cultural resources that the associated people define as heritage resources.
- **Vernacular Landscape:** a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives.
- **Designed Landscape:** a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect or horticulturist according to design principles or an amateur gardener working in a recognized style or tradition.

As previously stated, the HRER identified and evaluated the urban forest at Mount Davidson as an ethnographic landscape and treated it as a historic urban forest or historic landscape. The fact that the forest has existed since approximately 1885 and has since taken on importance to the City and the local residents could also give it standing as a vernacular landscape. According to NPS Preservation Brief 36, a historic vernacular landscape is "a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley." Several features or events could qualify Mount Davidson as a vernacular landscape: (1) the citizens' campaign to preserve Mount Davidson as a public park; (2) the site's home to the 1934 Mount Davidson Cross and the annual Easter sunrise service (that began in 1923); (3) the use of the Park as a place for recreation and contemplation; and (4) as a place that supports a rich biological community that would be enhanced through implementation of the SNRAMP. The essential function of Mount Davidson would not change with implementation of the SNRAMP. The cross would remain, the Easter services would be held, recreational activities would continue to be promoted, biological diversity would increase, the urban forest would be maintained according to SNRAMP principles and recommendations, and views of the site would not be materially altered, as concluded in the Draft EIR and illustrated by Draft EIR Figure 5 and 6, pp. 193 and 194. Further, if the site were classified as a vernacular landscape, it would be afforded no more or different

[59] http://tclf.org/landscapes/what-are-cultural-landscapes, accessed on August 8, 2015.

protection than is offered by its classification as an ethnographic landscape or historic landscape or site.

Lastly, this site would likely not qualify as a designed landscape because there is insufficient evidence to demonstrate that it was consciously designed or laid out according to specific design principles or recognized landscape styles or traditions; however, the site's potential designation as a vernacular landscape is evaluated in this response.

The text on Draft EIR pp. 219 and 220 has been changed as follows to include pertinent text provided in this response:

> **Impact CP-2. Invasive tree and vegetation removal and planting activities, as part of programmatic projects, would not result in a substantial adverse change in the significance of cultural ~~historic~~ landscapes or urban forests. (Less than Significant)**
>
> Several of the management activities proposed in the SNRAMP could adversely affect any present historical architectural resources. In addition to those discussed above, adverse effects could also result from vegetation changes within a Natural Area that may alter potential cultural ~~historic~~ landscapes.
>
> There are four types of cultural landscapes according to the Cultural Landscape Foundation[60] (and a site can fall under more than one category):
>
> - **Historic Site (or Historic Landscape):** a landscape significant for its association with a historic event, activity, or person.
> - **Ethnographic Landscape:** a landscape containing a variety of natural and cultural resources that the associated people define as heritage resources.
> - **Vernacular Landscape:** a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives.
> - **Designed Landscape:** a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect or horticulturist according to design principles or an amateur gardener working in a recognized style or tradition.
>
> Such changes include tree removal, which is proposed for 15 of the 32 Natural Areas and affects approximately 16 percent of the invasive trees in urban forests (San Francisco Park and Recreation Department 2006). As mentioned above, the Natural Areas that contain urban forest stands are Lake Merced, Glen Canyon Park, Bayview Park, McLaren Park, Mount Davidson, Interior Greenbelt, Dorothy Erskine Park, Corona Heights, and Sharp Park. These stands have not been evaluated for their historic significance; therefore, they are treated as potentially historic urban forests or historic landscapes.
>
> Impact AE-1 in the Aesthetics section addresses the tree removal at Mount Davidson and Sharp Park and concludes that invasive tree and vegetation removal would not be noticeable at these Natural Areas and therefore it would not materially affect their significance as historic resources. Impacts to these potential historic resources through tree removal, which is detailed in Chapter III

[60] http://tclf.org/landscapes/what-are-cultural-landscapes, accessed on August 8, 2015.

and in the Urban Forestry Statements in Appendix F of the SNRAMP, "could be beneficial to potential historic urban forests or historic landscapes because removing trees (through thinning and group selection) while maintaining the existing forest (which would occur in MA-3) would improve the health of the forest by relieving crowding and encouraging growth." Other Natural Areas would experience less tree removal than Sharp Park and Mount Davidson, and, as a result, would experience lower impacts.

An HRER was prepared for Mount Davidson, and it was determined that invasive tree and vegetation removal as well as planting activities will not result in any significant changes to the historic or ethnographic landscape at Mount Davidson (CCSF 2011a). Selective tree removal would help to restore the historic balance of tree species within the forest and preserve its historic character. The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. For the other San Francisco Natural Areas containing urban forest stands, there would be a relatively lower amount of tree removal than Mount Davidson, and, as a result, similar or lower impacts to potentially historic landscapes.

The HRER provides additional information supporting the conclusion that the site is potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape:

> Sutro, known for his Comstock Lode engineering and as a philanthropist, and specifically his conservationist activities, purchased the Mount Davidson (then known as Blue Mountain) property in 1881 and began planting the forest circa 1885. This activity occurred around the same time that Sutro was helping to organize the first California Arbor Day held in 1886. The original forest was planted with pine, cypress, and eucalyptus trees; however, over time the eucalyptus have begun to dominate and have occasionally been thinned to retain the diversity of the forest. The property was transferred to A.S. Baldwin in 1909. During this time the mountain was given the name 'Mount Davidson', and the first public trails were established on the property. In 1923 the first Easter ceremony was held at the top of the mountain, beginning the tradition which continues through today. The property was finally purchased by the City in 1927 and the land was dedicated as a city park in 1929. In the same year as the park dedication, a permanent cross was constructed at the mountaintop for the yearly Easter services. As noted above the park became the site of a WPA-era work project between 1936 and 1943. Based upon these facts, the period of significance for the potential historic landscape would appear to be 1885-1943, beginning with the forest planting and extending through to what appears to be the last major improvement project for the park.

In summary, the HRER identified and evaluated the urban forest at Mount Davidson as potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape and treated it as a historic urban forest or historic landscape. The fact that the forest has existed since approximately 1885 and has since taken on importance to the City and the local residents could also give it standing as a vernacular landscape.

According to NPS Preservation Brief 36, a historic vernacular landscape is "a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley." Several features or events could qualify

Mount Davidson as a vernacular landscape: (1) the citizens' campaign to preserve Mount Davidson as a public park; (2) the site's home to the 1934 Mount Davidson Cross and the annual Easter sunrise service (that began in 1923); (3) the use of the Park as a place for recreation and contemplation; and (4) as a place that supports a rich biological community that would be enhanced through implementation of the SNRAMP. However, the essential function of Mount Davidson would not change with implementation of the SNRAMP. The cross would remain, the Easter services would be held, recreational activities would continue to be promoted, biological diversity would increase, the urban forest would be maintained according to SNRAMP principles and recommendations, and views of the site would not be materially altered. Further, if the site were classified as a vernacular landscape, it would be afforded no more or different protection than is offered by its classification as an ethnographic landscape or historic landscape or site.

Lastly, this site would likely not qualify as a designed landscape because there is insufficient evidence to demonstrate that it was consciously designed or laid out according to specific design principles or recognized landscape styles or traditions; however, the site's potential designation as a vernacular landscape is evaluated in this response.

Based on the above, invasive tree and vegetation removal would not result in a substantial adverse change in the significance of historic landscapes or historic forests and this impact would be ***less than significant***.

Removal and Replacement of Trees

One of the commenters also indicated that "replacement trees can be planted anywhere in San Francisco," "SNRAMP specifies replacement of trees removed with oaks rather than the historic forest species," and "it lacks any plan for restoring the remaining forest in the MA-3a zone as the existing historic species reach the end of their lifespan." While the commenter is generally correct, there are some details that deserve clarification. First, trees would be replaced on a one-to-one basis within the Natural Areas, not within the broader city boundaries, although they would not necessarily be planted within the Natural Areas where trees were removed. Second, in addition to oaks, replacement trees in this Natural Area would also include cypress and berry-producing scrub, with cypress trees representing one of the species planted as part of the original Sutro forest; the tree selection, whether eucalyptus or a native species, would not make a meaningful difference in terms of the use of the park or its potential as a cultural landscape (using any of the three applicable definitions of a cultural landscape evaluated in the Draft EIR or in this response).

Plans for restoring the remaining forests in the MA-3a areas are, in fact, addressed in the SNRAMP under Issue GR-15 (Urban Forest) and Recommendations GR-15a through GR-15h, which call for maintaining a specific basal area per acre; maintaining a stocking rate that will perpetuate the urban forest and promote forest health as the forest ages; focusing on the removal of dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding; not planting sensitive species; removing select invasive species to promote and maintain urban forest health; consulting the SFRPD arborist when tree removals or planting are proposed; installing trees and shrubs in the urban forests to promote species diversity and improve wildlife habitat; and using City-approved insecticides to treat cut stumps.

4.D.4 Transportation and Circulation [TR]

The comments and corresponding responses in this section cover topics in Draft EIR Section VI.F.1, Transportation and Circulation.

Comment TR-1 Impacts of driving if more dog play areas are closed

The response to Comment TR-1 addresses all or part of the following individual comments:

CFDG-1-07	CFDG-1-08	DogPACSF-1-13
Bartolotta-1-12	Brown-1-10	Chambers-1-04
Kelly-1-04	McGinnis-1-01	

- The EIR assumes that because there will still be relatively large off-leash areas in McLaren Park and on Bernal Hill, that few people will be forced to drive to other DPAs to walk their dogs, with few resulting impacts on air pollution, traffic congestion, and climate change from the added car trips after the 15% closures take place. However, this EIR does not adequately consider the topography of the remaining off-leash spaces in these parks. If much of the remaining area is steep, people will not be able to use the area, and more people will be forced to drive to other DPAs. This must be analyzed in this EIR. [CFDG-1-07]
- This EIR does not consider the impact of people driving to other parks if 80% of off-leash space is closed. This analysis must be done. [CFDG-1-08] [Kelly-1-04]
- The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the closures of 15% of off-leash space at Lake Merced, Bernal Hill, and McLaren Park will be less than significant because there will remain sufficient off-leash space in those parks (except for Lake Merced). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs. This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows. [DogPACSF-1-13] [Bartolotta-1-12] [Brown-1-10]
- The NAP EIR assumes that because there will still be relatively large off-leash areas in McLaren Park and on Bernal Hill, that few people will be forced to drive to other DPAs to walk their dogs, with few resulting impacts on air pollution, traffic congestion, and global warming from the added car trips after the 15% closures take place. However, the EIR does not adequately consider the topography of the remaining off-leash spaces in these parks. If much of the remaining area is steep, people will not be able to use the area, and more people will be forced to drive to other DPAs. This must be analyzed in the NAP EIR. The NAP EIR does not consider the impact of people driving to other parks if 80% of off-leash space is closed. This analysis must be done. [Chambers-1-04]
- Please do not close any off-leash parks unless scientific studies show that there are significant negative impacts, and don't forget to include the environmental impact created by forcing people to drive farther to get to a park. [McGinnis-1-01]

Response TR-1

These comments suggest that people would need to drive to other DPAs if the DPAs at Lake Merced, McLaren Park and Bernal Hill were closed or reduced in size.

As discussed in Draft EIR Section VI.F.1, Transportation and Circulation, the potential traffic effects from the proposed reductions and closures of DPAs would be less than significant. The DPAs at Bernal Hill and McLaren Park are proposed to be reduced, and not eliminated. As mentioned on Draft EIR p. 257, the portions of DPAs within McLaren Park and Bernal Hill that would be closed are steep areas with high erosion potential or areas with sensitive habitat. It is not anticipated that current users of these DPAs would need to access other DPAs with a resulting increase in vehicle trips. The DPA closure at Lake Merced could result in additional vehicle trips, but the increase is expected to be marginal due to low usage of this DPA along with the close proximity of two other existing off-leash areas for dogs (1.5 miles to Fort Funston and one-half mile to the Pine Lake DPA). The SFRPD conducted dog and owner counts at various DPA sites throughout the city (included as a new Appendix K to the Draft EIR and also provided in Chapter 5 of this RTC document on p. 5-64), and staff observed the Lake Merced DPA on three occasions. The total count from all three visits to the Lake Merced DPA was one dog and one owner; therefore, the closure of the Lake Merced DPA would not result in a substantial increase in vehicular traffic or vehicle miles traveled. Other than the reduction of the DPAs at Bernal Hill and McLaren Park and the closure of the Lake Merced DPA, no additional changes to DPAs are proposed at this time.

Also, some of the comments have varying interpretations of the percentage of DPAs that would be closed. As stated in Impact RE-1 (Draft EIR p. 257), of the 95.2 acres of off-leash DPAs within the City's Natural Areas, 19.3 acres (approximately 20 percent) are proposed for closure (SNRAMP General Recommendations GR-8a, GR-8b, and GR-8c) and 75.9 acres (approximately 80 percent) would remain available for off-leash use.

Refer to Response RE-7, RTC p. 4-323, for a discussion of the adequacy of the remaining DPA space at McLaren Park and Bernal Hill, and refer to Response RE-13, RTC p. 4-347 for a discussion of the effects of the reduction of off-leash Dog Play Areas (DPAs) on other DPAs in terms of recreational capacity.

Comment TR–2	**Request Lake Merced Dog play area visitor use data to verify whether an increase in traffic would be minimal**

The response to Comment TR–2 addresses all or part of the following individual comment:

NPS-1-09

- Lake Merced DPA (pg. 443): GGNRA would appreciate receiving any Lake Merced DPA visitor use data, referenced in the summary of increase in traffic being "minimal" as a result of this DPA closure. [NPS-1-09]

Response TR–2

This comment requests Lake Merced DPA visitor use data to verify whether an increase of traffic would be minimal in response to closure of this DPA. The response below provides the requested data to the extent possible.

The SFRPD collected visitor use data at their DPAs, including Lake Merced. Three visits were made to Lake Merced (on September 7, 2011, between 1:15 p.m. and 2:15 p.m., November 10, 2011, between 8:45 a.m. and 9:45 a.m., and November 11, 2011, between 7:45 a.m. and 8:15 a.m.). During the three visits, only one dog and one owner were observed on September 7, 2011; no dogs or owners were observed during the November visits. Further, no professional dog walkers were observed during any of the visits. Of all of the DPAs, Lake Merced exhibited the fewest dog-related visitor use (included as a new Appendix K to the Draft EIR and also provided in Chapter 5 of this RTC document on p. 5-64). The San Francisco Dog Owners Group[61] indicated (on their website in 2009) that while this is an official DPA, it is barely used. The Group's website also states that it is risky to use with the nearby heavy, high-speed traffic, and it is not large enough for adequate off-leash play (San Francisco Dog Owners Group 2009).

Draft EIR p. 444 states that at Lake Merced, a designated five-acre DPA is located at the north side of the East Lake. This DPA would be closed as a result of the project. This closure may prompt users to access another DPA in the area. Fort Funston, located approximately 8,000 feet (about 1.5 miles) from the existing Lake Merced DPA, has approximately 200 acres open for off-leash dog use. Current users of the Lake Merced DPA could either walk or drive to the Fort Funston dog area. This could result in a slight increase in the number of vehicles along Lake Merced Boulevard. However, this increase would be minimal considering that the number of dog owners presently using this DPA is minor (San Francisco Dog Owners Group 2009). Also, dog owners could use the Pine Lake DPA, approximately half a mile north of Lake Merced. Therefore, the closure of the five-acre DPA would not significantly increase the number of vehicle trips in the vicinity. As such, reducing or reconfiguring the DPAs as part of this proposed project would not result in significant traffic impacts from increased vehicle trips.

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[61] According to the San Francisco Dog Owner's Group website, the purpose of the organization is as follows: "Founded in 1976 by a group of friends, SFDOG organized more formally in 1997 in reaction to the closing of Ocean Beach in the Golden Gate National Recreation Area to off-leash recreation. While continuing to work for off-leash recreational opportunities for responsible dog owners/guardians and their companion animals, we have expanded our mission to include a variety of programs designed to educate the people of San Francisco about dogs and their place in our culture. We work with dog owners/guardians about what it means to be a responsible dog owner/guardian. We help non-dog owners understand dog behavior to alleviate any fears or misconceptions they may have. We educate elected and appointed officials about dogs and the benefits of off-leash recreation. We share the 'joy of dog' with others, and provide a central clearinghouse of information about neighborhood dog groups, responsible dog ownership/guardianship, and off-leash recreation."

4.D.5 Noise [NO]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter VI, Section VI.F.2, Noise.

Comment NO-1 Permanent noise impacts of tree removal

The response to Comment NO-1 addresses all or part of the following individual comments:

MPIC-1-10 MPIC-2-22

- Noise and Wind Pollution Mitigation. The DEIR addresses the noise-pollution impact anticipated from the actual tree clearing to residents adjacent to the park. However, the DEIR does not address the MPIC's concern that tree removal will result in a substantial permanent increase in ambient noise levels heard by visitors within the park. The nearby 280 freeway, BART, and Portola Drive are substantial sources of noise currently partly mitigated by trees slated for removal. The Final EIR should compare sound readings within the MA-1a area with those in the MA-3a areas to demonstrate the impact of MA-1c and MA-2c area tree removal on noise levels along the Park road and trails surrounding the summit of the mountain. [MPIC-1-10]
- The forest in Mt. Davidson Park acts as a significant sound barrier. The DEIR addresses the noise-pollution impact anticipated from the actual tree clearing to residents adjacent to the park. However, the DEIR does not address the MPIC's concern that tree removal will result in a substantial, permanent increase in ambient noise levels heard by visitors **within the park**. The nearby 280 freeway, BART, and Portola Drive are substantial sources of noise currently partly mitigated by trees slated for removal. The final EIR should compare sound readings within the MA-1a area with those in the MA-3a areas to demonstrate the impact of MA-1c and MA-2c area tree removal on noise levels along the Park road and trails surrounding the summit of the mountain. [MPIC-2-22]

Response NO-1

These comments refer to the long-term noise impacts resulting from tree removal at Mount Davidson from within the park. For the reasons documented in Draft EIR Section VI.F.2, Noise, and as summarized below, the long-term noise effects on noise-sensitive receptors resulting from tree removal at Mount Davidson would be less than significant. The proposed tree removal activities would remove trees located in the middle of the forest and would leave intact at least 85 percent of the nonnative trees within that Natural Area. Although trees to be removed near Juanita Way are located in close proximity to residences, those trees are surrounded by a dense forest that extends more than 300 feet and tree removal would not affect the density or depth of this forest. As described in Draft EIR Chapter III, Project Description, p. 93, SFRPD would spread tree removal across targeted Natural Areas and would not concentrate it in a particular location at any one time.

The existing noise levels within the interior of the park, where most tree removal activities would be conducted, are generally below 55 dB L_{dn}.[62, 63] According to the *San Francisco General Plan*'s Land Use Compatibility Chart, noise levels below 70 dB L_{dn} are acceptable for parks and playgrounds.[64] Alterations to the forest canopy would not be sufficient to substantially increase permanent ambient noise levels within Mount Davidson, and would not result in unacceptable noise levels for park users. The comments above do not provide substantial evidence that the proposed project would result in significant noise impacts. In the absence of substantial evidence that the proposed project would result in a significant impact, the EIR properly concludes that long-term noise impacts on noise-sensitive receptors would be less than significant.

The text on Draft EIR p. 445 (first full paragraph) has been changed to address potential noise impacts from within the park, as follows:

> Tree removal at Mount Davidson would be to the west and south of Juanita Way and would not increase the noise exposure of the residences along Juanita Way from Portola Drive. The existing noise levels within the interior of the park, where most tree removal activities would be conducted, are generally below 55 L_{dn}.[65, 66] According to the *San Francisco General Plan*'s Land Use Compatibility Chart, noise levels below 70 L_{dn} are acceptable for parks and playgrounds.[67] Alterations to the forest canopy would not be sufficient to substantially increase permanent ambient noise levels within Mount Davidson, and would not result in unacceptable noise levels for park users. Therefore, removal of the trees at Mount Davidson would not expose ~~the nearby residences~~ noise sensitive receptors to new, long-term noise sources.

62 Average noise exposure over a 24-hour period is often presented as a day-night average sound level (L_{dn}).

63 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element, Map 1, Background Noise Levels. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

64 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

65 Average noise exposure over a 24-hour period is often presented as a day-night average sound level (L_{dn}).

66 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element, Map 1, Background Noise Levels. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

67 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

4.D.6 Air Quality [AQ]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.K, Air Quality.

Comment AQ-1 Increased pollution from tree removal activities

The response to Comment AQ-1 addresses all or part of the following individual comments:

SFFA-3-06 Bowman-2-12 Hecht-1-03

- The destruction of thousands of trees will increase air pollution

  According` to the US Forest Service survey of San Francisco's urban forest, "It is estimated that trees and shrubs [of San Francisco] remove 260 tons of air pollution (CO, N02, 03, PM10, 502) per year with an associated value of $1.3 million (based on estimated national median externality costs associated with pollutants). **Trees remove about 19 percent more air pollution than shrubs in San Francisco.**" (emphasis added)

  The DEIR provides us with no information about the increase in air pollution which will result from removing thousands of trees over 15 feet tall, untold numbers of trees less than 15 feet tall, thinning the remaining urban forest in the natural areas from approximately 740 trees per acre to less than 200 trees per acre and replacing all those trees with grassland and shrubs which are significantly less capable of reducing air pollution. [SFFA-3-06]

- In addition, trees benefit air quality and the plan does not address the impact of the removal of trees on air quality for those exercising or using the parks. The environmental impact on public health is significantly degraded by the SNRAMP proposed plan and the policies implemented by the Natural Areas Program since the creation of the SNRAMP. [Bowman-2-12]

- Another important consideration of the NAP "cleansing" program is the pollution it would create. How will the trees now growing, adding pleasant ambiance, softening the hard concrete be removed but with polluting equipment? How will the silent sequesters of carbon be transported once fallen but via polluting vehicles? And where will all the growing trees once felled go but to the already over-taxed landfill? [Hecht-1-03]

Response AQ-1

These comments note potential air quality (and greenhouse gas) impacts related to tree removal. Potential impacts related to criteria pollutant emissions generated by tree removal and hauling are evaluated under Impact AQ-4 (programmatic projects), Impact AQ-5 (routine maintenance), and Impact AQ-6 (Sharp Park restoration) in Draft EIR Section V.K, Air Quality. Potential health risk impacts from hazardous air pollutants generated by restoration activities, including tree removal and hauling are addressed in the Draft EIR under Impact AQ-7 (programmatic projects), Impact AQ-8 (routine maintenance), and Impact AQ-9 (Sharp Park restoration). Cumulative air quality and health risk impacts are addressed under Impact AQ-10. As discussed in the Draft EIR,

including under "Tree Removal and Replacement" of Draft EIR Chapter III, Project Description, pp. 92 and 93, implementation of the SNRAMP would employ manual techniques for tree removal wherever possible and would replace all trees removed from San Francisco Natural Areas. As analyzed in Draft EIR Section V.K, tree removal and other programmatic projects could exceed the 54 pounds per day NO_x significance threshold for construction activities. Since the details of the programmatic projects are not yet known, this is a conservative estimate of project specific impacts and the average daily emissions could be less. Given the uncertainty of actual construction required for the programmatic projects at this time and the resultant emissions, the Draft EIR concludes that NO_x emissions may remain above the significance threshold; therefore, even with implementation of Draft EIR Mitigation Measure M-AQ-4, Construction Contract Specification to Reduce Construction Vehicle Emissions, p. 431, potential air quality impacts were determined to be significant and unavoidable.

As described in Draft EIR Section VI.F.3, Greenhouse Gas Emissions, p. 445, all large woody debris would be used to create wildlife habitat, for erosion control, for trail maintenance or be composted in Golden Gate Park. As also stated on Draft EIR p. 453, wood chips may be used to suppress understory invasive vegetation or could be used as beneficial mulch on other revegetation projects in the Natural Areas. If onsite use is not available or realistic, the removed tree materials would be transported to SFRPD's green waste/composting facility in Golden Gate Park or to Recology's green waste site on Tunnel Road. Greenwaste generated at Sharp Park would be transferred to the Sharp Park organic dump. Where removal of tree materials is not possible, the limbs and trunk sections would be left in place on the ground. As stated on Draft EIR p. 93, Section III, Project Description, tree removal would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance. Stumps may be ground to below grade where necessary to avoid tripping hazards and erosion impacts. As stated in Response GG-1, RTC p. 4-297, each year the Natural Areas Program propagates and plants over 10,000 plants in restoration sites throughout the city, approximately 200 of which are trees, and it is assumed that this practice will continue with implementation of the SNRAMP.

Appendix F of the SNRAMP indicates that "Mount Sutro has an estimated 740 trees per acre (including very small trees) and approximately 280 trees per acre over 12 inches." However, the SNRAMP does not indicate that the Natural Areas, overall, contain approximately 740 trees per acre. Further, neither the SNRAMP (including Appendix F) or the Draft EIR states or implies that "thinning the remaining urban forest in the natural areas from approximately 740 trees per acre to less than 200 trees per acres and replacing all those trees with grassland and shrubs which are significantly less capable of reducing air pollution," as the commenter suggests. The commenter did not provide additional data or information to describe how the presented calculations were obtained, and, therefore, no further response can be provided.

Vegetation sequestration of carbon is addressed on Draft EIR pp. 455 to 457, as well as Response GG-1, RTC p. 4-297. As discussed in this section, because the proposed project would

replace primarily dead, dying, and diseased trees that have limited capability to sequester carbon or other pollutants for that matter, with young saplings that have long-term carbon sequestration capabilities, the proposed project is expected to result in a net increase in carbon sequestration capacity within the Natural Areas in San Francisco. As discussed on Draft EIR p. 457, replacement of nonnative trees removed at Sharp Park with native grassland and scrub species would not result in a substantial loss of carbon sequestration capacity.

4.D.7 Greenhouse Gas Emissions [GG]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter VI, Section VI.F.3, Greenhouse Gas Emissions.

Comment GG-1	**Climate change analysis of vegetation changes is insufficient and inaccurate**

The response to Comment GG-1 addresses all or part of the following individual comments:

DogPACSF-1-22	GGAS-1-09	MPIC-2-14
SFDOG-2-23	SFFA-3-05	WTPCC-1-03
Bartley-1-13	Bartolotta-1-21	Bose-1-04
Bose-1-05	Bowman-1-12	Brown-1-19
Hecht-1-02	Jake-1-10	Johns-1-06
Kelly-1-07	McAllister-3-03	Thomas-1-06

- 21) The NAP plans call for cutting down over 18,000 healthy trees simply because they are not native. The NAP EIR does not adequately consider the long-term impacts on climate change and global warming of the conversion of land covered by trees with grasslands. Tree are much better at carbon sequestration than grasslands, and the long-term consequences of this difference are not adequately considered. [DogPACSF-1-22] [SFDOG-2-23] [Bartolotta-1-21] [Brown-1-19]

- Golden Gate Audubon cautions the Planning Department that removal of trees results in loss of carbon and carbon-fixing, which may be considered to contribute to climate change. The Department should address this issue in the DEIR because failing to do so may be considered a flaw in the DEIR that leaves it vulnerable to challenge.

  Golden Gate Audubon does not challenge the assertion that the DEIR is inconsistent with San Francisco's Climate Action Plan. (See DEIR, at 156). However, we note that the Project calls for the removal of many trees and other vegetation, which may have impacts on carbon-release and carbon-sequestration. Golden Gate Audubon urges the Planning Department to fully consider these impacts to ensure that the lack of information related to invasive plant removal and carbon-sequestration creates a vulnerable flaw in the DEIR. [GGAS-1-09]

- <u>Implementation of SNRAMP will result in a significant loss of stored carbon.</u>

  The urban forest of San Francisco stores 196,000 tons of carbon and adds to that accumulated store of carbon at an annual rate of 5,200 tons per year, according to a US Forest Service

survey (Nowak 2007). About 25% of the annual rate of sequestration and the accumulated storage of carbon are accomplished by the blue gum eucalyptus, the chief target for destruction by SNRAMP. When a tree is destroyed, it releases the carbon that it has accumulated throughout its lifetime into the atmosphere as carbon dioxide (CO_2) as it decays. CO_2 is the predominant greenhouse gas that is causing climate change. Since greenhouse gases are regulated in California by a law that commits the state to reduce greenhouse gas emissions, the DEIR for the NAP goes to great lengths to make the case that destroying thousands of trees will not violate California law. The DEIR's claim that the implementation of SNRAMP will not contribute to greenhouse gas emissions is based on:

> Fabricating facts by misrepresenting scientific studies. The facts are:
  - Grassland in San Francisco does NOT lower ground temperature.
  - Grassland does NOT store more carbon than forests.

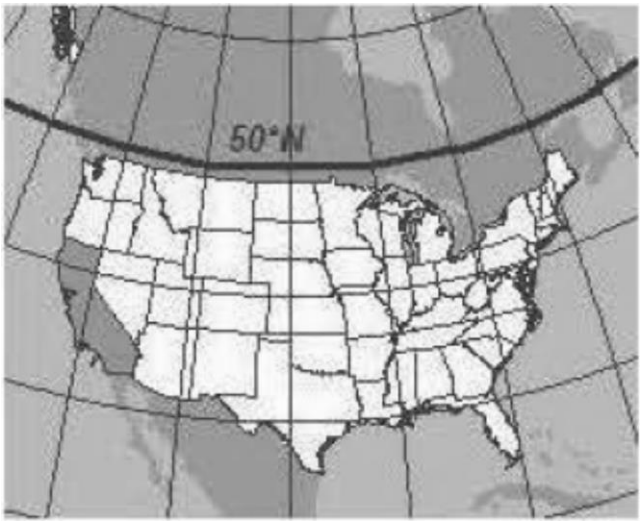
> Confusion of the RATE of carbon sequestration with the total accumulated carbon storage in the plant or tree as it continues to grow.
  - While a young tree may sequester carbon at a faster RATE while it is growing rapidly, as the DEIR maintains, that does not alter the fact that a mature tree stores more carbon over its lifetime as the carbon accumulates.
  - Replacing mature trees with ANY plant or tree will never compensate for the loss of the carbon stored in the trees that will be destroyed. Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in mature trees.

These misrepresentations and confusions are discussed in detail in the following subsections.

<u>Grassland in the San Francisco Bay Area does NOT lower ground temperature.</u>

The DEIR claims: "According to a study presented at the American Geophysical Union's meeting, **grasslands above 50 degrees' latitude** reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius." (DEIR, page 457, citing Jha A, "Planting trees to save planet is pointless, say ecologists" in The Guardian, 12/15/2006). However, the DEIR's statement does not apply to the San Francisco Bay Area and the reference used to support the statement misrepresents the cited study, because:

> The entire continental United States, including the San Francisco Bay Area, is below 50 degrees latitude. In other words, this statement – even if it were true – would not apply to the San Francisco Bay Area.



> The statement is taken out of the context of the article. The entire sentence in which this statement appears actually says, "Grassland or **snowfields**, however, reflected more sun, keeping temperatures lower. Planting trees above 50 degrees latitude, such as in Siberia, could cover tundras normally blanketed in heat-reflecting snow." It does not snow in the San Francisco Bay Area. Therefore, this statement does not apply to the San Francisco Bay Area.

> The article being quoted by the DEIR is NOT the scientific study, but rather a journalistic article in *The Guardian*, a newspaper in England, in which the author of the study has been misquoted and his study misrepresented.

> The day after this article appeared in *The Guardian* (and also in the *New York Times*), *The Guardian* published an op-ed (which also appeared in the *New York Times*) by the author of the scientific study, Ken Caldeira (Stanford University) in which he objected to the misrepresentation of his study:

> > "I was aghast to see our study reported under the headline "Planting trees to save planet is pointless, say ecologists." (December 15). Indeed, our study found that **preserving and restoring tropical forests is doubly important**, as they cool the earth both by removing the greenhouse gas carbon dioxide from the atmosphere and by helping produce cooling clouds. We did find that preserving and restoring forests outside the tropics does little or nothing to help slow climate change, but nevertheless **these forests are a critical component of Earth's biosphere and great urgency should be placed on preserving them."** (Caldeira, 2006)

As if this misrepresentation of the facts weren't bad enough, we find in Appendix A of the DEIR that this isn't the first time that someone has informed the authors of the DEIR that their statement is not accurate. One of the public comments submitted in 2009 in response to the Initial Study quoted Ken Caldeira's op-ed in the New York Times. Yet, 2 years later, the DEIR repeats this misrepresentation of Professor Caldeira's research.

Grassland does NOT store more carbon than forests.

The DEIR also claims that "Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink." (DEIR, page 457, citing Conant, Paustian and Elliot, 2001 and Hu, et al, 2001).

Once again, **the cited studies do not support the statement in the DEIR**:

> The statement has been taken out of context. The entire sentence reads, "We conclude that grasslands can act as a significant carbon sink **with the implementation of improved management.**" This sentence appears in the abstract for the publication. (Conant 2001)

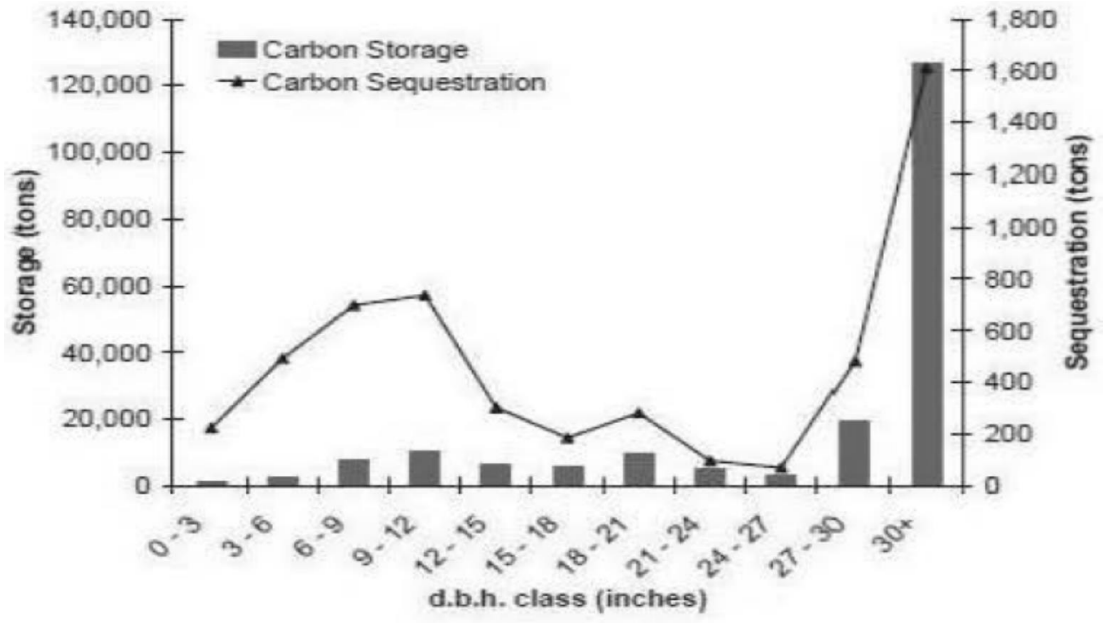
> The point of the study is that land management techniques such as fertilization, irrigation, introduction of earthworms, plowing and fallow methods, etc., can improve the sequestration of carbon in the soil of croplands and pastures. This is obviously irrelevant to the Natural Areas Program, which is not engaged in agriculture or pasturage.

> However, the study is relevant in that it reports that **when forest is converted to grassland, no amount of "management techniques" can compensate for the loss of the carbon in the trees that are destroyed**: "Though more than half of the rain forest conversion studies (60%) resulted in increased soil carbon content, **net ecosystem carbon balance…decreased substantially due to the loss of large amounts of biomass carbon**." (Conant 2001)

The second study cited (Hu et al, 2001) in support of the claim about carbon storage in grassland reports that increased levels of carbon dioxide **in the air** increase carbon accumulation in the soil. This study says nothing about the relative merits of grasslands and forests with respect to carbon storage. Another study reports a relation between global warming and carbon storage in trees: "…warmer temperatures stimulate the gain of carbon stored in trees as woody tissue, partially offsetting the soil carbon loss to the atmosphere." (Melillo, 2011)

The DEIR confuses the RATE of carbon sequestration with the total accumulated storage over the life of the tree.

The DEIR claims that because a young tree, growing at a faster rate than a mature tree, sequesters carbon at a faster rate than a mature tree, it follows that replacing mature trees with young trees will result in a net carbon benefit. This is NOT a logical conclusion, as illustrated by the following graph from the US Forest Service survey of San Francisco's urban forest (Nowak, 2007):



This graph tells us that although trees sequester carbon faster when they are very small, the large, most mature trees are also sequestering carbon and they store far more carbon than the smaller trees. This is as we would expect, **because the total amount of carbon stored within the plant or tree is proportional to its biomass, both above ground (trunk, foliage, leaf litter, etc.) and below ground (roots).**

Even IF it were possible replace the non-native trees with native trees-and it's NOT--the native trees would be significantly smaller than the trees that will be destroyed. The few trees that are native to San Francisco are ALL small trees, compared to the trees that will be destroyed. The Natural Areas Program reports that they have planted 8 species of native trees in the "natural areas" since 2008. Of those 8 species, only one (Red Alder) is classified as a tree by the USDA plant database. The other 7 species are classified as "tree/shrub," indicating their small stature and low branching habit. Since the amount of carbon stored within the tree is proportional to its biomass, the native trees would never sequester as much carbon as the trees that will be destroyed by the implementation of SNRAMP.

In its zeal to exonerate SNRAMP from releasing carbon stored in the trees it proposes to destroy, it contradicts itself, i.e., that SNRAMP proposes to destroy all non-native trees less than 15 tall. These are the very same young trees that the DEIR says are capable of sequestering more carbon than mature trees. If, indeed, carbon storage could be preserved by a forest of exclusively young trees-and it CAN'T-what is the point of destroying all the young non-native trees?

The DEIR does not account for the loss of the carbon in the trees that will be destroyed

If we were starting with bare ground, it might be relevant to compare carbon sequestration in various types of vegetation, but we're not. We're talking about a specific project which will require the destruction of thousands of non- native trees. Therefore, we must consider the loss of carbon associated with destroying those trees. **It doesn't matter what is planted**

after the destruction of those trees, nothing will compensate for that loss because of how the trees will be disposed of.

The fate of the wood in trees that are destroyed determines how much carbon is released into the atmosphere. For example, if the wood is used to build houses the loss of carbon is less than if the wood is allowed to decompose on the forest floor. And that is exactly what this project proposes to do: chip the wood from the trees and distribute it on the forest floor, also known as "mulching." **As the wood decomposes, the carbon stored in the wood is released into the atmosphere as carbon dioxide:** "Two common tree disposal/utilization scenarios were modeled: 1) mulching and 2) landfill. Although no mulch decomposition studies could be found, studies on decomposition of tree roots and twigs reveal that 50% of the carbon is lost within the first 3 years. The remaining carbon is estimated to be lost within 20 years of mulching. Belowground biomass was modeled to decompose at the same rate as mulch regardless of how the aboveground biomass was disposed" (Nowak 2002)

Furthermore, the process of removing trees releases stored carbon into the atmosphere, regardless of the fate of the destroyed trees: "Even in forests harvested for long-term storage wood, more than 50% of the harvested biomass is released to the atmosphere in a short period after harvest." (Anderson 2008)

The DEIR claims to have run a model of carbon loss resulting from the project in Sharp Park: "The model returns the C02 emission rates for all equipment deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use." (DEIR, page 455). The C02 emissions resulting from the destruction of 15,000 trees over 15 feet tall in Sharp Park is conspicuously absent from their analysis.

Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in the trees that will be removed.

The DEIR claims that improving the health of the urban forest by thinning and reforestation with young trees-which will NOT be physically possible--will result in a net benefit of carbon storage.

In fact, the more open canopy of an urban forest with less tree density results in greater growth rates. (EPA 2010) Although more rapid growth is associated with greater rates of carbon sequestration, rates of storage have little effect on the net carbon storage over the life of the tree. (Nowak 1993) **Net carbon storage over the life of the tree is determined by how long the species lives and how big the tree is at maturity. These characteristics are inherent in the species of tree and are little influenced by forest management practices such as thinning.** (Nowak 1993)

More importantly, even if there were some small increase in carbon storage of individual trees associated with thinning, this increase would be swamped by the loss of the carbon in the trees that will be destroyed. [MPIC-2-14] [SFFA-3-05]

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The citations used to make bogus claims regarding carbon sequestration must be removed because they are not relevant and they have been misrepresented by the DEIR.

> The DEIR's presentation of the terrestrial carbon cycle must be corrected because it is inaccurate:

  - RATES of carbon sequestration must not be confused with the total accumulated stored carbon in mature trees.
  - The final EIR cannot claim that there will be a net carbon benefit of the proposed tree destruction because that claim is inconsistent with the science of the terrestrial carbon cycle

The DEIR has not quantified the carbon stored in the current landscape; has not quantified the carbon released by the planned tree destruction; has not quantified the carbon stored in the resulting grassland and scrub. The claimed "qualitative analysis" does not tell us how much carbon will be released into the atmosphere by the implementation of SNRAMP. [SFFA-3-05]

As required by CEQA and California Law AB 32, the final EIR must quantify the loss of carbon resulting from the destruction of thousands of healthy trees, compare that loss to the resulting vegetation (grassland and scrub) and mitigate for the net loss of carbon that is the inevitable outcome of the implementation of SNRAMP. [MPIC-2-14] [SFFA-3-05]

- WTPCC is also concerned that the DEIR does not adequately address impacts on carbon sequestration and global warming from NAP's plans to cut down 18,500 trees. A 2007 US Forest Service survey of San Francisco's urban forest notes that our trees store 196,000 tons of carbon, adding 5,200 tons of carbon to the storage each year. When a tree is cut down, it releases its stored carbon into the atmosphere (as carbon dioxide) as it decays. California State Law requires the state to reduce greenhouse gas emissions; NAP's plans seem to be at odds with this goal. In addition, grassland does not store as much carbon as forests of trees, and the DEIR does not adequately address the impacts on this of NAP's plans to replace non-native trees with native grasses. [WTPCC-1-03]
- Carbon Sequester models - Trees vs. grasslands, etc.: If you completely buy into theories that our current climate change is primarily being driven by human impacts then methods of maximizing carbon sequestering by our planting (or un-planting) choices should be considered. Shapiro mentions trees vs. "artificial" grasslands (presume he means artificial turf) - well, that's a no-brainer but what about comparisons of natural grasslands (both non-native and native) vs. tree forests or even marshlands? There is disagreement amongst researchers on what habitat types sequester the most carbon and trees are not a clear front runner. [Bartley-1-13]

- Pg 457: The DEIR cites an irrelevant study showing that grasslands reflect more sunlight in northern latitudes above 50 degrees north. Since this does not apply to any part of the US but Alaska, it is misleading. [Bose-1-04]
- Pg 457: Grasslands as a significant carbon sink. Compared with what? The cited study compares badly managed agricultural land to better-managed pasture (with the single most important factor being fertilizer addition). Since the comparison here is with land covered with trees, the study is again irrelevant to this EIR. Cutting down trees and substituting grassland and scrub will inevitably reduce carbon sequestration. There has been no attempt to quantify the loss of sequestered carbon from the Proposed Project or any of the alternatives, though clearly with thousands of trees scheduled for destruction the impact would be considerable. [Bose-1-05]
- Air quality needs to be quantitatively reviewed for the removal of trees and limbs and for the suppression of replacement growth and underbrush instead of just presenting abstract information.

  I cannot find a comprehensive analysis on carbon dioxide absorption from converting large areas of land from forest to grasslands/scrub. Cutting 18,500 trees is only a small part of the conversion since the actual goal is to slowly convert these areas to grassland/scrub. Just because the conversion is slow does not negate the fact that large area, particularly Sharp Park, will soon be almost devoid of trees and all the under canopy / vegetation that exists today. From what I can see, it appears that more 50% of the forest area is planned to be converted slowly to scrub and grassland just like what predominates most of San Mateo county and the nearby area. [Bowman-1-12]
- The Natural Areas Program's (NAP) plan would decimate our existing Urban Forest, including such a unique ecotope as Sutro Woods. The NAP plan relies on false thinking, is a waste of scarce resource, and is an aesthetic abomination. It is true as the plan's proponents state San Francisco once had no Urban Forest. But it is also true as proponents ignore that San Francisco once had no miles of roadways, concrete paving and buildings, an electrical grid and a dense population driving automobiles. The proponents of the plan never answer the question "What will sequester the off-gassing of these elements other than our Urban Forest's trees?" The answer is obvious to me and to others who work with sustainable landscaping: we need our existing trees to sustain the environment in which we live. Additionally, visit one of the many treeless San Francisco neighborhoods to understand the dismal, lifeless future of a treeless San Francisco. [Hecht-1-02]
- The NARMP plans call for cutting down almost 20,000 trees because they are not native does not adequately consider the long-term impacts on climate change, global warming, and the quality of fresh air in San Francisco. It would be costly and, simply, dumb. Open up your eyes! There are a lot of non-native inhabitants everywhere you look – in the Bay, on land, and in the air. Get used to it! [Jake-1-10]
- 4. And what about the climate change it will cause? Whole neighborhoods are buffered from the wind from the west because of the forests. [Johns-1-06]

- The NAP EIR does not adequately consider the long-term impacts on climate change and global warming that will result from changing areas with non-native trees into native grasslands. Trees are much better at sequestering carbon than grasslands are, and the long-term impact of cutting down trees and replacing them with grasslands must be considered. [Kelly-1-07]

- **3. The implementation of SNRAMP will result in a significant loss of stored carbon.**

  The urban forest of San Francisco stores 196,000 tons of carbon and adds to that accumulated store of carbon at an annual rate of 5,200 tons per year according to the US Forest Service survey. (Nowak 2007) About 25% of the annual rate of sequestration and the accumulated storage of carbon are accomplished by the blue gum eucalyptus, the chief target for destruction by SNRAMP. When a tree is destroyed, it releases the carbon that it has accumulated throughout its lifetime into the atmosphere as Carbon Dioxide (CO2) as it decays. Carbon Dioxide is the predominant greenhouse gas that is causing climate change.

  Since greenhouse gases are regulated in California by a law that commits the state to reduce greenhouse gas emissions, the Draft Environmental Impact Report (DEIR) for the Natural Areas Program (NAP) goes to great lengths to make the case that destroying thousands of trees will not violate California law. The DEIR's claim that the implementation of SNRAMP will not contribute to greenhouse gas emissions is based on:

  > Fabricating facts by misrepresenting scientific studies. The facts are:
    - Grassland in San Francisco does NOT lower ground temperature
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The DEIR also claims:

> "Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink." (DEIR, page 457, cited studies)

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> However, the study is relevant in one regard. It reports that **when forest is converted to grassland, no amount of "management techniques" compensates for the loss of the carbon in the trees that are destroyed:**

> "Though more than half of the rain forest conversion studies (60%) resulted in increased soil Carbon content, **net ecosystem Carbon balance … decreased substantially due to the loss of large amounts of biomass carbon."** (Conant 2001)

The second study cited in support of the claim about carbon storage in grassland reports that increased levels of Carbon Dioxide in the air increases carbon accumulation in the soil. This study tells us nothing about the relative merits of grassland and forests with respect to carbon storage. (Hu 2001) Another study reports a similar relationship between global warming and carbon storage in trees: "… warmer temperatures stimulate the gain of carbon stored in trees as woody tissue, partially offsetting the soil carbon loss to the atmosphere." (Melillo 2011)

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The DEIR claims that because a young tree, growing at a faster rate than a mature tree, sequesters carbon at a faster rate than a mature tree, it follows that replacing mature trees with young trees will result in a net carbon benefit. This is NOT a logical conclusion, as illustrated by this graph from the US Forest Service survey of San Francisco's urban forest (Nowak 2007):

This graph tells us that although trees sequester carbon faster when they are very small, most mature trees are also sequestering carbon and they store far more carbon than the smaller trees. This is as we would expect, because **the total amount of carbon stored within the plant or tree is proportional to its biomass, both above ground (trunk, foliage, leaf litter, etc.) and below ground (roots).**

Even IF it were possible replace the non-native trees with native trees – and it's NOT – the native trees would be significantly smaller than the trees that will be destroyed. The few trees that are native to San Francisco are ALL small trees, compared to the trees that will be destroyed. Since the amount of carbon stored within the tree is proportional to its biomass, the native trees would never sequester as much carbon as the trees that will be destroyed by the implementation of SNRAMP.

In its zeal to exonerate SNRAMP from releasing carbon stored in the trees it proposes to destroy, it contradicts itself, i.e., that SNRAMP proposes to destroy all non-native trees less than 15 tall. These are the very same young trees that the DEIR says are capable of sequestering more carbon than mature trees. If, indeed, carbon storage could be preserved by

a forest of exclusively young trees – and it CAN'T – what is the point of destroying all the young non-native trees?

The DEIR does not account for the loss of the carbon in the trees that will be destroyed

If we were starting with bare ground, it might be relevant to compare carbon sequestration in various types of vegetation, but we're not. We're talking about a specific project which will require the destruction of thousands of nonnative trees. Therefore, we must consider the loss of carbon associated with destroying those trees. **It doesn't matter what is planted after the destruction of those trees, nothing will compensate for that loss because of how the trees will be disposed of.**

The fate of the wood in trees that are destroyed determines how much carbon is released into the atmosphere. For example, if the wood is used to build houses the loss of carbon is less than if the wood is allowed to decompose on the forest floor. And that is exactly what this project proposes to do: chip the wood from the trees and distribute it on the forest floor, also known as "mulching." **As the wood decomposes, the carbon stored in the wood is released into the atmosphere as carbon dioxide:** "Two common tree disposal/utilization scenarios were modeled: 1) mulching and 2) landfill. Although no mulch decomposition studies could be found, studies on decomposition of tree roots and twigs reveal that 50% of the carbon is lost within the first 3 years. The remaining carbon is estimated to be lost within 20 years of mulching. Belowground biomass was modeled to decompose at the same rate as mulch regardless of how the aboveground biomass was disposed" (Nowak 2002)

Furthermore, the process of removing trees releases stored carbon into the atmosphere, regardless of the fate of the destroyed trees: "Even in forests harvested for long-term storage wood, more than 50% of the harvested biomass is released to the atmosphere in a short period after harvest." (Anderson 2008)

The DEIR claims to have run a model of carbon loss resulting from the project in Sharp Park: "The model returns the CO2 emission rates for all equipment deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use." (DEIR, page 455). The CO2 emissions resulting from the destruction of 15,000 trees over 15 feet tall in Sharp Park is conspicuously absent from their analysis.

Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in the trees that will be removed.

The DEIR claims that improving the health of the urban forest by thinning and reforestation with young trees – which will NOT be physically possible--will result in a net benefit of carbon storage.

In fact, the more open canopy of an urban forest with less tree density results in greater growth rates. (EPA 2010) Although more rapid growth is associated with greater rates of carbon sequestration, rates of storage have little effect on the net carbon storage over the life of the tree. (Nowak 1993) **Net carbon storage over the life of the tree is determined by how long the species lives and how big the tree is at maturity. These characteristics are**

inherent in the species of tree and are little influenced by forest management practices such as thinning. (Nowak 1993)

More importantly, even if there were some small increase in carbon storage of individual trees associated with thinning, this increase would be swamped by the loss of the carbon in the trees that will be destroyed.

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The citations used to make bogus claims regarding carbon sequestration must be removed because they are not relevant and they have been misrepresented by the DEIR.

> The DEIR's presentation of the terrestrial carbon cycle must be corrected because it is inaccurate:

  - RATES of carbon sequestration must not be confused with the total accumulated stored carbon in mature trees.
  - The final EIR cannot claim that there will be a net carbon benefit of the proposed tree destruction because that claim is inconsistent with the science of the terrestrial carbon cycle

The DEIR has not quantified the carbon stored in the current landscape; has not quantified the carbon released by the planned tree destruction; has not quantified the carbon stored in the resulting grassland and scrub. The claimed "qualitative analysis" does not tell us how much carbon will be released into the atmosphere by the implementation of SNRAMP.

As required by CEQA and California Law AB 32, the final EIR must quantify the loss of carbon resulting from the destruction of thousands of healthy trees, compare that loss to the resulting vegetation (grassland and scrub) and mitigate for the net loss of carbon that is the inevitable outcome of the implementation of SNRAMP. [McAllister-3-03]

- Loss of trees would result in less sequestering of carbon dioxide and motor vehicle exhaust products, adversely affecting local air quality. [Thomas-1-06]

Response GG-1

These comments question whether the Draft EIR correctly analyzed the effects of the conversion of land covered by trees to grasslands (i.e., carbon storage and carbon sequestration as compared to loss of carbon) on climate change and global warming. These comments also indicate that there was no attempt to quantify the loss of sequestered carbon from the Proposed Project and questioned whether grasslands are a carbon sink. Additional analysis is provided below to further support the impact analysis and determinations of the Draft EIR with respect to the loss of GHG sequestration.

As discussed and evaluated in Draft EIR Section VI.F.3, Greenhouse Gas Emissions, "Vegetation Sequestration of Carbon" section, pp. 455 to 457, tree removal would be conducted to promote forest health and foster native species and would focus on removing trees that are dead, dying, diseased,

insect-infested, storm-damaged, or hazardous, or whose growth is suppressed by overcrowding. In addition, trees removed in San Francisco would be replaced at a one-to-one ratio. Carbon accumulated in biota will always be returned to the atmosphere upon death and decay of the plant or tree. Therefore, the release of biogenic GHG's resulting from the proposed project would eventually occur without the project. Consequently, when addressing the GHG impacts of a proposed project, it is standard practice in CEQA to assess the difference between existing sequestration rates and those that would occur after implementation of a proposed project. This practice is demonstrated by the California Emissions Estimator Model (CalEEMod) model of the California Air Pollution Control Officers Association (CAPCOA). This model is a tool developed with the consultation of CAPCOA for the purposes of calculating pollutant emissions and GHGs with respect to CEQA analysis. CalEEMod calculates GHG emissions based solely on sequestration rates and not based on release of stored carbon (ENVIRON 2013).

The text on Draft EIR pp. 456 to 457 (starting with the last paragraph) has been changed to further substantiate and quantify the impact assessment of the Draft EIR, as follows:

> As trees die and decay, they release much of the stored carbon to the atmosphere. Thus, carbon storage is an indication of the amount of carbon that can be lost if trees are allowed to die and decompose. Of all the species in San Francisco, eucalyptus trees store and sequester the most carbon (approximately 24.4 percent of the total carbon stored and 16.3 percent of all sequestered carbon). Trees removed in the Natural Areas in San Francisco would be replaced at a one-to-one ratio, although not necessarily in the same location. Eucalyptus trees would be replaced with native trees. ~~Although the net effect on carbon sequestration capacity is unknown for the proposed replacement of mature eucalyptus with native saplings, replacing dying trees with healthy trees typically enhances the carbon sequestration process. In fact, one of the urban forest management strategies to help improve air quality is to increase the number of healthy trees. Further, among mitigation measures recommended by the Intergovernmental Panel on Climate Change is forest management, and particularly selection of tree species that sequester the most carbon (IPCC 2007). As such, tree replacement is expected to result in a net increase in the amount of carbon sequestered within the Natural Areas. The total number of trees would not change within the Natural Areas of San Francisco and the amount of carbon sequestered would increase in the long term from replacing dead, dying, or diseased trees. According to the California Registry, dead trees must be replaced within one year of removal. This timeframe allows for planting to occur at the appropriate time of the year. Therefore, the project would not conflict with San Francisco's Greenhouse Gas Ordinance. Further, the project would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB32[68]. Therefore, the proposed project would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.~~ An analysis drawing from a number of resources to quantify anticipated CO_2 sequestration gains and losses was prepared for the SNRAMP Project. These sources include the Urban Forestry Carbon Sequestration Workbook

[68] ~~In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).~~

published by the U.S. Department of Energy,[69] the Center for Urban Forest Research Tree Carbon Calculator published by the U.S. Forest Service (USFS),[70] the *Good Practice Guidance for Land Use, Land Use Change and Forestry* published by the International Panel on Climate Change (IPCC),[71] and the CalEEMod supporting calculations.[72]

Trees have a relatively high rate of CO_2 sequestration potential. However, while the sequestration rate increases over a period of time (assumed to be approximately 20 years, based on professional practice), after that point the accumulation of carbon in biomass slows with age, and eventually is completely offset by losses associated with tree clipping, pruning, and occasional death (IPCC 2003). Sequestration rates for grasslands and herbaceous plants, which grow quickly, were assumed to be static. This analysis applied tree age for Blue Gum (eucalyptus trees would be the predominant species removed, and all are assumed to be blue gum) provided by the SFRPD to determine increases and losses in CO_2. The Urban Forestry Carbon Sequestration Workbook was used to estimate increasing carbon sequestration of new tree plantings over a 20-year period. The Tree Carbon Calculator from the USFS was used as a source of sequestration rates for specific tree types to be removed as provided by the SFRPD.[73] The CalEEMod supporting documentation provided the sequestration rates for grasslands.

The following discussion shows sequestration losses and gains from implementation of two distinct activities: (1) implementation of a tree replacement program in San Francisco (Table 19A); and (2) replacing existing trees with native grasses in Sharp Park in Pacifica (Table 19B).

While these tables represent distinct activities, the total project beneficial impact would be the sum of these two contributions, which shows a net sequestration gain at the end of the 20-year program of 202 metrics tons of CO_2e per year (calculated as 138 metric tons of CO_2e per year [Table 19A] plus 64 metric tons of CO_2e per year [Table 19B]).

Sequestration Losses and Gains from Tree Replacement in San Francisco

Data provided indicate that 3,448 trees would be removed from the Natural Areas in San Francisco (not including Sharp Park) over a 20-year period. While six species of trees were identified for removal, species-specific sequestration rates could not be identified for four of these species. However, the remaining two species (eucalyptus and pine) comprise over 96 percent of the trees to be removed. Consequently, sequestration rates for the remaining species were assigned to the known sequestration rates equally. Based on field data estimates provided by Hort Science,[74] approximately 2,942 of these trees to be removed are Blue Gum trees greater than 20 years of age for which sequestration has been slowed and is assumed by IPCC Good Practice[75] to be offset by

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69 U.S. Department of Energy, Urban Forestry Carbon Sequestration Workbook, 2007.

70 U.S. Forest Service, Urban Forest Research Tree Carbon Calculator, 2005. This document is available online at: http://www.fs.usda.gov/ccrc/tools/tree-carbon-calculator-ctcc, accessed on June 7, 2016.

71 International Panel on Climate Control, National greenhouse Gas Inventories Programme, *Good Practice Guidance for Land Use, Land Use Change and Forestry*, 2003. This document is available online at: http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/GPG_LULUCF_FULL.pdf, accessed on June 7, 2016.

72 SCAQMD, CalEEMod Appendix A, 2011.

73 San Francisco Recreation and Park Department, Memorandum to Jessica Range of San Francisco Environmental Planning, November 27, 2012.

74 Hort Science, Memorandum to Jessica Range, January 17, 2013.

75 International Panel on Climate Control, National greenhouse Gas Inventories Programme, *Good Practice Guidance for Land Use, Land Use Change and Forestry*, 2003.

maintenance and mortality. Loss of sequestration from trees to be removed in San Francisco is presented in Table 19A.

Over the same 20-year period that trees would be removed, new tree plantings would occur. These trees were assumed, based on data provided, to largely consist of California Live Oak. Consequently, these trees were assigned to the "medium hardwood" category in the Urban Forestry Carbon Sequestration Workbook. Carbon sequestration increases over time from replanting 3,448 trees are also presented in Table 19A.

Table 19A
CO_2 Sequestration Losses and Gains from Tree Removal and Planting in San Francisco

Tree Removal – San Francisco	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration loss (over 20 years)	- 54 Metric Tons (MT) CO_2/year
Tree Plantings – San Francisco	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration gain (year 20)	+ 192 MT CO_2/year
Net sequestration gain at end of 20-year program	**+ 138 MT CO_2/year**

Sequestration Losses and Gains from Tree Removal and Grassland and Scrub placement in Sharp Park

Data provided indicate that 15,000 trees would be removed in Sharp Park (separate from the 3,448 removed in the San Francisco Natural Areas) over a 20-year period. These tree species are almost entirely eucalyptus. Based on field data estimates provided by Hort Science,[76] approximately 13,500 of these trees to be removed are Blue Gum trees greater than 20 years of age for which sequestration has been slowed and is assumed by IPCC Good Practice to be offset by maintenance and mortality. Loss of sequestration from trees to be removed at Sharp Park is presented in Table 19B.

Over the same 20-year period that trees would be removed from Sharp Park, trees would be replaced with native grassland and coastal scrub. Replacement vegetation was assigned a grassland sequestration rate as provided by CalEEMod. A specific sequestration rate for coastal scrub was not available; thus, all 56 acres of replaced vegetation were assumed to be grassland for purposes of calculation. Carbon sequestration associated with planting approximately 56 acres of grasslands is also presented in Table 19B.

[76] Hort Science, Memorandum to Jessica Range, January 17, 2013.

Table 19B
CO_2 Sequestration Losses and Gains from Tree Removal and Grassland Planting in Sharp Park (in Pacifica)

Tree Removal – Sharp Park	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration loss (over 20 years)	- 177 MT CO_2/year
Grassland Plantings – Sharp Park	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration gain (year 20)	+ 241 MT CO_2/year
Net sequestration gain (after 20 years)	**+ 64 MT CO_2/year**

Net Sequestration Changes Associated with the Implementation of the SNRAMP

At the end of the 20-year horizon window of the SNRAMP, there would be a calculated total net sequestration gain of approximately 202 MT of CO_2 per year, as indicated in Tables 19A and 19B. The primary contributing factor to this sequestration gain would be the removal of an aging eucalyptus tree population which would be replaced with much more efficiently sequestering tree and plant growth.

~~Trees removed in Sharp Park would be replaced with native grassland and scrub species. The California Registry is developing flexible mechanisms to address reversals if removed trees are not compensated by planting replacement trees. According to a study presented at the American Geophysical Union's meeting, grasslands above 50 degrees latitude reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius (Jha 2006). However, in the tropics, forests cool the planet by an average of 0.7 degree Celsius (Jha 2006). Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink (Hu et al. 2001; Conant et al. 2001). Therefore, replacing the trees to be removed in Sharp Park with grassland and scrub habitat would not result in a substantial increase in GHG emissions from the loss of CO_2 sequestration, and impacts from GHG emissions would be less than significant.~~

Consequently, using standard practice methodologies for assessing GHG impacts relative to CEQA, the proposed project would have a net GHG benefit and would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB 32.[77] Therefore, the proposed project would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.

In summary, sequestration rate estimates of newly planted grasslands are predicted to be greater than for the aging population of eucalyptus in Sharp Park based on factors published by the U.S. Department of Energy and the CAPCOA.

In addition, the text on Draft EIR p. 455 (starting on line 11) has been changed to address GHG emissions resulting from increased heavy-duty vehicle use associated with construction activities, as follows:

[77] In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

Increased GHG emissions occur as a result of increased heavy-duty vehicle and equipment associated with construction activities. During the 5.5-month construction period, the Sharp Park wetland restoration project would emit 21,777 lbs per day of CO_2e, which is equivalent to a total of 1,630 metric tons of CO_2e. ~~Because~~ BAAQMD's 2011 *CEQA Air Quality Guidelines* do not define a project-level GHG threshold for construction-related emissions, ~~there is no applicable significance threshold to which to compare this estimate~~ but these emissions are commonly addressed in a CEQA analysis by amortizing them over the lifetime of a project and adding them to operational emissions. Using the 20-year window of the Management Plan as the lifetime of the proposed project, annualized emissions from construction would be approximately 81.5 metric tons of CO_2e per year.[78] When these emissions are added to those of the sequestration change, the proposed project would still have a less-than-significant impact with regard to GHG emissions. Thus, GHG emissions of the Sharp Park restoration would result in a less than significant impact. When the annual 81.5 metric tons of CO_2 emissions from construction are subtracted from the net sequestration gain resulting from the tree plantings with the project (202 MT of CO_2 per year), the project still results in a net sequestration gain. The Sharp Park restoration is considered the largest of the programmatic projects. Therefore, GHG emissions resulting from other individual programmatic projects in the Sharp Park Natural Area are expected to be less than those resulting from the restoration project.

Comment GG-2 Draft EIR ignores changes to San Francisco's climate

The response to Comment GG-2 addresses all or part of the following individual comments:

DogPACSF-1-23	SFDOG-2-24	Bartolotta-1-22
Brown-1-20	Jake-1-11	Kelly-1-08

- The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (and tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time when the climate has changed since that time. The environmental consequences (for example, more

[78] The proposed activities for the Sharp Park restoration include the use of heavy equipment for creating shallow pools within the existing wetlands, dredging excess sediments, and grading to prevent flooding. GHG emissions resulting from the Sharp Park restoration were calculated using URBEMIS. The URBEMIS model was populated with assumptions regarding timing of restoration activities and the number, type, and operating hours of equipment as specified by the project sponsor. The model returns the CO_2 emission rates for all equipment, deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use. Other GHGs, such as methane and nitrous oxide rates, are assumed to comprise 95 percent of CO_2e emissions. In addition, this analysis assumed that all heavy duty construction equipment is diesel or gasoline powered and no substantial electrically powered pieces of construction equipment would be used, based on the project description. The results indicate that approximately 21,777 pounds per day of CO_2e would be emitted during the implementation of these activities. During the 5.5-month construction period, the Sharp Park wetland restoration project would emit 21,777 lbs per day of CO_2e, which is equivalent to a total of 1,630 metric tons of CO_2e. These emissions were annualized over the 20 year implementation period of the SNRAMP to come up with 81.5 metric tons of CO_2e per year, calculated as 1,630 metric tons of CO_2e divided by 20 years.

herbicides, etc.) of trying to force the old habitat into today's climate should be analyzed more thoroughly. [DogPACSF-1-23]

- The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (nor tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time considering that the climate has changed since that time, and will be continuing to change in the near future. The environmental consequences (for example, more herbicides, etc.) of trying to force the old habitat into today's (and tomorrow's) climate should be analyzed more thoroughly. [SFDOG-2-24] [Bartolotta-1-22] [Brown-1-20] [Kelly-1-08]
- The NARMP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NARMP plan is trying to re-create. [Jake-1-11]

Response GG-2

These comments assert that the Draft EIR did not adequately consider the fact that the climate in San Francisco has changed (and continues to change) as compared to hundreds of years ago.

The baseline for the CEQA analysis in the Draft EIR is the date issuance of the Notice of Preparation, April 2009. Atmospheric temperatures in the San Francisco Bay Area are predicted to increase by approximately 1.5 degrees Celsius between 2000 and 2050.[79] This increase in temperature over a 50-year period may discourage growth of certain sensitive plant and tree populations. During the same period, precipitation in the San Francisco Bay Area is predicted to be variable, with increased periods of drought.[80] As discussed in Draft EIR Chapter III, Project Description, the SNRAMP would maintain viable plant communities that consist of native species more adapted to local climate, such as those that are more drought-resistant and require less irrigation. It would, therefore, be more reasonable to allow native species to continue to evolve to these predicted slow increases in temperature and periods of drought than to predict what nonnative species may thrive under similar conditions. Refer also to Response HZ-4, RTC p. 4-557, for a discussion of the relative flammability of native and nonnative plants.

As discussed in Draft EIR Chapter III, Project Description, the SNRAMP aims to maintain viable plant communities. The SFRPD does not propose to introduce plants that are not viable in today's

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79 California Energy Commission, *White Paper on Climate Change Scenarios for the San Francisco Region*, July 2012. This document is available online at: http://www.energy.ca.gov/2012publications/CEC-500-2012-042/CEC-500-2012-042.pdf, accessed on June 7, 2016.

80 California Energy Commission, *White Paper on Climate Change Scenarios for the San Francisco Region*, July 2012. This document is available online at: http://www.energy.ca.gov/2012publications/CEC-500-2012-042/CEC-500-2012-042.pdf, accessed on June 7, 2016.

climate. The proposed project includes both monitoring and adaptive management, which will allow the SFRPD to modify its activities based on the monitoring of project successes and failures. Further, refer to Response PD-11, RTC p. 4-159, for a discussion of the City's policy guidance that supports the protection and maintenance of biodiversity within the City's Natural Areas.

Refer also to Response HZ-1, RTC p. 4-531 for a discussion of the use of herbicides and pesticides with the Natural Areas, and Response BI-33, RTC p. 4-457, and Response PD-31, RTC p. 4-206, for a discussion of the success of past restoration and revegetation efforts and the measures that will be employed to ensure the success of future restoration and revegetation efforts.

4.D.8 Wind and Shadow [WS]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.E, Wind and Shadow.

Comment WS-1 Analysis of wind impacts from tree removal

The response to Comment WS-1 addresses all or part of the following individual comments:

MPIC-1-11	MPIC-2-08	SFFA-3-03
Bowman-2-03	Risk-1-04	Zeiger-1-02

- Furthermore, the trees in the MA-1c area now serve as a wind-break, and we believe their removal will significantly increase wind in inside the park and thus negatively impact the experience for visitors within the Park. The EIR should address this potential impact, which could be documented by taking wind speed-readings from the now treeless northeast viewpoint of the Park and comparing these readings with other readings from the MA-3a areas. [MPIC-1-11]

- **I. Wind**

  The forest in Mt. Davidson Park is a significant wind barrier. The SNRAMP project disregards this fact in its proposed doubling of the existing native plant area of the park by converting a third of the forest area (10.2 acres) into a prairie/coastal scrub landscape. The DEIR statements that this is thinning the forest and would involve removal of only 15% of all the trees are misleading, as the trees are actually proposed for removal in a concentrated 10.2-acre area (p. 14, SNRAMP – Appendix F). The DEIR therefore does not adequately evaluate the potential damage to the remaining forest from windthrow after implementation of the 1000-tree removal planned for the MA-1c area. This concentrated removal, estimated by the SNRAMP to be 82% of the trees in this 3.5-acre area, is substantial – not mere thinning.

  The DEIR concludes that the wind impacts would be less than significant because trees would be removed in accordance with the Urban Forestry Statements in Appendix F of the SNRAMP. This is an inaccurate conclusion because it does not address the statement in Appendix F that substantial tree removal should not occur in the MA-1c and MA-2c areas

because this would increase the rate of windthrow. The DEIR states that ground-level wind hazards would not increase along the trails of Mt. Davidson because mostly small- and medium-sized trees would be selectively removed. This is incorrect. The MA-1c zone, which will lose 82% of its trees, is the location of the major and most popular trails in the park, which cross this zone in several locations. This concentrated removal would therefore result in a significant negative impact to this cultural, recreational, and biological resource.

The EIR should acknowledge the above inconsistency in the SNRAMP by recommending a significant reduction in the percentage of trees to be removed in the MA-1c area, to 15% or less, in order to avoid an increase in windthrow that could damage or kill trees, as well as expose trails and hikers to a significant increase in wind hazard created by making this area an exposed hilltop. In the existing situation, the forest serves as a wind-break and provides protection to visitors from the high wind speeds that prevail in this area. The EIR should address this potential cumulative negative impact, which could be documented by taking wind-speed readings from the now treeless northeast viewpoint of the Park and comparing these readings with other readings in the MA-1c zone, which would lose 82% of its trees. [MPIC-2-08]

- **The final EIR must provide scientific evidence that the trees that will be destroyed by SNRAMP are invasive or it must delete this justification for their destruction.**

4. Tree removals will change wind patterns, causing tree failures

The DEIR does not evaluate wind impacts of removing thousands of trees in the natural areas because:

> "This section does not address wind impacts in certain Natural Areas because trees targeted for removal are isolated individuals or small groups scattered throughout these Natural Areas, and this removal is not expected to have noticeable wind effects." (DEIR, page 243)

It is patently false that "trees targeted for removal are isolated individuals or small groups scattered throughout" the natural areas. Here are a few examples of the large number of trees that will be removed from small areas (SNRAMP, Forestry Statement, Appendix F-14-F-17):

> Mt. Davidson: 1,000 trees will be removed from MA-1e (3.5 acres)

> Glen Canyon: 100 trees will be removed from MA-2e (.6 acres)

> Sharp Park: 1,476 trees will be removed from MA-2j (5.6 acres)

> Corona Heights: 10 trees will be removed from MA2C (less than .01acre)

> Bayview Park: 140 trees will be removed from MA-1d (.02 acres)

> McLaren Park: 600 trees will be removed from MA-2b (9.9 acres)

> Interior Greenbelt: 100 trees will be removed from MA-2a (1acre)

Tree removal on this scale cannot be done piecemeal, taking only a few individual trees on separate occasions. The game of "pick-up-sticks" is a good metaphor to understand the

problem. Felling one tree will impact those in close proximity. Whether intended or not, neighboring trees are likely to be felled by the falling tree.

Removing that individual tree will not be possible unless its neighbors are also removed. One can't pick up that felled tree when other standing trees surround it. Felled trees must be dragged out. As a qualified arborist said, when expressing his opinion of the proposed selective method of tree removal, "I don't have tweezers to pick these trees out of the forest."

Leaving the felled trees on the ground until they are all destroyed is not an option because the restoration objective is to plant the bared ground with native plants, which can't be accomplished if the ground is covered with dead trees.

Furthermore, destroying a large number of trees slowly, over time substantially increases the cost of such tree removals. Even if it were physically possible to remove them piecemeal, it would not be a responsible use of the limited resources of the Recreation & Park Department which frequently justifies the poor quality of its service and the maintenance of San Francisco's parks on the grounds that their budget is insufficient.

Even if it were true that only "small groups of trees" will be removed, it does not follow that tree removal would not include wind-toughened edge trees nor that removals "would not result in increased wind hazards or expose trees … to high winds." In fact, most of the tree removals will occur on the edge of the existing forest, which is consistent with the stated goal of the removals to expand the adjacent native scrub and grassland (SNRAMP, Forestry Statement, pages F-8-F-11):

> Mt. Davidson: "Additional removals will occur … on the eastern edge of the forest."

> Bayview Park: "Tree removal will focus on the existing edge of forests …"

> Mclaren Park: "… removal will occur along forest edges …"

> Interior Greenbelt: "Tree removal will focus on the eastern border and the western tip of this Natural Area …"

In addition to these narrative descriptions of the location of tree removals, SNRAMP contains detailed maps of the natural areas in Section 6 that indicate the location of the tree removals. These maps reveal the vulnerability of the remaining trees as a consequence of some of the tree removals.

In their "Assessment of Urban Forestry Operations" for the Recreation and Park Department, Hart Science reminds us of the vulnerability of the trees that remain after their neighbors are gone and they are exposed to more wind than they have developed defenses against: "As individual trees die or fall, it exposes remaining trees to higher wind loads and increases the overall failure rate." (page 27)

In December 2011, Hart Science provided us with a specific example of such an occurrence in their "Stern Grove-Pine Lake Park, Parkside Square tree risk assessment." This report was written as an update of Hart Science's comprehensive assessment of all trees in Stern Grove-Pine Lake in 2003, in preparation for finally removing the hundreds of trees that had been

evaluated as hazardous 8 years before. Here is what Hart Science found at the "West end of the park, near Wawona and 33rd Ave:"

> "**This area had a number of trees removed by the Natural Areas Program. Subsequently a large Monterey pine failed at the edge of the newly exposed woodland**. Concern was expressed about the exposed nature of the edge and potential for additional failures. This area of Pine Lake Park is exposed to westerly winds. There is still, however, significant tree canopy at street-edge. Pines have been declining for some time. Tree #1057 is posted for removal. Mid-slope is a standing dead pine #347, also recommended for removal."

These trees were cut down in order to expand the native plant garden around Pine Lake. Hart Science had evaluated all trees in Stern Grove/Pine Lake for hazards about one year before these trees were removed. We know those trees were not hazardous, because they had not been judged to be hazardous by the Hart Science evaluation done in 2003.

In other words, as a result of trees removed at the west end of Stern Grove by the Natural Areas Program, a large Monterey pine fell across the path around the lake. Hart Science doesn't mention where the tree fell, but park visitors remember this failure well. It was not a tree that had been previously designated by Hart Science as hazardous. It became hazardous because its wind break was compromised by the removal of trees by the Natural Areas Program.

The removal of 1,600 trees over 15 feet tall on Mt. Davidson will substantially increase windthrow hazards. Although the DEIR denies this risk, the Forestry Statement in SNRAMP acknowledges it:

> "Because of this, removal of edge trees on the northwest side of the park (MA-1e and MA-2c) could increase the rate of windthrow within the stand. **Substantial tree removal in these areas should not occur.** A significant number of mature trees should remain at the park edge to minimize the effects of wind on this stand." (SNRAMP, Appendix F, page F-11)

Despite this warning that "substantial tree removal … should not occur" in MA-1e and MA-2c areas, just three pages later in Table F-1, SNRAMP reports these tree removals in these areas on Mt. Davidson:

MA	*Acres*	*Existing Trees*	*Removed*	*Percent*
MA-1e	3.5	1221	1000	82%
MA-2c	1.8	644	200	31%

In other words, SNRAMP predicts tree failures on Mt. Davidson from removal of as many as 82% of all trees on 3.5 acres on the northwest side of Mt. Davidson, yet it plans to remove 1,200 trees from those areas anyway.

The Forestry Statement of SNRAMP also attempts to minimize the danger of windthrow on the grounds that the trees are not near residential neighborhoods: "In general, potential

windthrow hazard to people is minimal because there are no residential areas near the stands where the tree removals will occur." (Forestry Statement, Appendix F-11). This irresponsible excuse for endangering the public does not acknowledge that there are people visiting these parks and taking their lives in their hands by doing so. The death of a park visitor to Stern Grove in 2008, is apparently insufficient testimony to the way the public is being endangered by these tree removals.

Either the planned tree removals must be decreased to reduce the risk of tree failures caused by windthrow or the final EIR must acknowledge the significant risk of these tree removals. [SFFA-3-03]

- The 2006 Pine Lake project is the best representation of the SNRAMP proposed plan for tree removal and fencing in the Natural Areas. Pine Lake demonstrates how the removal of trees impacts the park by opening up the forest curtain to expose houses and how removal of trees results in wind throw which along with the understory removal results in erosion as demonstrated in the pictures in *Attachment C*. [Bowman-2-03]

- * Contrary to statements in the DEIR, we believe that removing 1600 trees would have a significant negative impact on the Mt. Davidson Forest. It would mean increased wind exposure, increased erosion, reduced carbon dioxide absorption, and loss of animal and bird habitat. And it would certainly alter our woodland hiking experience. [Risk-1-04]

- How does the nap plan translate into the reality of our urban parks? In my neighborhood park, not so well. At the western tip of Pine Lake, 25 trees were cut down in 2004. These trees served as a windbreak from the prevailing western winds for thousands of the other park trees for approximately a hundred years. Though it's denied by the chairwoman of nap that the windbreak trees were destroyed so that native's could be planted in their place - natives *were* planted in their place. In a very short time the native's all died and the windbreak trees are gone forever. The nap chairwoman claims all those 25 trees were hazardous and taking them down had nothing to do with wanting an unshaded space for planting native's. However it challenges plausibility that on a narrow hillside not more than about 100 feet wide that every single one of those 25 trees were in a hazardous condition. They were not judged all hazardous in 2003 when the Hort Science Arborists' examined and graded every tree in the park. It's been my experience that misleading responses from nap is not an unusual occurrence.

  I've been walking in Stern Grove/Pine Lake park since 1970 when I got my first dog. So I can vouch for the fact that more trees have fallen onto public paths since the taking down of the windbreak trees than had happened in the past 42 years. In fact a death by falling tree limb did occur in 2008. Whether or not the removal of those trees played a part in that tragedy can't be known for certain. However it is certain that park visitor's life and limb have been more at risk since the irresponsible destruction of all those windbreak trees.

  Lopping off branches in Glen Park and using toxic herbicides have been carried out illegally by nap during this critical nesting season. [Zeiger-1-02]

Response WS-1

These comments relate to potential wind impacts in several Natural Areas caused by the proposed tree removals, or, in the case of Pine Lake, previous tree removals, as well as potential safety impacts from falling trees or tree limbs.

It is correct that 82% of the trees within the MA-1c area would be removed. These trees would be removed from the center of MA-1c. As stated on Draft EIR p. 248, prevailing winds at Mount Davidson are from the west and southwest, so removing edge trees on the west side of the park could increase the rate of windthrow within the stand; however, no trees are proposed to be removed in these areas, minimizing or avoiding windthrow impacts in those locations. Similarly, SNRAMP Appendix F, p. F-11, states that:

> "removal of edge trees on the northwest side of the park (MA-1c and MA-2c) could increase the rate of windthrow within the stand. Substantial tree removal in these areas should not occur. A significant number of mature trees should remain at the park edge to minimize the effects of wind on this stand. Small tree thinning is acceptable in the buffer area."

SNRAMP Appendix F, p. F-11, goes on to state that "Tree removals in the MA-1 and MA-2 stands will not create windthrow hazards to residential areas because of their location within the stand and/or their location away from any homes."

Ground-level wind hazards also would not increase along the trails of Mount Davidson because mostly small- and medium-sized trees would be selectively removed or thinned out rather than clear-cut. Further, as stated on Draft EIR p. 92, trees would be removed limb-by-limb, rather than by felling whole trees (unless tree removal presents a safety concern which would require felling of the tree). Some trees within the restoration zones would remain, as would most of the trees on the wind-hardened forest edges. Therefore, tree removal would not substantially decrease the density of the urban forest overall, expose people on the trails to excess wind, or result in high wind speeds.

Draft EIR p. 248 concludes that at Mount Davidson, some windthrow is likely to occur naturally within the stand and its edges, but removing trees from Mount Davidson is not expected to substantially alter the windthrow rates because tree removal would be conducted in accordance with Appendix F of the SNRAMP, which recommends that removal of edge trees in these areas are limited. Further, the removal of dead or aging trees would reduce the potential for windthrow hazards. Therefore, wind levels at Mount Davidson resulting from the programmatic projects would not substantially increase ground-level hazards or alter the windthrow rates. Thus, wind impacts of the programmatic projects at Mount Davidson would be less than significant.

In terms of the previous tree removal activities at Pine Lake, they are not within the scope of this project and, therefore, are not addressed in this EIR. However, in terms of the general concept of replacing nonnative trees with native species in order to increase biodiversity, refer to

Response PD-11, RTC p. 4-159. Further, as indicated by Table 5 of the Draft EIR, no trees would be removed at Pine Lake.

Impacts related to public safety associated with windthrow effects (e.g., falling trees) are discussed in Impact HZ-1 on Draft EIR p. 389. As discussed in Draft EIR Section V.E, Wind and Shadow, tree removal would not substantially change wind patterns; therefore, windthrow hazards would not cause a significant risk to humans and nearby residents. In general, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Removing these trees would likely benefit public safety because damaged and dying trees may be at greater risk of falling and injuring visitors or residents. Alterations in wind patterns and impacts of ground-level wind hazards on pedestrians are analyzed in Section V.E. Also, Draft EIR p. 389 concludes that tree removal under the programmatic projects would result in less-than-significant windthrow effects on public safety.

Comment WS-2	**Disagree that all tree removal will have less than significant effects on wind**

The response to Comment WS-2 addresses all or part of the following individual comments:

Borden-1-06 Thomas-1-04

- I question the EIR's statement the impact of tree cutting on wind will be less than significant for all project alternatives. It will come down to which specific trees Natural Areas decides to cut. [Borden-1-06]
- Wind tunnels would be created by tree removal and pleasant micro-climates would be altered. [Thomas-1-04]

Response WS-2

These comments question the determinations in the Draft EIR concerning wind impacts from tree removal, both as a result of the proposed project and associated with the project alternatives, but provide no evidence or analysis supporting a different conclusion or concerns regarding a specific Natural Area.

The Draft EIR assessed the wind impacts of tree removal based on the specific tree removal details included in Draft EIR Chapter III, Project Description, and the Natural Areas maps in Draft EIR Appendix B, which identify the specific management areas proposed for tree removal. Draft EIR Section V.E, Wind and Shadow, pp. 242 to 251, provides analysis that supports the conclusion that the proposed project would not result in significant wind impacts. This determination is based on several factors discussed in the Draft EIR, including (1) trees would be removed gradually over a 20-year period; (2) most trees would be removed from interior areas of forest stands and not from the wind hardened forest edges; and (3) the majority of trees would be retained. In addition, the potential wind effects associated with each of the project alternatives are evaluated in Chapter VII, Alternatives (p. 469 – No Project Alternative, p. 484 – Maximum Restoration Alternative, p. 497 –

Maximum Recreation Alternative, and pp. 514 to 515 – Maintenance Alternative). As with the proposed project, all wind-related impacts associated with the alternatives would be less than significant.

4.D.9 Recreation [RE]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.F, Recreation.

Comment RE-1	**Actual number of dog play areas is 29, not 19, and total acreage of DPAs is 120 acres, including DPAs outside of the Natural Areas**

The response to Comment RE-1 addresses all or part of the following individual comments:

DogPACSF-1-08	SFDOG-1-02	SFDOG-2-09
Bartolotta-1-08	Brown-1-05	PH-Stephens-02

- The number of DPAs in city parks listed in the NAP EIR is wrong. Page 155 says there are 19 DPAs, when the actual number is 29. To get such a basic fact wrong is shocking and calls into question other information about dogs, such as their alleged "impacts' on plants and wildlife. [DogPACSF-1-08] [SFDOG-2-09] [Bartolotta-1-08] [Brown-1-05]
- The EIR incorrectly states the number and total acreage of off-leash Dog Play Areas (or DPAs). There are actually 29, which cover about 120 acres total. [SFDOG-1-02]
- The EIR incorrectly states the number and total acreage of all placed dog play areas, or DPAs. There are actually 29, which cover about 120 acres total, but 80 percent of that total is located either within or adjacent to a natural area and is therefore at risk of future closure if NAP claims impacts from the dogs. [PH-Stephens-02]

Response RE-1

These comments indicate that there are actually 29 DPAs in the city as compared to what is provided in the Draft EIR (19) and that there are a total of 120 existing acres of DPAs, which includes DPAs outside of the Natural Areas.

Based on SFRPD data, there are over 30 existing designated off-leash City DPAs in San Francisco totaling over 120 acres. The text on Draft EIR p. 155 (line 29) has been changed, as follows:

> The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off-leash in ~~19~~ over 30 existing designated ~~areas~~ DPAs totaling over 120 acres in San Francisco, seven of which are located in the Natural Areas.

Similarly, the text on Draft EIR p. 254 (first paragraph) has been changed, as follows:

> There are ~~19~~ over 30 existing designated DPAs totaling over 120 acres that support off-leash dog use within San Francisco, seven of which are located in the Natural Areas. They are Bernal Hill, Buena Vista Park, Corona Heights, Golden Gate Park Oak Woodlands, Lake Merced, McLaren Park, and Pine Lake.

As previously mentioned, and affirmed by the above text change, there are over 30 existing designated DPAs totaling over 120 acres that support off-leash dog use within San Francisco, seven of which are located in the Natural Areas. In addition, DPAs exist on other publicly accessible locations throughout San Francisco, such as at the GGNRA, Rincon Hill, Heron's Head, and Mission Bay. As shown in Draft EIR Table 5 on Draft EIR, Summary of Natural Areas Management Plan, p. 114, a total of 19.3 acres of DPAs would be reduced in size or closed to off-leash dog use within three Natural Areas (one would be closed and two would be reduced in size), resulting in 75.9 acres (or 80 percent) of off-leash DPAs within the Natural Areas that would remain open. Additionally, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland, and additional acreage is available at other parks throughout the city, all of which can be used by dogs that are on leash. Refer also to Response RE-13, RTC p. 4-347, for a more detailed discussion of the closure of one DPA and the reduction in size of two DPAs, as well as the amount of on-leash and off-leash areas that are available throughout the City.

Comment RE-2 Characterization of dog play area moratorium

The response to Comment RE-2 addresses all or part of the following individual comments:

DogPACSF-1-09 SFDOG-2-10 Bartolotta-1-09
Brown-1-06

- The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct the citywide survey. While the survey was being conducted, the DAC was told, there would be a hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." This hold was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. [DogPACSF-1-09] [Brown-1-06]

- The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a

systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct a citywide survey. While the survey was being conducted, the DAC was told, there would be a temporary hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." The Commission was only called upon to agree to sunset the DAC. The hold on new DACs was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. [SFDOG-2-10]

- The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct the citywide survey. While the survey was being conducted, the DAC was told, there would be a hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." This hold was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones because of a temporary halt on new designations is absurd. Any analysis of alternatives that does not include this possible mitigation is incorrect and inadequate. [Bartolotta-1-09]

Response RE-2

These comments express the opinion that the Draft EIR incorrectly describes the SFRPD's moratorium on creating new DPAs.

As further discussed in Response G-23, RTC p. 4-93, the Draft EIR conservatively characterized the direction from the Recreation & Park Commission concerning establishment of new DPAs as a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas. This direction was presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee;

addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas.

The EIR concludes that the proposed closure and reduction of DPAs would not result in significant impacts to recreational resources (Impact RE-1 and Impact RE-4). However, when combined with impacts resulting from the GGNRA Dog Management Plan, the Draft EIR conservatively determines that the cumulative impact of these two projects could accelerate the physical deterioration of the remaining DPAs and the Natural Areas in general (Impact RE-7 on Draft EIR pp. 261 to 262), resulting in a significant and unavoidable impact. To clarify and expand upon the analysis provided in the Draft EIR, the cumulative impact analysis provided in Impact RE-7 on Draft EIR pp. 261 and 262 has been changed as follows:

> **Impact RE-7: The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to recreation. (Significant and Unavoidable)**
>
> The geographic scope of this analysis includes San Francisco and Pacifica. Cumulative projects that would have an impact on recreation resources include those that reduce the overall recreation experience provided by the Natural Areas. This includes projects that may result in a significant increase in the regional population resulting in overcrowding of the Natural Area, a decrease in currently available recreation opportunities, consequently putting increased pressure that is unable to be absorbed by other Natural Areas, or a physical or visual change in the landscape that adversely impacts the appeal of a Natural Area.
>
> Implementation of the proposed GGNRA Dog Management Plan ~~may~~ would further restrict dog access and off-leash areas within GGNRA land holdings, including Fort Funston (near Lake Merced), Fort Mason, Crissy Field, Fort Point National Historic Site, Baker Beach, Lands End, Fort Miley, Sutro Heights Park (near Balboa), Ocean Beach (the north end near Balboa), Milagra Ridge (near Sharp Park), Mori Point (near Sharp Park), and Sweeney Ridge (near Sharp Park). At both Fort Funston and Milagra Ridge, as part of the GGNRA General Management Plan, recreational activities would be provided in a more natural setting to protect natural ecosystems and sensitive habitats.

The GGNRA Dog Management Plan[81] designates specific areas where dogs would be required to stay on leash, where dogs may be allowed off-leash, but only when under immediate voice and sight control, and where dog walking would be prohibited. In San Francisco, off-leash dog walking would be permitted in six areas: Fort Mason; Crissy Field (two areas); Ocean Beach; and Fort Funston (two areas).

The most popular locations for GGNRA dog use is Crissy Field and Fort Funston. At Fort Funston, of the total of 180 acres (excluding the 10-acre Bank Swallow Protection Area), approximately 95 acres are steep cliffs or dense vegetation and are not accessible for any use. Of the remaining 85 acres, 35 acres (or 41 percent) would be available for off-leash dog use. At Crissy Field, 30 percent of the airfield and 40 percent of the beach front mileage would be available for off-leash dog use. Overall, of the 8.7 miles of beaches within GGNRA jurisdiction, about 2.3 miles (over 26 percent) would be available for off-leash dog use. In addition, much of the remaining GGNRA lands would be open to dogs on-leash.

To collect current and detailed information regarding visitor use of the park by dog owners, NPS conducted a survey in 2012 to measure customer satisfaction related to dog walking at the GGNRA sites and to determine where visitors would go if they were not satisfied. This survey, the *GGNRA Dog Walking Satisfaction Visitor Study*, evaluated the perception of and satisfaction with the current on and off-leash GGNRA dog walking policies by both dog walkers and non-dog walkers, and the potential for redistribution of use based on the proposed access changes. Of the approximately 7,000 individuals contacted, 897 responded to the survey. Respondents included 662 dog walkers, 20 commercial dog walkers, and 212 individuals who do not walk dogs at the park. These same respondents were then asked where they would go (either inside or outside GGNRA) as an alternative site for dog walking. The five most popular alternative sites indicated in the survey for off-leash dog walking included Pine Lake/Stern Grove, Golden Gate Park (all areas), McLaren Park, Ocean Beach, and Alta Plaza.

~~In addition, t~~The SNRAMP proposes to close the Lake Merced DPA and reduce the size of the DPAs at Bernal Hill and McLaren Park. Of the DPAs impacted by the SNRAMP, only McLaren Park was identified by the GGNRA visitor study survey as a potential alternative off-leash dog-walking site. On-leash dog use would still be allowed at these and all other Natural Areas (except at Lake Merced). Nonetheless, ~~T~~the combined reductions in off-leash areas proposed by the GGNRA and the SFRPD could result in an increase in dog use at the remaining Natural Areas, including McLaren Park, which would be reduced by 8.3 acres, with 53.4 acres remaining.

[81] The GGNRA Draft Dog Management Plan/Supplemental Environmental Impact Statement (SEIS), which contained six alternatives, was released in September 2013. Subsequently, in February 2016, the Proposed Rule for Dog Management in the GGNRA was released for a 60-day comment period. On February 24, 2016, the Proposed Rule for Dog Management in the GGNRA opened for a 60-day public comment period on www.regulations.gov (RIN 1024-AE16). The comment period was later extended to 90 days and ended on May 25, 2016. All substantive comments on both the SEIS and Proposed Rule will be documented and responded to by NPS in a Final Environmental Impact Statement FEIS. These comments, along with relevant data, expert opinions, and other facts accumulated during the SEIS and Proposed Rule stages, will be evaluated by NPS to determine whether the proposed solution will help accomplish the goals and solve the problems identified in the SEIS before moving forward with a Final Environmental Impact Statement, Record of Decision, and Final Rule. While no specific alternative has been selected, it is reasonable to assume that the reduction in off-leash dog play areas would occur as a result of implementation of one of the Plan's alternatives.

Consistent with the conclusion of the cumulative analysis contained in the GGNRA Supplemental Environmental Impact Statement,[82] it is speculative to precisely identify the magnitude or location of redistribution of dog walkers related to the implementation of the SNRAMP in combination with the GGNRA Dog Management Plan. Numerous factors are difficult to predict, including human behavior, level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances.

While both the SNRAMP and GGNRA propose the reduction of off-leash DPAs, new or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts, although none are proposed or envisioned in the Natural Areas. However, for the purposes of this EIR, it is assumed that no new DPAs are reasonably foreseeable to provide a worst-case analysis. It is further assumed that ~~A~~an increase in dog use at the Natural Areas could accelerate the physical deterioration of those DPAs and the Natural Areas in general, and~~. Given the speculative nature of the increased level of use that could result from these proposals,~~ the impacts to recreation are conservatively determined to be significant from the combined cumulative projects. The contribution of the SNRAMP project to this potentially significant impact would be cumulatively considerable, specifically as a result of the closure of the Lake Merced DPA.

DPAs within the Natural Areas would continue to be evaluated in accordance with the SFRPD's Dog Policy~~,~~; and the SFRPD would monitor DPAs for their effects on the Natural Areas and develop solutions to any identified issues. ~~These established procedures are considered adequate, and further monitoring procedures would not be expected to reduce the impact.~~ The potentially significant impact to recreational resources as a result of increased use resulting from cumulative actions could be mitigated by adding a new DPA at a nearby Natural Area or other nearby property. However, as discussed above, adding a new DPA may not mitigate impacts from reducing or closing DPAs because it is speculative to precisely predict the magnitude or location of redistribution of dog walkers related to the implementation of the SNRAMP in combination with the GGNRA Dog Management Plan. Numerous factors are difficult to predict, including human behavior, level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances. Therefore, no feasible mitigation exists that would reduce this impact. ~~as discussed in this document, there is a current moratorium[83] on new DPAs, and the mitigation, therefore, would not be feasible.~~ As a result, this impact would be ***significant and unavoidable***.

Refer to Response RE-3, RTC p. 4-319, for a discussion of the status of the environmental review process for the GGNRA's Dog Management Plan.

[82] National Park Service, Golden Gate National Recreation Area California, Draft Dog Management Plan/Supplemental Environmental Impact Statement, Fall 2013 (page 354).

[83] There ~~is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

Comment RE-3	**Use GGNRA estimate of closing 90% of off-leash lands for cumulative analysis**

The response to Comment RE-3 addresses all or part of the following individual comments:

CFDG-1-06	DogPACSF-1-01	DogPACSF-1-07
SFDOG-2-08	Bartolotta-1-07	Brown-1-04
Emanuel-1-03	Emanuel-2-03	Pittin-1-03
Vitulano-1-02		

- This EIR acknowledges that there is likely to be a significant and unavoidable impact of DPA closures when combined with closures of off-leash area in the GGNRA. However, the EIR says the nature of the GGNRA closures is "speculative" and therefore it doesn't try to analyze the level of the combined impacts. However, we know that the GGNRA proposed to cut a substantive amount of its off-leash space, and this EIR should analyze the impact of that level of closure when combined with the NAP closures of 15% and 80%. [CFDG-1-06]

- If the GGNRA Master and Dog Management Plans are implemented, the overflow for resident and dog recreation will overcrowd our city parks. To date, the GGNRA has not provided the city with any analysis or metrics of the effects of their plans on city assets.

  This must be accounted for BEFORE ANY sweeping adjustment to city parks is considered.

  I know of no known science that shows any ill effects of dogs on open spaces. Humans are the most widely perpetrators of environmental destruction, not dogs. [DogPACSF-1-01]

- The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures can and should be analyzed. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. The busiest weekend days normally find about 60 dogs at the Pine Lake DPA at any one time. Weekday mornings normally have far fewer, closer to 20. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday and more than 3 times the maximum numbers of dogs seen on weekends. This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The analysis presented in the EIR, which does not contain this, is inadequate. [DogPACSF-1-07] [Brown-1-04]

- However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures (especially the possible closure of 80% of DPAs)

can and should be analyzed in the NAP EIR. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday (normally about 20 dogs at one time) and more than 3 times the maximum numbers of dogs seen on busy weekends (about 60 dogs at a time). This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The effects of Tsunami Friday were mentioned in an article in the March 2011 issue of the *West Portal Monthly*. The analysis presented in the EIR, which does not contain this, is inadequate. [SFDOG-2-08]

- The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures (especially the possible closure of 80% of DPAs) can and should be analyzed. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. The busiest weekend days normally find about 60 dogs at the Pine Lake DPA at any one time. Weekday mornings normally have far fewer, closer to 20. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday and more than 3 times the maximum numbers of dogs seen on weekends. This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The analysis presented in the EIR, which does not contain this, is inadequate. [Bartolotta-1-07]
- The SFNAP EIR does not adequately consider or measure the impacts the GGNRA's Dog Management Plan will have on San Francisco city parks. [Emanuel-1-03] [Emanuel-2-03]
- The NAP EIR does not recognize the other needs and uses for San Francisco open space, and does not reflect the pressures which are created also by possible changes in the GGNRA, our other recreational space. We cannot dedicate our recreational and open spaces primarily to creating a plant museum from an arbitrary "pre-European" era when all was "natural" and "native". [Pittin-1-03]
- The Dog Play Areas (DPA) are important for adults and children, and this impact comes as the GGNRA is also proposing radical cuts to dog recreation space. The cumulative impacts to recreation from these plans are unacceptable. [Vitulano-1-02]

Response RE-3

These comments relate to the impacts that would occur with implementation of the SNRAMP combined with the GGNRA Dog Management Plan; one commenter requests a quantitative analysis of these impacts.

The SNRAMP Draft EIR provides a qualitative analysis of the cumulative effects of the SNRAMP and the GGNRA Dog Management Plan and acknowledges that both the SNRAMP and the GGNRA Dog Management Plan would result in reductions in the available off-leash areas within properties under their respective jurisdictions, which could result in an increase in dog use at the remaining Natural Areas. It also states that because it would be speculative to project the increased level of use at other DPAs that could result from implementation of these proposals, the Draft EIR conservatively identifies the cumulative impact as significant and unavoidable.

This analysis satisfies the CEQA requirements to disclose potentially significant cumulative impacts. As provided by CEQA Guidelines Section 15130(b), "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." The NPS's 2011 Dog Management Plan/Environmental Impact Statement, which was considered in the SNRAMP Draft EIR, presented six alternatives at 22 sites for the management of dog walking activities at GGNRA lands. Because of the diversity of resources and the variety of use patterns across these park sites, a site-specific approach to analyzing the alternatives was adopted, resulting in a preferred alternative for each site. Given the substance of many of the comments received on the 2011 Draft Dog Management Plan/Environmental Impact Statement, availability of additional data and studies, and potential changes to the alternatives and impacts analysis resulting from that information, a Supplemental EIS (SEIS) was developed for the draft Dog Management Plan, with the comment period for the SEIS closing on January 11, 2014. On February 24, 2016, the Proposed Rule for Dog Management in the GGNRA opened for a 60-day public comment period on www.regulations.gov (RIN 1024-AE16). The comment period was later extended to 90 days and ended on May 25, 2016. All substantive comments on both the SEIS and Proposed Rule will be documented and responded by NPS to in a Final Environmental Impact Statement FEIS. These comments along with relevant data, expert opinions, and other facts accumulated during the SEIS and Proposed Rule stages will be evaluated to determine whether the proposed solution will help accomplish the goals and solve the problems identified in the SEIS before moving forward with a Final Environmental Impact Statement, Record of Decision, and Final Rule.

The key changes between the 2011 EIS, considered in the SNRAMP Draft EIR, and the 2013 SEIS, considered as part of the SNRAMP Responses to Comments, include the addition of new data; consideration of additional research; changes to the impact analysis (including additional analysis of potential redistributive effects of opening/closing areas to dog walking); changes to the compliance-based management strategy by including natural and cultural resource monitoring and removing

automatic triggers and restrictions (now the monitoring-based management strategy); evaluation of fencing as a future management option to manage dog walking impacts; changes to dog walking access at some sites in the preferred alternative; and site-specific alternatives and analysis for Rancho Corral de Tierra in San Mateo County. The alternatives evaluated in the SEIS include (1) no action (Alternative A); (2) NPS leash regulation (Alternative B); (3) emphasis on multiple use balanced by county (Alternative C); (4) most protective of resources and visitor safety (Alternative D); (5) most dog walking access and most management intensive (Alternative E); and (6) mix of alternatives based on public comment (Alternative F, the preferred alternative).

While the Proposed Rule is assumed as part of the cumulative projects for this project, it does not result in a different conclusion regarding the significant and unavoidable cumulative recreation impacts identified in Impact RE-7. Response RE-2, RTC p. 4-313, further clarifies and expands upon the recreational cumulative impact analysis provided in Impact RE-7.

Refer to Response TR–2, RTC p. 4-280, for a discussion of visitor use data at Lake Merced, where there is limited use. However, with respect to the Natural Areas included in the SNRAMP, the SFRPD also collected data for Bernal Heights, McLaren Park, Buena Vista, Corona Heights, and Pine Lake, as provided in a new Appendix K of the EIR. Excluding Lake Merced, which only had a maximum of one dog and one owner over three visits, the total recorded use by dogs and owners at Bernal Heights and McLaren Park was 39 (30 dogs and 9 owners) and 26 (19 dogs and 7 owners), respectively. The estimated hourly use for Bernal Heights was 60 dogs and 18 owners and for McLaren Park, it was 25 dogs and 9 owners. The DPA counts for Bernal Heights and McLaren Park were taken in 2009, while the DPA counts for Lake Merced were taken in 2011.

Comment RE-4 Address increase in passive recreation for cumulative analysis

The response to Comment RE-4 addresses all or part of the following individual comment:

Holzman-1-06

- The potential cumulative impacts discussed re: Impact RE-7: does not address the potential for an increase in passive recreation; i.e., the ability of citizens to appreciate the natural landscape and wildlife that would improve with the plan, or the lessening of dog-people/ children conflicts in areas where dogs off leash would be curtailed. I would suggest the overall recreation opportunities when passive recreation is included would be increased if the plan was implemented. [Holzman-1-06]

Response RE-4

This comment states that the SNRAMP will increase passive recreation.

Impact RE-7, on Draft EIR p. 262, addresses the cumulative impact associated with passive recreational uses; Impact RE-7 was further clarified and expanded in Response RE-2, RTC p. 4-313. This impact states that new developments could bring additional recreation users to the Natural

Areas, which could increase the use of those natural areas, resulting in some crowding, degrading the overall passive recreation experience over time. In terms of the cumulative impact analysis related to passive recreational uses, Draft EIR p. 263 concludes that the cumulative impact on recreational resources (and specifically passive recreational uses, to which this commenter refers) would be beneficial and less than significant. The commenter also confirms the Draft EIR conclusions, suggesting that the SNRAMP would beneficially increase passive recreational opportunities.

As stated on Draft EIR p. 263, in addition to proposed improvements and regular maintenance, as a part of the SFRPD Trails Program, trails would be improved with SFRPD- and/or grant-funded capital projects. Trail improvement in areas surrounding the 32 Natural Areas would dissipate recreation users throughout the trail system and would enhance the experience of passive recreation users overall, resulting in a beneficial and ***less-than-significant*** cumulative impact on recreational facilities.

Comment RE-5	**Consider adding holes to the Sharp Park Golf Course east of Highway 1**

The response to Comment RE-5 addresses all or part of the following individual comment:

PH-Antonini-07

- And also I did not see an alternative that utilized some of the space to the east of Highway 1, which now has four holes – I believe it's either three or four – and I always thought when I was golfing there that that would be a great place to put a couple of extra holes. [PH-Antonini-07]

Response RE-5

This comment states that an alternative was not evaluated that includes the use of the land east of Highway 1 for additional golf holes.

As discussed in Response RE-6, RTC p. 4-322, Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, identifies two options for restoring the playability of the Sharp Park Golf Course. As identified in that mitigation measure, on Draft EIR p. 261, Option 2 would provide a new hole to the east of Highway 1, increasing the number of holes to the east of the highway from four to five.

Comment RE-6	**Replace the removed hole at the Sharp Park Golf Course to maintain 18 holes**

The response to Comment RE-6 addresses all or part of the following individual comment:

PH-Antonini-06

- I did not see – and maybe staff can answer this question, Jessica Range in particular – uhm, I didn't see – there's talk about removing one of the holes of Sharp Park, and is there a

replacement? I did not see that in the EIR. Maybe it's in there and I didn't read carefully enough, because a 17-hole golf course doesn't work real good for me. [PH-Antonini-06]

Response RE-6

This comment questions whether one hole would be removed and also replaced.

The purpose of Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, is to restore the playability of the Sharp Park Golf Course as an 18-hole course. As discussed in Mitigation Measure M-RE-6, and also described in Response PD-13, RTC p. 4-175, two options for replacement of Hole 12 are contemplated: Option 1 would replace the hole on the west side of Highway 1 and Option 2 would replace the hole on the east side of the highway.

Comment RE-7	**If Bernal Hill and McLaren Park are closed, remaining dog play area land would be less suitable**

The response to Comment RE-7 addresses all or part of the following individual comments:

DogPACSF-1-11 SFDOG-2-12 Bartolotta-1-10
Brown-1-08

- The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the 15% closures will not cause a significant number of people to drive to other parks to walk their dogs. People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs. Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. This must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate. [DogPACSF-1-11] [Bartolotta-1-10] [Brown-1-08]
- The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the proposed immediate closures in those parks (13% at McLaren, 29% at Bernal Hill) will not cause a significant number of people to drive to other parks to walk their dogs. People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs. Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. Topography must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate. [SFDOG-2-12]

Response RE-7

These comments express the opinion that the Draft EIR did not consider the steepness of the topography that would remain within the McLaren Park and Bernal Hill DPAs, rendering some of the remaining area inaccessible for dog walking. These comments also generally question whether reducing the DPAs at McLaren Park and Bernal Hill would cause people to drive to other parks, which is also addressed in Response TR-1, RTC p. 4-279.

The proposed project would not close the DPAs at either McLaren Park or Bernal Hill. Rather, 8.3 acres of the 61.7-acre DPA at McLaren Park and 6 acres of the 21-acre DPA at Bernal Hill would be converted to on-leash use. The portion of the Bernal Hill DPA proposed for conversion to on-leash use contains sensitive MA-1 habitat areas located on very steep slopes, some of which are inaccessible due to their steepness (refer to Recommended Management Action BH-3a on Draft EIR p. 118, which states that off-leash activities would be limited to the relatively flat areas of Bernal Hill to avoid impacts to sensitive plant species). The remaining 15 acres of off-leash DPA at Bernal Hill is less steep than the area proposed to be converted to on-leash use. Therefore, the areas that are less steep are being retained as off-leash areas. The 8.3-acre portion of the McLaren Park DPA to be converted to on-leash use includes Gray Fox Creek, a sensitive natural community (as indicated in Recommended Management Action MP-9a on Draft EIR p. 139). The slopes in the remaining 53.4 acres of off-leash DPA in McLaren Park are characterized as gentle to moderate with ample areas available for off-leash recreation. As discussed on Draft EIR p. 258, the DPA reductions would not be substantial enough to result in the physical deterioration or accelerated deterioration of recreational facilities because the DPA at Lake Merced is not heavily used and the Bernal Hill and McLaren Park DPA reductions represent a small portion of otherwise large DPAs. Also, in Draft EIR Chapter VII, Alternatives, pp. 470, 498, and 515, the impacts associated with maintaining the off-leash DPAs are discussed as part of the No Project, Maintenance, and Maximum Recreation Alternatives analyses.

Refer also to Response TR-1, RTC p. 4-279, for a discussion of impacts related to the potential for people to drive to other DPAs if the DPAs at Lake Merced, McLaren Park, and Bernal Hill were closed or reduced in size.

Comment RE-8 Impacts resulting from restrictions on recreational access

The response to Comment RE-8 addresses all or part of the following individual comments:

DogPACSF-1-19	SFDOG-2-20	SFFA-3-18
Brown-1-16	Jake-1-08	

- The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land

controlled by the NAP. A majority of land under NAP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative. [DogPACSF-1-19]

- The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area is designated as MA-1 and MA-2, with resulting significant restrictions on access to the entire park by everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider the impact of this large-scale denial of access on recreation and people (not just those with dogs) having to drive to another park to play catch with their kids when analyzing the Project Alternative and other alternatives. [SFDOG-2-20]
- A majority of land under NAP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative. [Brown-1-16]
- Where NARMP controls the entire park, the NARMP EIR does not adequately consider impacts on the specifics of recreation and land use. No other recreational use is possible in those parks. In an additional 10 parks, NARMP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NARMP. A majority of land under NARMP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NARMP EIR must consider this large-scale denial of access when analyzing the Project Alternative. [Jake-1-08]

Response RE-8

A majority of these comments contend that with respect to DPAs "a majority of land under NAP control citywide (57%) will have significant restrictions to access by all people." Other commenters

request that the EIR consider an alternative that results in fewer restrictions to public access in the Natural Areas.

The designation of areas as Management Areas 1 and 2 (MA-1 and MA-2) does not remove recreational access, although in some areas it may restrict access of off-leash dog use and in other areas, some trails may be closed (though general access throughout the Natural Areas would continue). Approximately 25 percent of the existing trails would be closed or relocated (54,000 linear feet would be closed as compared to 217,000 linear feet of existing or created trails). The trails that would be closed include social trails that are considered redundant and unsafe and trails that could otherwise protect sensitive species or habitat or prevent soil erosion, while also providing maintenance, trail contouring, improved access, and better signage. In most parks, there are areas for informal picnicking, relaxing, or nature discovery, whether on grass, in open areas, or on benches, depending on the activity. As described on Draft EIR p. 257, an improved trail system in Natural Areas could result in an increase in visitor use by making them more accessible to more types of users. Therefore, the proposed project would not result in large-scale restrictions on recreational access. A designated and improved trail system would likely reduce user conflicts because renovated trails would provide more space on trails and greater opportunities for passing areas. The impacts to recreation use and amenities associated with the No Project and Maximum Restoration Alternatives are discussed on Draft EIR pp. 469 and 484. The commenter provides no additional information to support the conclusion that impacts to recreation under the proposed project or these alternatives would result in significant impacts.

As further articulated in Response RE-1, RTC p. 4-311, there are ample off-leash DPAs and on-leash dog use areas that would continue to be available in San Francisco. Further, as also reflected in Response RE-1, RTC p. 4-311, approximately 870 acres (including Lake Merced) is available for on-leash dog use, unless other noted; these parks will not be subject to significant access restrictions or a large-scale denial of access.

The goals of the SNRAMP, as articulated on SNRAMP p. 2-2, are to provide opportunities for passive recreational uses compatible with conservation and restoration goals and to improve and develop a recreational trail system that provides the greatest amount of accessibility while still protecting natural resources. The project does not create new Natural Areas within the existing Natural Areas, but would increase the acreage devoted to maintaining and enhancing native and sensitive habitats (approximately 19.3 acres).

Because the commenters mention the large-scale denial of access when analyzing the "Project Alternative," it is assumed that the comment relates to the recreational impacts of the alternatives. The significance of recreation impacts for each of the alternatives is presented on Draft EIR pp. 477 to 527. A summary of the significance conclusions is provided on Draft EIR p. 525. This summary concludes that the proposed project and the Maximum Restoration alternatives would result in the same recreation impacts (potentially significant, but mitigable), whereas the No Project and the

Maximum Recreation alternatives would result in lesser recreation impacts (less than significant, with no mitigation required).

Comment RE-9	**Impacts on recreation from planting threatened and endangered species**

The response to Comment RE-9 addresses all or part of the following individual comments:

DogPACSF-1-18
SFFA-3-19
Buckley-1-04
Ghosh-1-05
Nelson-1-03
PH-Bowman-02
GGHNA-1-04
Bartolotta-1-17
Dougherty-1-03
Jake-1-07
Pruitt-1-02
SFDOG-2-18
Brown-1-15
Form Letter-1-04
Moyer-1-04
Yip-1-04

- The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people and dogs. The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species. There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives. [DogPACSF-1-18] [Brown-1-15]

- The analysis does not adequately address impacts from introducing sensitive species into natural areas.

  The NAP Management Plan calls for the re-introduction of sensitive species at Grandview and other parks. Because of their special status (threatened or endangered), these species, once planted, automatically trigger additional protections and restrictions, especially in access. The NAP EIR does not address the impacts on recreation of planting sensitive species in natural areas. It also does not address impacts on neighboring properties if sensitive species are planted. This is especially concerning in the parks in our neighborhood, where the natural areas control the entire park and where sensitive species could be planted immediately adjacent to a homeowner's property. What will be the impact on these park neighbors if invasives from their backyards ''threaten" the sensitive species? Will they be held liable in any way because of damage to the sensitive species? Will they be forced to cut down invasive plants on their own property? These impacts should be considered in the EIR. [GGHNA-1-04]

- The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout

its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people (and dogs). The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species. There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks to give people a sense of what San Francisco's historical habitat was like. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives. [SFDOG-2-18]

- In the SNRAMP, NAP expresses its intent to plant threatened or endangered species throughout the natural areas, including many places where they are not currently found. The mere presence of these species triggers a number of additional protections and access restrictions required by the federal Endangered Species Act and similar state and local laws The intentional planting of legally protected species where they are not currently found makes restrictions on recreational access (indeed all access} a *fait accompli*. Once the plant is in the ground or the animal is known to exist, it MUST be protected and recreational access MUST be restricted.

  We have two specific examples of the consequences of reintroducing endangered species to our parks. In the case of Sharp Park, two endangered species of animal are known to exist. To our knowledge, these animals were not reintroduced by humans. The DEIR proposes to reconfigure the golf course to accommodate those legally protected species. The scale of that project is described in detail by the DEIR. We can't imagine how much this project will cost to implement. However, despite the scale of this monumental effort, San Francisco is being sued by organizations which do not believe that the proposed accommodations are adequate and therefore violate the Endangered Species Act. These organizations demand that the golf course be closed entirely and that all recreational access be confined to "viewing zones" behind fences. Essentially, they want the entire 411acre park turned over to the two endangered species.

  The effort of the Natural Areas Program to reintroduce the endangered Mission Blue butterfly to Twin Peaks is a more clear-cut example of the potential for the implementation of SNRAMP to eliminate recreational use of San Francisco's parks, because the butterfly did not exist there prior to the efforts of the Natural Areas Program to reintroduce it. In other words, the reintroduction was a discretionary act. The Natural Areas Program is willfully subjecting Twin Peaks to the potential to be closed to the public. The federal recovery plan for the Mission Blue previews these restrictions:

  "Recreational impacts pose a substantial threat to mission blue butterfly habitat … One of the contributing factors to the apparent extirpation of this butterfly on Twin Peaks is heavy recreational use by off-trail hikers, and motor-bike activity all of which are prohibited."[1]

SNRAMP informs us that the Natural Areas Program intends to reintroduce the endangered Mission Blue butterfly in Mclaren Park and Bayview Hill. It is, however, silent about what recreational access restrictions may be required to support the population of a legally protected species.

In its section on Recreation (p. 252), the DEIR says that the Notice of Preparation Seeping process identified several concerns about recreation, including: "Effects of the introduction of endangered/threatened species on recreational opportunities, public access, and the administration of local public lands." Despite this acknowledgment, there is no discussion of impacts on recreation caused by intentional planting of sensitive species where they are not currently found.

The final EIR must acknowledge that the Natural Areas Program intends to reintroduce legally protected species of plants and animals to the Natural Areas. It must inform the public of what recreational access restrictions will be required to accommodate those species. When the loss of recreational access is anticipated, the final EIR must mitigate for those impacts by providing commensurate recreational opportunities in San Francisco.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Analyze the impacts on recreation and access resulting from the intentional planting or reintroduction of legally protected species of plants and animals in natural areas where they do not currently exist** [SFFA-3-19]

- The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people and dogs. The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species. There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks. Ecologists have noted that planting a few sensitive species does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives. [Bartolotta-1-17]
- The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered. [Buckley-1-04] [Form Letter-1-04] [Ghosh-1-05] [Yip-1-04]
- The NAP EIR fails to recognize the further restrictions on public access to areas planted with "native" and endangered species of plants. [Dougherty-1-03]

- The NARMP EIR does not adequately analyze the impacts on recreation of NARMP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. [Jake-1-07]
- 4) The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered. [Moyer-1-04]
- The NAP EIR fails to recognize the further restrictions on public access to areas planted with "native" and endangered species of plants. [Nelson-1-03]
- The SF Recreation and Parks Department should remove "Recreation" from it's title if this plan goes forward. If restricted plants are planted and their areas then closed off for recreation, it seems this would not be under the mission of a city recreation and parks department but under a natural preservation zone. Such an area would not make sense to put in a densely populated city environment. [Pruitt-1-02]
- In addition, introducing new or expanding endangered species habitats will permanently hijack our small but precious recreational areas.

  This plan doesn't take into consideration these future impacts on people or recreation. [PH-Bowman-02]

Response RE-9

These comments assert that the Draft EIR did not consider impacts on recreation (such as restrictions on access) as a result of planting sensitive plant species in locations where they do not currently exist.

While the proposed project would convert some areas of nonnative vegetation to native vegetation, some of which would be considered sensitive, it would do so in accordance with the SNRAMP's recreation goals, which include providing opportunities for passive recreation compatible with conservation and restoration goals, plus improving and developing a recreation trail system. The SNRAMP conservation and restoration goals focus on maintaining populations of special-status species; enhancing native plant and animal communities; enhancing local biodiversity, while also re-establishing native community diversity, structure, and ecosystem function where degraded; and decreasing the extent of invasive exotic species cover. The designation of portions of Natural Areas as MA-1 and MA-2 would not restrict recreational access; in fact, trails that currently allow recreational access and on-leash dog use throughout the Natural Areas, including MA-1 and MA-2 areas, and in all other areas, unless noted otherwise (such as within athletic fields and courts, children's play areas, and sensitive habitat areas), would continue to be provided. In order to have a significant impact on recreational resources, as stated on Draft EIR p. 255, the project would require a physical deterioration of facilities to be substantial or accelerated; the construction or expansion of recreation facilities that might have an adverse physical effect on the environment; or a physical

degradation of existing recreation resources. Given that none of this conditions would occur, as concluded on Draft EIR pp. 256 to 261,the restoration, enhancement, and introduction of sensitive plant species would not have a substantial adverse impact on recreational resources, Refer also to Response PD-11, RTC p. 4-159, for a discussion of the benefits of increasing biodiversity in the Natural Areas.

Refer to Response G-19, RTC p. 4-88, and Response PD-23, RTC p. 4-198, for a detailed discussion of on-leash and off-leash dog opportunities throughout the city; Response RE-1, RTC p. 4-311, and Response RE-13, RTC p. 4-347, for a discussion of the Draft EIR's conclusions regarding recreational impacts; Response G-25, RTC p. 4-106, for a discussion of the impacts of dogs on wildlife and sensitive habitats; and the following responses for a discussion of the no project, maintenance, and maximum restoration alternatives: Response AL-1, RTC p. 4-562; Response AL-2, RTC p. 4-563; Response AL-3, RTC p. 4-565; Response AL-4, RTC p. 4-566; Response AL-5, RTC p. 4-568; Response AL-7, RTC p. 4-572; Response AL-8, RTC p. 4-585; and Response AL-9, RTC p. 4-587.

Comment RE-10 Recreational analysis related to trails

The response to Comment RE-10 addresses all or part of the following individual comments:

SFFA-3-15	SFFA-3-16	SFFA-3-18
WTPCC-1-07	Bartolotta-1-18	Borden-1-03
Borden-1-05	Bowman-2-08	

- As acknowledged in the DEIR, a 2004 Recreation Assessment conducted for the Recreation and Park Department reported that the number one recreational facility need was more trails. Of the residents surveyed, 67% reported participating in walking or running, the highest percentage for any of the 26 activities listed in the Assessment. People want more trails, not less.

  According to RPD General Manager Phil Ginsburg, the majority of trails in San Francisco city parks are located in the natural areas controlled by NAP (private conversation, June 1, 2012; he said this when asked to explain why the "trail restoration" part of the 2008 Clean and Safe Neighborhood Parks Bond was restricted to trails in natural areas). Thus, the SNRAMP's proposed closure of 23% of the total length of trails in natural areas marks a significant decrease in the length of trails available to the public systemwide, not just in the natural areas. There is simply not enough trail mileage in non-NAP parks to adequately replace the mileage lost in the natural areas. Thus the trail closures will have a more significant negative impact on the majority of San Franciscans who want more trails on which to walk or run. This aspect of the trail closures was not mentioned in the DEIR.

  By closing off the areas currently accessed by the trails that will be closed, the SNRAMP will reduce the variety of experiences park users can have (fewer different areas to see). With less mileage available to walk, the closures will also discourage people from taking longer walks. Neither of these impacts was considered in the DEIR.

Many, if not most, of the trails scheduled for closure are "social trails," trails created by park users, not by park staff. There is usually a reason people create social trails; they prefer to take a more direct, faster, or more scenic path from Point A to Point B than the path RPD staff have told them they should take. Frequent visitors are the ones who create social trails by walking off an official trail time and time again. People new to a park will likely stay on official trails; they don't know where else to go. The closure of social trails will therefore have a greater impact on people who walk frequently in the parks, degrading their experience of the park by forcing them to walk in places they clearly would rather not.

When the University of California at Santa Cruz opened in the 1960s, administrators paved few paths between the colleges. They chose to wait to see what paths the students "naturally" created on their own to get from one place to another, and then paved the social trails that resulted. The social trails became the official trails. NAP has taken the opposite approach, deciding where people will be allowed to walk with little, if any, public input. And when the public has expressed a desire for something different than what NAP wants (by voting with their feet and creating a social trail), the response is to destroy the social trail. NAP is working at cross-purposes to the majority of San Franciscans who want more trails, and who try to show NAP where they want those trails to be when they create social trails.

Social trails also spring up when people want to enter or leave a park at a location where there is no "official" trail that will allow them do so. For example, over the years, people created a social trail at the northwestern corner of Grandview Park. The only "official" park access comes from trails on the eastern and southern sides of the park. To get to the official trails, people living on the north and western sides of the park are forced to walk in the street that surrounds the park, an option they clearly didn't like since they created a trail to the top of Grandview that began in the park's northwest corner. The recent closure of the social trail at Grandview by NAP has made it harder for the people who live north and west of the park to access it. The DEIR did not address the loss of accessibility to parks by the closures of some social trails.

Erosion can be a problem with social trails, but the response should be to mitigate erosion where it occurs, not to close the trail. The DEIR did not consider mitigations to these erosion problems other than closure.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Analyze the impacts on recreation of confining all recreation to trails, as well as the closure of trails in natural areas** [SFFA-3-15]

- Natural Areas desire to close narrow social trails is misguided. (page 256 DEIR) The narrow foot tread social trails are generally sustainable from an erosion viewpoint and those that exist are the result of a long evolutionary process. Granted, they are unsafe when compared to a smooth paved trail in Golden Gate Park, but tame compared to any trail in the Sierra Nevada. The web of social trails offers up a much more engaging outdoor experience than the "channelized" trails the NAP has in store for us. For the same square footage of

disturbed surface, the narrow social trails can accommodate many more users having their own nature experience than the broad bland trails envisioned. The closure of these social trails will have much more than a "less than significant impact". [Borden-1-03]

- Natural Areas singles out bicycle riders as a problem. However, the insistence that people not be allowed to ride bicycles on trails in Natural Areas is not based on any sound logic. Cyclists are much more likely to stay on trail than pedestrians. When people stay on trail, no damage is done to the sensitive habitat the trail runs through. (There are trails in Glen Canyon where bicycle use is inappropriate due to heavy use by hikers and dog walkers, combined with trails that are marginally sustainable.) [Borden-1-05]

- The DEIR does not address the impacts on recreation and visitor experience of being restricted to the trails in the natural areas. Being restricted to trails prevents many different types of recreation. Visitors can't spread a blanket on the ground and have a picnic or sunbathe while reading a book. Families can't play ball or Frisbee, fly a kite or a model airplane on a trail. Being confined to a trail essentially prohibits many other forms of recreation. Signs have been erected in the natural areas to inform the public that they are confined to the trails. The DEIR makes no mention of this policy or the restrictions it imposes on the recreational preferences of park visitors.

  Fences have been erected by NAP alongside trails to enforce this restriction. With fences in place on either side of a trail, a child is physically prevented from exploring plants and bugs on the ground just off of the trail, or following a butterfly or moving to see the bird she can hear calling. Fences, no matter how attractive they are, create a "look, Don't Touch" museum-like feel to the park. That is not what most people want in their neighborhood parks.

  Where trails have recently been "restored" in natural areas, NAP has erected fences on both sides of the trail, to force people to stay on the trails. These recently completed projects are a preview of the fences that the public can expect to be installed in all the natural areas as SNRAMP is implemented over its 20-year lifespan.

  These are not temporary fences. They will remain in place to keep people from straying off the trail for years to come. Putting a fence on both sides of a trail creates a "cattle chute" feeling that many people find unappealing. Their park experience is seriously degraded by the presence of these fences. The DEIR does not address the issue of impacts of permanent or semi-permanent fences on recreation, nor does it address the impact on visitor experience of creating "cattle chute" trails in neighborhood parks.

  When all recreational users are confirmed to a trail, it creates unnecessary conflicts between different user groups. When joggers, dogs being walked on 6' leashes (as allowed by law), bicycles, birders seeking quiet, are all confirmed to the small space of a fenced trail, conflicts are inevitable. These conflicts are mitigated, if not avoided altogether, by giving people the option of stepping off the trail to accommodate other park visitors. **Of all the negative impacts of the Natural Areas Program, perhaps the most devastating has been the increased conflicts it has caused in our parks. Park visitors who have co-existed in peace**

for generations are now pointing fingers at one another, blaming one another for the loss of their recreational liberty. [SFFA-3-16]

- **The final EIR must acknowledge the SNRAMP policy to confine all recreational access in the natural areas to fenced trails. This restriction has a significant impact on recreation in the parks of San Francisco and it should be recognized as such by the final EIR.**

  In over half of the parks with natural areas (17 of 3 listed in Table 5 of the DEIR), NAP controls the entire park. Entire parks have become essentially single-use parks- natural areas only. In an additional 10 parks, NAP controls over 50% of the park. In only four parks does NAP control less than half of the park.

  For those parks in which NAP controls the entire park, there are no recreational uses allowed in the entire park other than walking on a trail (Bernal Hill is the one exception, with off-leash dog walking allowed in the nearly half of the park that is designated as MA-3). Parents hoping to play catch with their child must find another park in which to do so. People wanting to sit on a blanket in the sun must go somewhere else. When you add in the parks with more than half of their land controlled by NAP, 87.5% of parks with natural areas in them will have significant restrictions on access and recreation. The final EIR must consider this impact on recreation and access.

  Within all the natural areas, more than half of the land (57%} is designated as MA-l or MA-2. These are the management zones with the most severe restrictions on recreation. In 7 parks, all of the land in the natural area is designated as MA-l or MA-2. These parks will see even more significant impacts on access and recreation than parks with at least some of their land designated as MA-3. Recreation restrictions from different management zones, and how much of a park is made up of each zone, must be considered in the final EIR.

  In some cases, the parks completely controlled by NAP do not have non-NAP parks close by. Thus people who want a non-NAP park experience (for example, to play catch with their children, friends or pets} will be forced to go to another park outside of their neighborhood. This will force many into their cars to drive to a non-NAP park. This increase in automobile usage and its attendant increases in pollution and global warming effects are not addressed in the DEIR.

  Conclusion

  The final Environmental Impact Report for the SNRAMP must:

  > **Analyze the impact of restricting all recreational access to trails enforced by fences on recreation and aesthetics, especially erecting fences on both sides of trails, as well as impacts from the removal of benches in natural areas**

  > **Analyze impacts on recreation and access resulting from the designation of entire parks as natural areas with consequent impacts on recreation and aesthetics**

  > **Analyze the maximum possible closures of all DPAs in natural areas (80%),not just the minimum possible (16.4%),and provide evidence of impacts claimed to be caused by dogs** [SFFA-3-18]

- WTPCC opposes NAP plans to restrict access to parks. NAP plans to close 9.2 miles of trails that thread through its natural areas. At our May meeting, Dennis Kern noted that a citywide survey of what San Franciscans want in their parks identified trails and hiking as the number one need. Yet NAP plans to close nearly a quarter of the total length of trails in natural areas (about 40 miles). This would seem to fly directly in the face of what the public said they want in their park.

  In most natural areas, the only thing you can do is walk on a trail. You cannot leave the trail to explore the area, or follow a butterfly, or try to see the bird you hear tweeting. To control access, NAP builds fences. Indeed, in parks where trails in natural areas have been restored recently, fences have been built on either side of the trail to ensure people cannot leave the trail. Natural areas become places where you can "look but not touch." How can children explore the wonders of nature if they are told repeatedly they must "Stay on the Trail"? This is not what we want for our parks.

  When people are restricted to walking only on trails, they lose access to the entire non-trail part of the park. In over half of the parks with a natural area (17 of 31), NAP controls the entire park. That means people have lost access to all but the trails in those parks. In an additional 10 parks, NAP controls over 50% of the land. Put another way, only four of the 31 parks with natural areas have less than 50% of their land controlled by NAP. Access restrictions planned by NAP ("stay on the trail", fences, and closure of trails) mean that entire neighborhoods will lose access to the vast majority of the parkland in their neighborhood parks. The Draft DEIR does not consider the impacts on neighbors and park users of this level of access restriction in the 27 parks where NAP controls more than half the land. [WTPCC-1-07]

- The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative. [Bartolotta-1-18]

- **Section 2: Table I - Summary of Environmental Effects - Recreation**

  Change all recreation environmental impact statements to Significant for Proposed Project, Maximum Restoration and No Project to reflect the significance of the proposed plan and the current Natural Areas Program management on park visitors. Consider Conducting an unbiased survey of Natural Areas visitors to determine the significance of decommissioning trails, removing park greenery (aka Trees, ivy, etc.), restricting visitors

to trails, removing park benches, closing dog play areas, spraying herbicides, etc. on visitor experience and use of the parks.

Proposed Plan, Maximum Restoration, and the No Project alternatives impact ratings for Recreation need to be changed to "Significant" to reflect the high value that residents place on trails and visiting nature and the significant change in people's recreational access to the land that is proposed. By decommissioning existing trails, installing fences, removing benches, and requiring visitors to stay on the trail, SNRAMP does the opposite of improving these highly valued facilities and encouraging visitation to parks and represents a significant negative environmental impact to recreational activities in the park and this is not fully recognized or analyzed in the DEIR.

According to the 2004 Rec & Park Assessment Survey, 67% of households run or walk in parks and 61% visit nature plus 55% of residents consider walking and biking trails to be one of the most important recreational facilities. Trails were by a wide margin the most important recreation facility according to the survey. Running, walking, and enjoying nature are also low cost options for all residents to combat public health issues such as obesity, diabetes, heart disease, mental health issues, etc., and restricting access discourages residents from fully using parks to promote health and well-being. Any analysis that assumes the SNRAMP plan does not have a significant impact of recreation needs to be supported by unbiased evidence such as an independent survey. Note that public hearing are not sufficient as RPD has a reputation for filtering public input to only present the information that supports RPD's current position.

In addition, freedom to play in parks promote children engaging with the outdoors and also provides health benefits as summarized by the National Wildlife Federation: http://www.nwf.org/News-and-Magazines/Media-Center/News-by-Topic/Get-Outside/2012/04-12-12-Getting-the-Dirt-on-Dirt-for- Healthier-Happier-Children.aspx. See *Appendix D*.

In addition to decommissioning trails, the Natural Areas' Sensitive and Important Habitat signs requiring people to "Stay on the Designated Trail" have already been posted at the entrances of Natural Areas which indicates that these rules apply to even the highly resilient forest and grassland areas and significantly alters the recreation land use of all Natural Area zones.

In addition, rows of fencing have already been installed in the Natural Areas which restrain people from using park areas and also mar the park aesthetics. See *Appendix E* with pictures of unattractive fencing that mars the beauty and views of the Natural Areas. The fencing that runs the length of the Sharp Park berm has a large number of holes in the fence which illustrate that the public wants to use these areas and trails for recreation where the Natural Areas Program is attempting to bar access. My understanding is also that the transfer of the property to the City of San Francisco stipulates that these areas are for recreation and converting these park areas to habitat conservation zoning does not comply with that stipulation.

Examples of significant SNRAMP conservation focused recommendations that will have a significant degrade the recreational land use of the Natural Areas include:

> GR-11a: plan recommends re-routing or closing 10.3 miles of trail (approximately 26 percent of total existing trails).
>
> GR-11c: Public use in all Natural Areas, unless otherwise specified, should encourage on-trail use. To reduce the deleterious effects of trampling in unstable areas, formal use areas, including designated trails, shall be created at locations that are sufficiently stable to withstand the pressure of public use (see GR-11a). Additionally, interpretive and park signs should be installed or modified as appropriate to include "Please Stay on Trails" with information about why on-trail use is required.
>
> GR-11d: Natural Areas shall be monitored on a routine basis for the development of new social trails. Those that impact sensitive species or sensitive habitats or that contribute to erosion problems shall be closed or re-routed (see GR-11b) with signs and brush barriers. Temporary fencing will be used as a last resort in these areas if less obtrusive measure (signs, brush barriers) are not effective.

Closing trails and access not only impacts children exploration and enjoyment. I visit Sharp Park often and the lagoon was the equivalent of our 18th hole on our hiking trips that I miss deeply. I'm obviously not the only one as the fence along the berm is riddled with holes made by individuals that obviously believe as I do visiting the lagoon is a significant recreational activity. The ugly fence also diminishes the aesthetic of the golf course for those walking on the berm and creates an exclusionary atmosphere where before it felt as if the golf course was for everyone.

Rec & Park seems to believe that creating "volunteer" stewardship programs in some way replaces or compensates for the millions of self-guided visits each year that residents make to these parks. While volunteering is important for many reasons, it does not replace personal, daily interactions with nature in the parks, plus the Natural Areas Program is alienating large segments of daily park users, thus reducing these users willingness to participate in volunteer programs or support Rec & Park. With more than 800,000 residents, the FY 2009-2010 volunteer hours of 129,703 of habitat restoration, gardening and recreation program support represents a minor element of people's recreational use of the park. In addition, the volunteer habitat restoration projects are in some cases assisting with decommissioning recreational access to the parks. It is also concerning that RPD is directing most volunteer hours to native plant gardening and few hours to other park maintenance needs.

Rec & Park recently used volunteers to create lovely new trails in the Corona Heights forest and re- opened a historic trail in the Interior Greenbelt forest and both are popular with residents. However, these trails do not compensate for the social trails to be closed in other Natural Areas or the intense "sensitive habitat" controls planned and both trails could easily have been created under the recreation or maintenance alternative. Both these trails indicate that residents appreciate having trails through forests and there are few such opportunities in San Francisco and SNRAMP's restoration and conservation objectives minimize the

opportunity for creating more such highly valued trails through forests to meet the needs of residents. [Bowman-2-08]

Response RE-10

These comments questioned the impacts caused by the closure of trails in the Natural Areas and request that the Draft EIR analyze the impacts of confining recreation activities to trails.

As stated on SNRAMP pp. 3-14 and 3-15, the existing trail network was surveyed for each site as part of the development of site-specific plans (refer to Table 3-6 of the SNRAMP). All trails, pathways, roads, boardwalks, and stairs were surveyed and mapped. Earthen trails were categorized into one of three types: primary, secondary, and social.

A primary trail has been officially designated as a main route into a Natural Area from large neighborhoods, main roadways, or parking areas. Often, primary trails are the designated formal entrances to a Natural Area that receive the greatest amount of foot traffic and typically are routed through points of interest (e.g., high points, viewing areas, connections to other trails). Primary trails would be maintained and improved as necessary. Approximately 91,000 feet (17.2 miles) of primary trails exist within the Natural Areas.

Secondary trails are also officially designated, but receive a moderate amount of foot traffic. These may or may not be improved or maintained depending on the trail and resources that a secondary trail may affect. Similar to primary trails, secondary trails provide main routes through Natural Areas and to points of interest. However, they may be the entrance from a smaller neighborhood or an informal entrance. Often they branch off of a primary trail and provide access to secondary Natural Area amenities. There are about 66,000 feet (12.5 miles) of secondary trails within the Natural Areas.

Social trails are undesignated pathways that have developed through use of a Natural Area. These are all undesignated trails and candidates for closure, rerouting, or formalization depending on their location, resources affected, and level of use. Social trails often result in impacts to sensitive resources, primarily because vegetation is trampled. Also, erosion problems rapidly develop following destruction of vegetation, which is often exacerbated by the orientation of the trail itself, as many social trails run straight up and down steep slopes, perpendicular to the slope contours. Social trails sometimes provide access to areas where unsanctioned activities occur (rock climbing, camping, etc.) and do not typically connect to points of interest or Natural Area amenities. Other times, social trails are simply redundant trails leading to the same destination. At the time trails data were collected for the SNRAMP, about 54,400 feet (10.3 miles) of social trails existed within the Natural Areas.

Impact RE-1, Draft EIR pp. 256 to 257, addresses the potential effects of trail closures on recreational resources and access. Of a total of 211,303 feet (or 40 miles) of trails, as a programmatic project, the SNRAMP calls for closing approximately 54,400 feet (10.3 miles, or 26 percent) of social trails,

creating 5,897 feet (1.1 miles) of new primary and/or secondary trails, and improving existing, primary trails to provide a more manageable trail system with greater access and easier navigation through the parks. Trail closures would focus primarily on eliminating social trails because they are considered unsafe for visitors; to protect sensitive species or habitat; or to prevent soil erosion. The improvement (e.g., maintenance, trail contouring, improved access, and better signage) and creation of new trails in the Natural Areas would continue to be focused on primary and/or secondary trails. Access to and within the Natural Areas would remain, allowing for continued use of the Natural Areas for passive recreation opportunities, and the trails that would remain would be improved and rerouted to provide better access.

The Draft EIR (in Impact RE-1) determined that the closure of social trails that are unsafe or in sensitive habitat areas would have a less-than-significant impact on recreational resources because general access would remain unimpeded; new trails would be created; the maintenance and improvement of existing primary trails under the SNRAMP would provide a more manageable trail system with greater access and easier navigation through the parks; and these improvements are expected to increase visitor use and improve access to the parks for more types of users. A designated and improved trail system would likely reduce user conflicts because renovated trails would provide more space on trails and greater opportunities for passing areas. Therefore, it is unlikely that closing social trails in Natural Areas would substantially increase the use of other recreational facilities to an extent that would result in substantial deterioration or the acceleration of deteriorating conditions at those facilities.

As articulated on SNRAMP p. 2-2, some of the express goals of the SNRAMP are to provide opportunities for passive recreational uses compatible with conservation and restoration goals and to improve and develop a recreational trail system that provides the greatest amount of accessibility, while still protecting natural resources. Similarly, as identified on Draft EIR p. 86, the objectives and goals of the project include providing opportunities for passive recreation, such as hiking and nature observation, and development of a recreation trail system that provides the greatest amount of accessibility while protecting natural resources.

A commenter objected to the closure of approximately 9.2 miles of trails, indicating that San Franciscans most desire trails based upon a citywide survey. To be accurate, according to Draft EIR Table 5, approximately 10.3 miles of trails would be closed (approximately 54,400 linear feet, or 10.3 miles), not including the 1.1 miles of new trails that would be created. As shown in Table 3-6 of the SNRAMP, over 29 miles of dedicated trails would remain in the Natural Areas after implementation of the SNRAMP. The SNRAMP seeks to balance increased biodiversity with the needs of local residents in order to provide recreational opportunities; therefore, for the reasons articulated earlier in this response, the loss of 10.3 miles of trails is considered to be a less-than-significant impact, as reflected on Draft EIR pp. 257 to 258. The commenter provides no support for the assertion that "the closure of social trails will have much more than a less-than-significant impact."

The SNRAMP does not single out bicyclists as a concern and does not include actions directed specifically at bicycle use. Off-road bicyclists would be affected by proposed trail closures similarly to other trail users, such as hikers and runners.

In responding to these comments, it is important to note that the purpose of the EIR is to identify potentially significant impacts of the proposed project on the physical environment and that, as stated in CEQA Guidelines Section 15131(a), "social effects of a project shall not be treated as significant effects on the environment." Refer also to Response G-26, RTC p. 4-114, for a more detailed discussion as to how social effects can be considered in an EIR.

One of the commenters expresses a preference for narrow social trails, which speaks to the merits of the proposed project and not to the accuracy or adequacy of the Draft EIR.

With respect to one of the commenter's concern about the aesthetic impact of restricting all recreational access to trails by fences, the SNRAMP does not propose restricting access to trails with fencing. Rather, fencing would only be required to protect visitor safety and habitat. Typically, the type of permanent fencing that typically would be used is a three-foot high rustic split -rail fence. Installation of these fences, where required, would not result in a substantial demonstrable negative change to the aesthetic conditions, as discussed on Draft EIR pp. 191 to 195. The text on Draft EIR p. 195 (following the second full paragraph) has been changed to clarify the impact that fences may have on aesthetics, as follows:

> Three-foot-high post-and-rail fences would be installed in some Natural Areas as required to protect human health and safety, reduce soil loss, protect water quality, and conserve habitat.

Refer to Response RE-13, RTC p. 4-347, for a discussion of the acreage of DPAs that are proposed to be closed and potential impacts on the recreational capacity of remaining DPAs; refer to Response RE-8, RTC p. 4-324, for a discussion of access restrictions in the MA-1 and MA-2 areas; refer to Response PD-2, RTC p. 4-122, and Response PD-23, RTC p. 4-198, for a discussion of the use of fencing as a last resort to restrict access to sensitive biological areas in the Natural Areas; refer to Response AE-4, RTC p. 4-226, for a discussion of the use of fencing at Sharp Park to restrict access to sensitive biological areas; refer to Response G-25, RTC p. 4-106, for a discussion of dog impacts related to erosion; refer to Response G-26, RTC p. 4-114, for a discussion of social impacts related to dogs and dog ownership; and refer to Response PD-11, RTC p. 4-159, for a discussion of the importance of re-establishing native habitats to improve biodiversity.

Also, the impacts to recreation use and amenities associated with the No Project and Maximum Restoration Alternatives are discussed on Draft EIR pp. 469 and 484. The commenter provides no additional information to support the conclusion that impacts to recreation under the alternatives would be significant.

Comment RE-11 Impacts of removing benches and recreational amenities

The response to Comment RE-11 addresses all or part of the following individual comments:

MPIC-1-13 SFFA-3-17

- The DEIR also does not address the negative impact on Park visitors of prohibiting benches in scenic view areas within the MA-1 sector in order to deter off-leash dogs. The DEIR does not assess how leash rules could be effectively enforced or that, instead of pursuing such enforcement, City staff are choosing to remove recreational amenities such as benches in sensitive plant areas. This policy significantly negatively impacts recreational experience of one of the best views in San Francisco. There is now only one bench in Mt. Davidson Park, and for full enjoyment by recreational users additional benches should be installed throughout the Park. [MPIC-1-13]
- NAP has a history of removing benches from areas under its control. For example, a bench on an overlook at Mt. Davidson, one of only two benches in the park, was recently removed by NAP. There was nothing wrong with this bench. It was apparently removed because it was perceived by NAP staff to be detrimental to the native plants that grow in that area. There is now no place to sit (except on the ground) to either rest or reflect while looking at the view. This is a particular hardship for seniors and others with more limited mobility, who now have no place to sit after a strenuous uphill hike. Despite park neighbors' and users' pleas to replace the bench, NAP has so far refused to do so. The lack of benches or places for people to rest without having to sit on the ground impacts all recreational users of the parks, even those who only want to walk on trails. [SFFA-3-17]

Response RE-11

These comments refer to prohibition of new benches and the removal of a bench at Mt. Davidson Park.

In 2011, SFRPD removed a bench on the northern portion of Mt. Davidson because it was rotting and unsafe for sitting. In late 2012, SFRPD installed a replacement bench close to where the unsafe bench had been located. The SNRAMP would not prohibit benches in scenic view areas within MA-1 designated areas or elsewhere. Furthermore, new benches are and would continue to be installed in Natural Areas on a site-by-site basis. No specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts are presented in the comments above.

Comment RE-12 SNRAMP proposals for park access

The response to Comment RE-12 addresses all or part of the following individual comment:

MPIC-2-21

- Which trails will be closed and how dog access will be limited in the park are not clearly stated in the SNRAMP, and are therefore inadequately evaluated in the DEIR. The EIR

should answer these questions so the public can truly be informed as to the impact of these plans on recreation. [MPIC-2-21]

Response RE-12

This comment requests an identification of the trails that would be closed and how dog access would be limited.

Draft EIR Table 5 (presented on p. 114) shows the feet of existing trails by Natural Area site; the feet of trails that would be closed or relocated; the feet of trails that would be created; and the resulting feet of trails. The specific trails within each Natural Area site that would be closed or relocated and the location of the trails that would be created are identified in the SNRAMP in figures titled "Soils, Land Features, and Trails"; a figure is provided for each Natural Area site.

Impact RE-1, Draft EIR pp. 256 to 257, addresses the potential effects of trail closures on recreational resources and access. Of a total of 211,303 feet (or 40 miles) of trails, as a programmatic project, the SNRAMP calls for closing approximately 54,400 feet (10.3 miles) of social trails, creating 5,897 feet (1.1 miles) of new trails and improving existing, primary trails to provide a more manageable trail system with greater access and easier navigation through the parks. Social trails are trails that have not been officially designated and are usually created by users, while primary trails are those officially designated as main routes into a Natural Area from large neighborhoods, main roadways, or parking areas. Trail closures would focus primarily on eliminating social trails because they are considered unsafe, to protect sensitive species or habitat, or to prevent soil erosion. The Draft EIR determines that closure of social trails that are unsafe or in sensitive habitat areas is not expected to have a significant adverse impact on recreational resources because general access would remain unimpeded; the creation of new trails and the maintenance and improvement of existing primary trails under the SNRAMP would provide a more manageable trail system with greater access and easier navigation through the parks; and these improvements are expected to increase visitor use and improve access to the parks for more types of users.

As addressed in more detail in Response G-25, RTC p. 4-106, the SNRAMP proposes to restrict dogs from only three sensitive habitat areas: Bernal Hill (reduce the 21-acre DPA by six acres), Lake Merced (close the 5-acre DPA), and McLaren Park (reduce the 61.7-acre DPA by 8.3 acres). Dog access to certain waterbodies would also be prohibited, such as in Pine Lake and in Gray Fox Creek within McLaren Park. Within Pine Lake, while dogs would not be allowed in the lake itself, dogs are permitted on leash within the remaining portions of the Pine Lake Natural Area. With regard to Gray Fox Creek (within McLaren Park), the SNRAMP would eliminate dog access to a 0.6-acre portion of Gray Fox Creek and convert a 7.7-acre area around the creek to an on-leash on-trail use area to protect sensitive habitat. This would affect a total of 8.3 acres of this 61.7-acre Natural Area, which represents the entirety of the change proposed for McLaren Park. While dog access to certain waterbodies would be prohibited, dogs are permitted on leash at all SFRPD parks. In fact, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of

approximately 2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city.

The EIR concludes that the proposed closure and reduction of DPAs would not result in significant impacts to recreational resources (Impact RE-1 on Draft EIR pp. 257 and 258). However, when combined with impacts resulting from the GGNRA Dog Management Plan, the EIR conservatively determines that the cumulative impact of these two projects could accelerate the physical deterioration of those DPAs and the Natural Areas in general (Impact RE-7 on Draft EIR pp. 261 to 262; Impact RE-7 was further clarified and expanded in Response RE-2, RTC p. 4-313). With respect to increased use of the Natural Areas by visitors, the EIR finds impacts to recreational resources to be less than significant (Impact RE-1, Impact RE-4, and Impact RE-7). Therefore, the proposed actions are adequately detailed in the SNRAMP and EIR and the environmental impacts of the proposed actions have been adequately addressed.

Comment RE-13	**Effect of the reduction of DPAs on other DPAs in terms of recreational capacity**

The response to Comment RE-13 addresses all or part of the following individual comments:

NPS-1-08	CFDG-1-05	DogPACSF-1-06
SFDOG-1-05	SFDOG-2-07	SFFA-3-20
Bartolotta-1-06	Bowman-1-06	Brown-1-03
Buckley-1-03	Carrington-1-02	Chambers-1-03
Donovan-1-03	Fitzer-1-02	Form Letter-1-02
Form Letter-1-19	Garber-1-04	Ghosh-1-03
Gordon-1-02	Kelly-1-03	Moyer-1-02
Naima-1-04	Popoff-1-03	Smith-1-02
Summer-1-02	Winquist-1-02	Yip-1-02
PH-Noetzel-01	PH-Stephens-06	

- Pg. 262, 346, 440 – Has any data been gathered to support the impacts on other DPAs and adjacent lands due to the proposed reductions of DPAs, together with the actions proposed in the draft GGNRA Dog Management Plan? If so, it would be helpful to share this information with GGNRA.

  Pg's 470, 484, 498: GGNRA would appreciate receiving any data that documents how implementation of the GGNRA Dog Management Plan would result in significant and unavoidable impacts from deterioration of the DPAs. [NPS-1-08]

- The EIR considers only the closures of 15% of total off-leash space when determining impacts on remaining DPAs and recreation. Because the NAP plan puts 80% of off-leash space at risk of closure in the future, this EIR must also consider the impacts of this much larger closure on remaining DPAs and on recreation. [CFDG-1-05] [Chambers-1-03]

- The NAP EIR considers only the NAP plans to close 15% of the legal off-leash space in SF city parks when considering impacts on the remaining DPAs and on recreation. However,

the NAP plan also calls for expanding the most sensitive areas within natural areas, and this potentially could result in the closure of significantly more DPAs (up to 80% of the total off-leash space currently available in city parks, off-leash space that is located either within or adjacent to a natural area). These added closures (up to 80%) will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate. [DogPACSF-1-06] [Brown-1-03]

- This is particularly important with the Maximum Restoration Alternative that will essentially close DPAs at McLaren Park, Bernal Hill, Buena Vista Park, and Lake Merced. These DPAs constitute roughly 75% of the total legal off-leash area in SF city parks. The EIR does not adequately analyze the impact of that level of closure on the remaining DPAs and other nearby parks, especially when combined with the Golden Gate National Recreation Area's plan to close 90% of its off-leash space. [SFDOG-1-05] [PH-Stephens-06]
- The NAP EIR considers only the NAP plans to close roughly 15% of the legal off-leash space in SF city parks (closure of Lake Merced DPA and reductions in DPAs at McLaren Park and Bernal Hill) when considering impacts on the remaining DPAs and on recreation. However, the NAP plan also calls for expanding the most sensitive areas within natural areas, and monitoring the DPAs in four parks - McLaren and Buena Vista parks, Bernal Hill, and the Golden Gate Park Oak Woodlands - to look for any impacts from dogs on the natural areas in these parks. These DPAs, combined with the one at Lake Merced that will be closed by NAP and DPAs at Pine Lake and Corona Heights that are located immediately adjacent to a natural area), constitute roughly 80% of the total off-leash area in SF city parks. Therefore, NAP claims of impacts from dogs could result in the closure of up to 80% of the legal off-leash space in city parks. These added closures will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts from the loss of 80% of legal off-leash space were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate. All analyses of impacts on recreation, transportation, global warming, and climate change (from increased driving because of DPA closures) must be done using the 80% loss that is quite possible, given NAP's historic antipathy toward dogs and dog walkers. [SFDOG-2-07]
- The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the immediate closures of the roughly 15% of the total off-leash space in city parks (at Lake Merced, Bernal Hill, and McLaren Park) will be less than significant because there will remain sufficient offleash space in those parks (except for Lake Merced, which will be completely closed). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs (80% of the total off-leash areas in city parks are located either within or adjacent to natural areas). This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows. The DEIR does not adequately consider impacts on off-leash recreation from the

SNRAMP. The DEIR addresses only the impacts on remaining DPAs, and on recreation, of the immediate closure of 16.4% of the total legal off-leash space in city parks once the SNRAMP goes into effect. However, the DEIR concludes that impacts of these closures on remaining DPAs, recreation, people driving to other DPAs, etc., will be minimal.

The SNRAMP makes clear that NAP will monitor DPAs in four parks- Mclaren, Buena Vista, Bernal Hill, and the Golden Gate Park Oak Woodlands- where DPAs are located either within or adjacent to natural areas. These DPAs, combined with the one scheduled for closure at Lake Merced, constitute roughly 80% of the legal off-leash space in all city parks. SNRAMP also makes clear that if NAP claims the monitoring shows impacts on theses natural areas from the dogs, the DPAs will be closed.

In other words, initial closures of dog play areas will be 16.4% of all dog play areas in San Francisco, but SNRAMP announces the potential for 80% of all dog play areas to be closed in the future. Since no evidence is provided by the DEIR that any damage has been done by dogs in the dog play areas that are being closed immediately, no evidence is likely to be provided to close most of the dog play area that would remain after the immediate closures.

In fact, in the one dog play area which will be closed entirely and immediately, both SNRAMP and the DEIR say that use of this area by visitors with dogs is minimal: "… the DPA at Lake Merced is not heavily used …" (DEIR, page 258) One wonders what the justification is for closing this DPA if it is not heavily used and no evidence is available that damage has been done by dogs.

The DEIR states that it cannot analyze the impacts of possible GGNRA closures because they have yet to be finalized. However, we know the amount of off-leash areas in the GGNRA proposed for closure in January 2011: 90% of existing off-leash space on GGNRA lands have been proposed for closure. The final EIR should analyze the cumulative impacts of the maximum amount of closure proposed by both SNRAMP and the GGNRA. We saw on "Tsunami Friday" what those impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. On Tsunami Friday, a Recreation and Park Department staff member counted over 200 dogs at once in the Pine Lake DPA at 10 am, ten times more dogs than on a normal weekday (usually about 20 dogs at any one time), and more than three times the maximum number of dogs normally seen on busy weekends (about 60 dogs). This example graphically illustrates the potential impact on remaining DPAs of significant closures of off-leash space. Forcing so many more dogs into remaining DPAs day after day will undoubtedly lead to serious degradation of those remaining DPAs thereby creating the conditions that would justify closure in the future.

Without providing any analysis, the DEIR concludes the cumulative impacts of closure of off-leash areas by the GGNRA and those proposed by SNRAMP are "significant and unavoidable." So, in this rare instance in which the DEIR acknowledges significant impact on the environment and on recreational opportunities in San Francisco, it gives itself a free pass: "It's unavoidable." We beg to differ. The final EIR has options that must be considered. The

obvious and responsible thing to do is to NOT close any dog play area if there is no evidence that dogs are harming those areas.

The DEIR repeatedly justifies the exclusion of off-leash recreation because it says dogs have a significant negative impact on plants and wildlife. Yet it offers no evidence to support the claims of impacts. The DEIR repeatedly says dogs MAY be impacting protected plant species or wildlife (ppgs, 298, 305, 306, 472, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. After each of these claims, the DEIR goes on to say: Dogs MAY continue to impact plants or wildlife. If there is no proof of an impact, then that impact cannot "continue." EIRs must be based on observed, documented impacts, not speculation about things that "may" happen at some point in the future. The final EIR must alter its analysis to address this and base any restrictions on recreation involving dogs on actual observed **impacts**. [SFFA-3-20]

- The NAP EIR considers only the NAP plans to close 15% of the legal off-leash space in SF city parks when considering impacts on the remaining DPAs and on recreation. However, the NAP plan also calls for expanding the most sensitive areas within natural areas, and this potentially could result in the closure of significantly more DPAs (up to 80% of the total off-leash space currently available in city parks, off-leash space that is located either within or adjacent to a natural area). These added closures (up to 80%) will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate. [Bartolotta-1-06]
- The EIR does not address the significant precedence of the NAP labeling dogs as an "invasive" nuisance and how that impacts the likelihood of daily recreation being reduced for at least 30% of the San Francisco population and visitors with dogs. If the NAP allows for reducing usage by people with dogs then the maximum reduction should be evaluated and presented in the plan. Reducing the usage by such a large population is certainly a significant impact on recreation as well as on the health and safety of people and dogs. A well-exercised and socialized dog is a safe dog, and these dog play areas are critical for providing the space needed for exercising and socializing dogs. In addition, these areas are important for people to socialize and exercise as well. [Bowman-1-06]
- Second: restricting and narrowing the areas in which we can take our dogs off leash is in effect setting up ghettos for us. As the areas remaining become more crowded (as Upper Douglass Park is already becoming) the turf and quality of existence not just for the plants but for the people being packed inside diminishes. The wear and tear on the ground cover cannot withstand such heavy use. Some of that overburden is the result of dog walkers with limited options for off leash places and dogs needing exercise; but the limitations will also force more people into these remaining areas. [Carrington-1-02]
- If the proposed changes are implemented, the large existing population of dog owners will be forced into a greatly reduced number of parks, dramatically increasing the impact on those areas by shear overuse of people and dogs. [Donovan-1-03]

- This GGNRA proposal will create dangerous situations of overcrowding and overburden city parks

  There are very few spaces left for people to take their dogs. 1 in 3 Bay area residents has dogs, and thousands like myself and my husband go to GGNRA every single day. [Fitzer-1-02]

- 2) The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas). [Buckley-1-03] [Form Letter-1-02] [Ghosh-1-03] [Moyer-1-02] [Yip-1-02]

- I come to SF parks. The parks need to remain open for dogs and people for recreation. [Form Letter-1-19]

- I also take my dog to McClaren Park and Sutro Mountain and I would mourn the loss of public areas that I can take my dog.

  Recreation should be a priority for the SF Recreation and Park Department and not removal of public lands from recreational opportunities. The proposed loss of walking trails, off-leash and on leash dog areas in the NAP EIR, couple with the GGNRA's proposed reduction of trails and dog-friendly trails, drastically reduces recreation areas for everyone in the Bay Area, both with and without dogs. [Garber-1-04]

- The NAP EIR considers only the closures of 15% of total off-leash space when determining impacts on remaining DPAs and recreation. Because the NAP plan puts 80% of off-leash space at risk of closure in the future, the NAP EIR must also consider the impacts of this much larger closure on remaining DPAs and on recreation. [Kelly-1-03]

- > any reduction on the number of off-leash play areas will put more of a strain on the remaining areas. There are more dogs in SF than children (so I've been told) and dogs need places to play. People, like myself, move to SF because it provides an urban environment that is dog friendly. Taking these away (potentially up to 80% given the wording of the proposal) will cause a huge strain on the remaining 20%, making them into unsustainable mud pits. [Naima-1-04]

- One thing that seems to be missing from many decisions being made regarding dogs and recreation in and around this city is that San Francisco is an URBAN area, not a wilderness area. We also have more households with dogs than children. It's not just about the dogs, it's also about the people who own the dogs and walk their dogs for exercise and recreation. My observation has been that the majority of dog owners are very conscientious and work together to keep areas clean and safe. Restricting the currently available areas will adversely impact the remaining Dog Play Areas. The dogs are not going away. We do not believe it is in the best interest of the residents of San Francisco to implement this restrictive plan. [Popoff-1-03]

- This latest plan would cut off traditional uses of parks and trails and we already have so few places to hike. The anti-dog bias seems based on people's opinions and dislike of dogs rather than facts or scientific studies. If you add this plan to the ridiculous and onerous GGNRA plan, dog owners will have no other option than to head to the nearest city parks – which already overcrowded for baseball and soccer games. [Smith-1-02]
- The analysis of the effects of the proposed closures of up to 80% of the Dog Play Areas in the city is incomplete. The impacts on other DPAs, parks, and the impact of park users traveling to the remaining DPAs on the environment have not been considered. [Summer-1-02]
- Additionally, the analysis of the effects of the proposed closures of up to 80% of the Dog Play Areas in the city is not adequate. Specifically, the impacts on other parks, DPAs, and the effects of transportation required to the remaining DPAs on the environment have not been considered. It also does not consider the impact the DPA closure would have on the physical and mental health benefits of people who walk with their dogs or on the social communities that exist within and around the parks. [Winquist-1-02]
- So you have this squeeze while at the same time young families and young people are adopting dogs in record numbers, at the same time there's a squeeze in some plans to restrict the places these dogs can run, either on leash or off leash, and I think this needs to be seriously looked into and addressed by any EIR or any planning for off-leash dog areas in the future.

  Don't restrict them. There's more dogs coming every day. Thank you. [PH-Noetzel-01]

Response RE-13

These comments question the effect the reduction of off-leash Dog Play Areas (DPAs) would have on other DPAs in terms of recreational capacity. Note, some commenters provide an inaccurate assessment of the acreage or percentage of DPAs that are proposed to be closed relative to what is available in the Natural Areas and in City parks outside of the Natural Areas and whether there are plans for future DPA closures.

Acreage of Off-Leash DPAs and On-Leash Areas Available within the City

There are over 30 designated DPAs that support off-leash dog use within San Francisco, seven of which are located in the Natural Areas. As shown in Draft EIR Table 5 on Draft EIR, Summary of Natural Areas Management Plan, p. 114, a total of 19.3 acres of DPAs out of a total of 95.2 acres would be reduced in size or closed to off-leash dog use within three Natural Areas (one would be closed and two would be reduced in size), resulting in 75.9 acres (or 80 percent) of off-leash DPAs within the Natural Areas that would remain open. The conversion of 19.3 acres of DPAs within the Natural Areas to on-leash dog areas would mean that 84 percent of all City DPAs would remain open. Additionally, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland that would be available for on-leash dog use, and additional park acreage is available at other parks throughout the city. Therefore,

there is opportunity for both off-leash and on-leash dog use within the Natural Areas and other city parks.

The Lake Merced off-leash DPA would be closed (approximately five acres), and the off-leash DPAs on Bernal Hill and in McLaren Park would be reduced in size (by six acres and 8.3 acres, respectively), as indicated by Draft EIR Table 5. The DPAs at each of the parks would be reduced in size or closed for the following reasons: (1) at McLaren Park, the DPAs would be reduced in size to restore creek riparian habitat with aboveground water available for wildlife, and the willow trees and surrounding scrub would be restored to provided habitat for the California quail (refer to SNRAMP p. 6.19-11); (2) at Bernal Hill, the DPAs would be reduced in size to protect sensitive plants and annual grassland habitat and to prevent or reduce erosion (refer to SNRAMP pp. 6.21-4 and 6.21-7); and (3) at Lake Merced, the DPAs would be closed to avoid disturbance to breeding birds (refer to Draft EIR p. 136); in fact, scientific review of the 2005 Draft SNRAMP specifically urged the relocation of the DPA at Lake Merced (Huntsinger and Bartolome 2005).

Project-Related and Cumulative Recreational Impacts and Impacts on other DPAs

The Draft EIR evaluated the project-related environmental impacts associated with reducing the amount of available DPAs provided by the SFRPD. The Draft EIR concludes that the proposed closure and reduction of DPAs, and the increased use of the other DPAs by visitors, would not result in significant impacts to recreational resources (Impact RE-1 and Impact RE-4 on Draft EIR pp. 257 to 258 and 259 to 260).

As stated on Draft EIR p. 258, the likelihood that Lake Merced recreation users, who are limited in number as discussed in Response G-1, p. 4-13, would use other DPAs within or outside of the Natural Areas largely depends on the users' proximity to another DPA; the next closest DPA is at Pine Lake, less than one mile north of Lake Merced. As the distance between a user and a DPA increases, the likelihood that the user would visit that DPA decreases. Thus, it is unlikely that DPAs within and outside of the Natural Areas would experience increased use to the point of physical deterioration or accelerated deterioration from the loss of 19.3 acres distributed among three DPAs; the remaining six DPAs (Bernal Hill, Buena Vista Park, Corona Heights, Golden Gate Park Oak Woodlands, McLaren Park, and Pine Lake) would have 75.9 acres available for off-leash use. In addition, and as previously mentioned, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city. Further, the SFRPD manages a total of 4,113 acres of recreation and open space areas, with 3,100 acres of that located in the City of San Francisco. As a result, the Draft EIR concluded (in Impact RE-1 on p. 258) that programmatic activities related to dog use would have a less-than-significant impact with respect to the physical deterioration of recreation facilities from increased use. Further, the SNRAMP project is not expected to result in an increase of dog use; instead, as articulated on Draft EIR pp. 84 to 87, some of the expressed goals and

objectives of the SNRAMP are to maintain and enhance native plant and animal communities; re-establish native community diversity, structure, and ecosystem function where degraded; and promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity. Therefore, the project seeks to maintain and enhance native species rather than expanding the use of the Natural Areas for off-leash recreation.

When project impacts are combined with impacts resulting from the GGNRA Dog Management Plan, the EIR conservatively determines that the cumulative impact of these two projects could accelerate the physical deterioration of the remaining DPAs and in the Natural Areas in general (Impact RE-7 on Draft EIR pp. 261 to 262; Impact RE-7 was further clarified and expanded in Response RE-2, RTC p. 4-313). As a programmatic analysis, and because the GGNRA's Dog Management Plan is still in the environmental review process, the cumulative analysis of recreational impacts caused by the closure or reduction of DPAs is qualitative, rather than quantitative. It is reasonable to conclude that the reduction of approximately 90 percent of off-leash DPAs at GGNRA and 20 percent within the Natural Areas would result in a significant cumulative impact to recreational use. Absent feasible mitigation, which was not identified in the SNRAMP Draft EIR, the impact would be significant and unavoidable. While there are other DPAs in the city, given that the NPS and the SFRPD control a majority of the parkland, there is not sufficient, alternative space available to reduce the level of significance of this impact. Refer also to Response RE-3, RTC p. 4-319, and Response RE-13, RTC p. 4-347, for a further discussion of the cumulative recreation analysis, which assumes implementation of the GGNRA Dog Management Plan.

One commenter suggested that the EIR should consider keeping the DPAs open to eliminate the significant and unavoidable cumulative impact; however, the project that is being proposed in the SNRAMP, and evaluated in this EIR, includes the conversion of limited DPAs to on-leash dog areas to protect and enhance sensitive biological resources; this conversion is part of the project. The commenter is essentially suggesting a project alternative. Two alternatives that evaluate keeping the existing DPAs open were evaluated in this EIR: the No Project Alternative (on Draft EIR pp. 455 through 480) and the Maximum Recreation Alternative (on Draft EIR pp. 493 through 511).

Refer also to Response G-26, RTC p. 4-114, for a discussion of the social impacts on dogs and humans as a result of a reduction of DPAs, and refer to Response G-25, RTC p. 4-106, for a discussion of dog impacts on plants and wildlife.

Future Closure or Conversion of DPAs

As shown in Table 5 of the Draft EIR, the effects of off-leash dog use on sensitive habitat areas would be specifically monitored at the oak woodlands in Buena Vista Park, the Golden Gate Park Oak Woodlands, and the small wildflower meadows at McLaren Park. The EIR identifies Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, which requires that DPAs within the Natural Areas shall continue to be evaluated in

accordance with the SFRPD's Dog Policy and be monitored for adverse effects to biological resources. If substantial adverse impacts to protected species are confirmed, the SFRPD shall take actions to protect those species, which may include installing signs, fencing, or protections including, but not limited to, decommissioning DPAs, in accordance with the SFRPD Dog Policy. In addition, as stated on Draft EIR p. 258, according to the SFRPD Final Dog Policy (SFRPD 2002), DPAs should be reviewed every three years for, among other things, degradation of the area. Any subsequent changes that might be required as a result of the monitoring activities required by Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, or as a result of SFRPD's triennial review of the Dog Policy could require further action by the SFRPD Recreation & Park Commission and could be subject to additional CEQA review.

While it cannot be stated that no new DPAs would be created in the city (and under the control of the SFRPD) during the 20-year planning period for the SNRAMP, the Draft EIR analysis is based on the existing conditions at the time the document was prepared, which assumed that no new SFRPD DPAs would be established. As stated in Response G-23, RTC p. 4-93, new or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas.

4.D.10 Biological Resources [BI]

The comments and corresponding responses in this section cover topics in Draft EIR Section V.G, Biological Resources.

Comment BI-1 Consider adding California Clapper Rail to Table 9

The response to Comment BI-1 addresses all or part of the following individual comment:

GGAS-1-28

- During the bird breeding season of 2011, California Clapper Rail young were observed on multiple occasions at Heron's Head Park. This was the first detection of (likely) breeding California Clapper Rail in a considerable period and it is believed that the nesting pair derived from rail populations further south in the Bay. The appearance of this breeding, endangered bird highlights the importance of all of San Francisco's bayside wetland areas, including, potentially, India Basin. Golden Gate Audubon recommends that the Planning Department consider whether the California Clapper Rail should be included on Table 9. [GGAS-1-28]

Response BI-1

This comment suggests that the California clapper rail[84] should be included in Table 9, State and Federally Listed Species That May Occur Within the Natural Areas, on Draft EIR p. 278.

The clapper rail was not considered within the Natural Areas, as its recent recorded presence in Heron's Head Park from August 2011 was unknown at the time that the Draft EIR was published. Also, in 2016, following publication of the Draft EIR, the burrowing owl was observed near Hawk Hill and Corona Heights by a neighbor and city staff.

Site-specific and general management actions are recommended for the India Basin Shoreline Park Natural Area that would restore and enhance bayside wetland areas and provide habitat for California clapper rail. The improvements at India Basin would result in a stable and productive salt marsh environment that would benefit resident and migratory birds, including the California clapper rail. Additionally, improved water quality and reduced erosion are all potential benefits of this plan with respect to the California clapper rail. None of these improvements is expected to result in any long-term impacts to this sensitive species; however, actions necessary to make these improvements could result in short-term effects to California clapper rails. Impact BI-2 on Draft EIR p. 303 states that vegetation removal, trail modification, and the use of herbicides and pesticides have the potential to directly affect nesting birds and habitat for special status bird species that may occur in the Natural Areas or result in direct impacts, such as injury, mortality, or destruction of nests for those species protected by the MBTA and California Fish and Game Code and other protected bird species. However, Draft EIR p. 304 goes on to conclude a less-than-significant impact for the following reasons:

> "In compliance with the MBTA, the SFRPD would avoid harming or removing the nests of these species and any migratory bird species. Implementation of GR-4b in the SNRAMP (page 109) would ensure that all vegetation management activities would be conducted outside the breeding season for bird species (February 1 through August 31, as designated by CDFG), unless these activities had already begun before the breeding season and had already removed nesting habitat, or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present. If active nests (or large abandoned stick nests) are discovered as part of the breeding bird survey, a 150-foot-radius avoidance buffer would be centered on the nest sites to prevent the nesting birds from being disturbed by power tools. Weeds may be pulled by hand no closer than 50 feet from the nest. Measure GR-4b in the SNRAMP would ensure that direct impacts to nesting birds, including special status bird species, would be avoided and minimized. In accordance with Mitigation Measure M-BI-1a,

[84] In 2014, after publication of the Draft EIR, the California clapper rail's name was changed to the Ridgway's rail; however, to maintain consistency between the Draft EIR and this RTC document, the term California clapper rail will continue to be used. All references to the California clapper rail (or clapper rail) refer to the Ridgway's rail.

SFRPD would be required to consult with appropriate regulatory agencies when there is potential for protected bird species to be affected by a programmatic project. Additionally, where protected or nesting bird habitat is temporarily or permanently removed, Mitigation Measure M-BI-1a would ensure that measures are taken to restore or compensate for indirect impacts as a result of habitat loss. With implementation of these measures and compliance with the MBTA, short-term impacts from programmatic vegetation removal on protected and nesting bird species would be ***less than significant***."

The text on Draft EIR p. 279 has been changed to add the California clapper rail and the burrowing owl to Table 9, State and Federally Listed Species That May Occur Within the Natural Areas, as follows:

Burrowing Owl	*Athene cunicularia*	--/CSC/--	Arid to semi-arid grasslands, with well-drained, level to gently sloping areas. Requires mammal burrow or natural hollow surrounded by sparse vegetation for breeding habitat.	P/ Observed near Hawk Hill and Corona Heights. The Golden Gate Audubon Society reports sightings at East Shore State Park, Cesar Chavez Park and the Tom Bates Sports Complex in Berkeley, at Martin Luther King, Jr. Shoreline Park in Alameda, and in some South Bay locations.
California clapper rail	*Rallus longirostris obsoletus*	FE/SFP/--	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes.	P/ Observed at Heron's Head Park near India Basin.

In addition, the text of Draft EIR pp. 289, 303, and 304 has been changed to address the California clapper rail and burrowing owl, as follows:

- On Draft EIR p. 289 (fourth paragraph):

Among the Natural Areas, India Basin is the only one that borders San Francisco Bay and provides the only habitat for migratory shorebirds. There are ten species of birds that are considered locally sensitive that have been observed at India Basin, and several of these are not found at other Natural Areas: black oystercatcher (*Haematopus bachmani*), pelagic cormorant (*Phalacrocorax pelagicus*), Brandt's cormorant (*P. penicillatus*), and pigeon guillemot (*Cepphus columba*). None of the locally significant species that have been observed are known to breed at India Basin. The restored wetlands and mudflats support nesting American avocet (*Recurvirostra americana*) and killdeer (*Charadrius vociferus*). According to the Golden Gate Audubon Society (as reflected in their comment later dated October 31, 2011), during the bird breeding season of 2011, California clapper rail young were observed on multiple occasions at Heron's Head Park (north of the wetlands at India Basin Park). The Golden Gate Audubon Society further stated that this was the first detection of (likely) breeding California clapper rail in a considerable period, and it is believed that the nesting pair derived from rail populations further south in the Bay. If restored, the more extensive saltgrass/pickleweed area could provide habitat for California black rail (*Laterallus jamaicensis coturniculus*) and California clapper rail (*Rallus longirostris obsoletus*), both protected under the state and federal Endangered Species Acts.

- On Draft EIR p. 303 (second full paragraph):

  ~~State and federally listed bird species have been recorded nesting at Sharp Park and Lake Merced.~~ The double-crested cormorant (*Phalacrocorax auritus*) presently nests at Lake Merced and the salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) presently occurs at Lake Merced and Sharp Park. The yellow warbler (*Dendroica petechia*) and bank swallow (riparia) have also been observed at Lake Merced. The double-crested cormorant nests on coastal cliffs and in trees. The salt marsh common yellowthroat requires saltwater or freshwater marsh and dense vegetation for nesting. The yellow warbler requires riparian woodlands and the bank swallow requires vertical cliffs near water bodies. The California clapper rail (*Rallus longirostris obsoletus*) has been observed near India Basin Shoreline Park. According to the Golden Gate Audubon Society (as reflected in their comment later dated October 31, 2011), during the bird breeding season of 2011, California clapper rail young were observed on multiple occasions at Heron's Head Park (north of the wetlands at India Basin Park). The Golden Gate Audubon Society further stated that this was the first detection of (likely) breeding California clapper rail in a considerable period, and it is believed that the nesting pair derived from rail populations further south in the Bay. In addition, the burrowing owl (*Athene cunicularia*) has been observed near Hawk Hill and Corona Heights, and the Golden Gate Audubon Society reports sightings at East Shore State Park, Cesar Chavez Park, and the Tom Bates Sports Complex in Berkeley, at Martin Luther King, Jr. Shoreline Park in Alameda, and in some South Bay locations. Bird species protected by the MBTA may occur at these and other Natural Areas.

- On Draft EIR p. 304 (first paragraph):

  The yellow warbler and bank swallow have been observed foraging over Lake Merced, but have not been observed nesting there and would therefore not be impacted by invasive vegetation removal at Lake Merced. The California clapper rail breeds in salt marsh wetlands throughout the Bay. The activities in the SNRAMP at India Basin Shoreline Park that could affect California clapper rail include removal of invasive vegetation from the wetlands and planting. The burrowing owl could be affected by the removal of grasslands and other open spaces. However, ~~I~~in compliance with the MTBA, …

California clapper rails are fully protected species under California Fish and Game Code. Fully protected species cannot be taken or possessed, except when authorized as part of a recovery action or for scientific collection. As such, Section 1.a of M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, Draft EIR p. 299, has been revised, as follows:

> For protected species and the fully protected California clapper rail, a qualified SFRPD biologist[85] shall survey for suitable habitat within the project area before the project begins, according to USFWS and CDFW protocol for the protected species having the potential to occur. If no protocol exists, surveys shall be conducted according to generally accepted survey methods. If individuals were found or if it is determined that the potential exists for protected species to be present, the SFRPD shall redesign the proposed project to avoid impacts on protected species. Avoidance/minimization measures shall include conducting project activities during periods of the species lifecycle when the species would not be affected or may be minimally affected by project activities. SFRPD shall not perform any activities that would result in take (as defined by California

[85] A SFRPD biologist knowledgeable about protected species occurring within the area proposed for disturbance. If no SFRPD biologists are familiar with the protected species occurring in the area proposed for disturbance, the SFRPD would be required to obtain a qualified biologist to conduct protected species surveys.

laws for fully protected species) of California clapper rails. If it is infeasible to avoid disturbance ~~of~~ to other protected species (besides the California clapper rail), the SFRPD will contact the USFWS or CDFW and undertake appropriate consultation according to the CESA or ESA (unless an existing Biological Opinion is already in place and the proposed activities fall under the actions of that Biological Opinion, as may be the case for impacts to the mission blue butterfly at Twin Peaks). Any additional requirements agreed to during consultation with the USFWS and CDFW, or other regulatory agencies, to protect the species would be implemented, including restoration and compensation, where required.

Comment BI-2 Corrections to permitting process

The response to Comment BI-2 addresses all or part of the following individual comment:

SFPGA-3-14

- The description of the permitting process for implementation of the Sharp Park Restoration project needs to be corrected.

  (a) Page 293 seeks to describe the state and federal permitting processes which would have to be completed prior to implementing the Restoration project. That description is inaccurate, and needs to be corrected as follows: (1) the City would not itself "consult" with the USFWS to obtain a Biological Opinion and associated Incidental Take Statement, rather such formal consultation under Section 7 of the Endangered Species Act would be performed by another federal agency, in this case the U.S. Army Corps of Engineers (although the City, as the applicant for the Corps permit, may participate in that consultation between the two federal agencies); (2) a "consistency determination" under the Fish and Game Code would not be required by the CRLF since that species is not listed as threatened or endangered under the California Endangered Species Act, and hence no take authorization from DFG is required; (3) a consistency determination for the SFGS is not available, as the SFGS is a "fully protected" species under the Fish and Game Code and DFG does not have the authority to authorize the incidental take of fully protected species; and (4) a state take permit for the western pond turtle is not required because this species is not listed as threatened or endangered under CESA. [SFPGA-3-14]

Response BI-2

This comment suggests revisions to the Draft EIR with respect to the permitting process for implementation of the Sharp Park restoration project.

As further described in Response AL-11, RTC p. 4-600, the Pumphouse Project, while separate and independent from the proposed restoration activities at Sharp Park under the SNRAMP, included the removal of 435 cubic yards of sediment and emergent vegetation within Horse Stable Pond and the connecting channel that links Horse Stable Pond with Laguna Salada. The purpose of the sediment removal of the Pumphouse Project is to improve breeding habitat for the California red-legged frog and reduce the potential for malfunction of the pumps caused either by sediment entering the pump system and/or by preventing water from entering the pump intake.

The proposed activities under the SNRAMP are articulated on Draft EIR pp. 144 to 146. These activities include dredging excess sediments and accumulated organic matter, including stands of encroaching tules, as well as other restoration activities. Under both projects, the Pumphouse Project and the SNRAMP, the SFRPD would continue to use the pumps to manage water levels in Horse Stable Pond to maintain California red-legged frog habitat. Neither the Pumphouse Project nor the SNRAMP would modify the operations of the existing pumps at Horse Stable Pond.

The SNRAMP Project is in the process of environmental review. If the EIR is certified by the Planning Commission and the Project is approved, the City will begin the permitting process for the proposed activities at Sharp Park that are part of the SNRAMP. As noted by the commenter, the City will consult with the USFWS through the U.S. Army Corps of Engineers (USACE) permitting process when preparing the Biological Assessment and obtaining a Biological Opinion and Incidental Take Permits. California Fish and Game Code Section 5050 indicates that "the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species." Because the Sharp Park restoration project is considered a recovery act, take of the San Francisco garter snake may be authorized by CDFW. It is noted that the Western pond turtle is not a state listed threatened or endangered species, but is a California Species of Special Concern. The text on Draft EIR p. 293 has been changed to clarify the permitting requirements for the Sharp Park Restoration Project, as follows:

> Before implementing the proposed Sharp Park restoration, the SFRPD would be required to undertake the following, consistent with state and federal laws:
>
> - Apply for a Section 404 permit from USACE, which would require, prior to issuance of the Section 404 permit, consultation with the USFWS regarding the biological assessment and issuance of a Biological Opinion and incidental take permit.
> - Request a Section 401 water quality certification from San Francisco Bay Regional Water Quality Control Board, or a waiver thereof.
> - Prepare a Biological Assessment and consult with the USFWS, through the USACE permitting process, to obtain a Biological Opinion and incidental take permit in accordance with the ESA.
> - Coordinate with CDFG for a consistency determination for federally and state protected species (San Francisco garter snake and California red legged frog)
> - ~~Apply for a take permit for state-only listed species (western pond turtle) pursuant to Section 2081(b) of the CESA;~~
> - ~~Obtain a permit from the US Army Corps of Engineers under Section 404 of the Clean Water Act;~~
> - ~~Obtain a water quality certification from the SFBRWQCB under Section 401 of the Clean Water Act;~~
> - Obtain a Streambed Alteration Agreement from the CDFG under Section 1602 of the California Fish and Game Code; and
> - Obtain a Coastal Development Permit, as required by the CCC.

Comment BI-3	**San Francisco sightings of Mission blue butterfly**

The response to Comment BI-3 addresses all or part of the following individual comments:

Bose-1-02 Bose-1-09

- Pg 319: Mission Blue Butterfly occurs at Twin Peaks and Sharp Park. The species is not recorded to occur at Sharp Park within the last decade. However, reintroduction is being attempted at Twin Peaks. [Bose-1-02]
- Pg 115, pg 294: Bayview Park is described as Mission Blue Butterfly habitat, without any evidence. Within the last decade, the butterfly has only been recorded at Twin Peaks. In very recent times, this is the result of importing dozens of them from San Bruno, where they do occur naturally. (The butterfly is also said to occur at Sharp Park, but again no evidence is provided.) Since this species depends on unstable disclimax habitat, only recent sightings would be relevant as the vegetation would change through natural succession. Attempts to create a habitat for this species would mean constant intervention to plant and then maintain disclimax habitats. [Bose-1-09]

Response BI-3

These comments identify where the Mission blue butterfly has been recorded within San Francisco.

Bayview Hill is identified within Draft EIR Chapter III, Project Description, as containing existing silver bush lupine (*Lupinus albifrons*), summer lupine (*Lupinus formosus*), and varied lupine (*Lupinus* sp.) populations which provide habitat for the mission blue butterfly. Table 9 identifies that the butterfly potentially occurs within McLaren Park, Bayview Park and the upper canyon at Sharp Park based on the presence of habitat. The Mission blue butterfly is known to occur on federal lands (Sweeney Ridge and Milagra Ridge) that are near Sharp Park and there is appropriate habitat for this species in the upper reaches of the canyon. In addition, the occurrence of the butterfly within these natural areas is documented in the CDFW California Natural Diversity Database, which is a record of historic occurrences of special-status species within the region, as shown in Table 9, State and Federally Listed Species That May Occur Within the Natural Areas, Draft EIR p. 278.

Comment BI-4	**Sharp Park restoration and the San Francisco Garter Snake Recovery Plan**

The response to Comment BI-4 addresses all or part of the following individual comment:

Sierra Club-1-11

- Further analysis is necessary to ensure that the Laguna Salada restoration proposals are aligned with the ongoing efforts of the San Francisco Garter Snake Recovery Plan.

  A major objective of the project is to provide habitat for the San Francisco Garter Snake, a federally listed species. In addition to ESA concerns, protection of endangered species is a priority per CEQA law as well. For instance, CEQA § 21001 (c), Additional Legislative Intent, states: "The Legislature further finds and declares that it is the policy of the state to: (…)

Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities (…)." Thus a key element in any analysis is showing how these proposals tie in with the larger goals of the SFGS Recovery Plan. We also note that the Recovery Plan is currently undergoing revision. As stated in a recent report, there has been significant evolution in biological opinion since the Recovery Plan was first issued:

> Since the initial recovery plan was published, wildlife managers have learned that the snake's upland habitat may be essential to its survival. On-going urbanization, combined with an increase in intensive agricultural operations, has contributed to the rapid loss and fragmentation of the snake's habitat and their primary prey species. The acquisition, restoration, and preservation of suitable habitat will be essential to this species' survival. (Source: National Park Service San Francisco Bay Area Network Resource Briefing, July 2010; Paul Johnson, biologist.)

Efforts should be made to analyze how the plan aligns with the most up-to-date recovery efforts, including recent research on population trends, demography, and genetics. Given the latest science on the importance of gene flow, and given the extremely vulnerable status of the species (some estimates place the total population at less than 2000 individuals), it is not enough to show that the plan provides the conditions of possibility for the survival of a subpopulation of 200 snakes. Rather, recent science shows that what is necessary is not only the provision of habitat but "ecological corridors" allowing connectivity between the isolated subpopulations. While the proposal to create an island of snake habitat in the middle of Laguna Salada may have merit, the approach may not be sufficient to satisfy the overall ecological requirements for a viable and self-sustaining snake population. [Sierra Club-1-11]

Response BI-4

This comment focuses on the merits of the proposed San Francisco garter snake habitat improvements at Sharp Park. No specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts are presented in this comment.

The following is provided for informational purposes only. The USFWS and CDFW have identified the wetland complex at Sharp Park as important habitat for San Francisco garter snake and California red-legged frog. Both agencies have suggested a restoration plan that enhances conditions in and around the wetlands to reduce the possibility of harm to and ensure the viability of the San Francisco garter snake population that is found in and around the wetlands. As described in Response BI-6, RTC p. 4-359, the activities described in the Sharp Park Restoration Plan are voluntary. During planning for the recovery effort, several broad goals were identified by SFRPD and through agency input. These goals are as follows: maintain and restore habitat for listed species, particularly the San Francisco garter snake and California red-legged frog; restore functional wetland and upland habitat that is high-value and low maintenance; comply with the requirements of state and federal regulations, including Federal Endangered Species Act (FESA) and the

California Endangered Species Act (CESA) and the Clean Water Act; and, preserve and enhance recreational opportunities that are compatible with the listed species goals. The San Francisco Garter Snake Recovery Plan was consulted when developing the Sharp Park restoration project and a local expert in San Francisco garter snake population biology and ecology guided the development of the plan. The goal of this recovery effort is to restore and enhance the San Francisco garter snake habitat in order to protect the population that currently exists there. While ecological connectivity may be an appropriate conservation strategy for some species, recent genetic data on the San Francisco garter snake may indicate that the next closest population to the one at Sharp Park/Mori Point is genetically different (Lim et al., in review); therefore, connecting the two populations may not be the best strategy to preserving the species beyond Sharp Park and Mori Point. The proposed actions at Sharp Park would not result in any increase in fragmentation of the San Francisco garter snake habitat and would serve to protect and enhance the current population of the species.

The comment also seems to suggest that CEQA requires the SNRAMP project to demonstrate that it is creating a viable self-sustaining San Francisco garter snake population. The effects of the project are measured against the baseline (existing) conditions and while the project is designed to benefit the snake, as described above, CEQA does not require project to demonstrate that it will result in self-sustaining population of the San Francisco garter snake.

Comment BI-5 Laguna Salada and Horse Stable Pond dredging effects on habitats

The response to Comment BI-5 addresses all or part of the following individual comment:

Sierra Club-1-12

- Dredging proposals need further study. A major component of the proposed project is to dredge Laguna Salada and Horse Stable Pond to create open water habitat for the red-legged frogs (RLF's). We are concerned that dredging the may actually harm existing frog and snake habitat. We are also concerned about possible contamination in the sediments, especially given the presence of the Rifle Range upstream. Further analysis, as well as characterization of core samples, is needed to determine whether the proposed approach is the right one. [Sierra Club-1-12]

Response BI-5

This comment indicates that the dredging proposal for Laguna Salada and Horse Stable Pond need further study.

As discussed in the Draft EIR under Impact BI-6, dredging would cause temporary impacts to existing San Francisco garter snake and California red-legged frog habitat. Dredging would occur during the dry period after both California red-legged frog and San Francisco garter snake breeding seasons are over. Draft EIR Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, contains avoidance measures, pre-construction activities and biological monitoring procedures that the SFRPD would be required to

adhere to in order to minimize the impacts to California red-legged frog and San Francisco garter snake during project implementation. These mitigations may be altered by resource agencies during the permit review process, as necessary.

The text on Draft EIR p. 387 (last paragraph) has been changed to clarify the discussion regarding potential contamination from the former rifle range at Sharp Park, as follows (also refer to Response HZ-4, RTC p. 4-557):

> The SFRPD used to maintain a rifle range in Sharp Park. This facility has been closed for over 13 years. Located near the archery club, this facility is outside of the Natural Areas at Sharp Park. A soil and groundwater investigation identified the presence of lead, polycyclic aromatic hydrocarbons, antimony, and arsenic in soil in an area covering approximately 4 acres; groundwater was not impacted (DTSC 2009). The Department of Toxic Substances Control issued a Notice of Exemption on August 5, 2009, for the removal action work plan for consolidation of lead-contaminated soil at the former Sharp Park Rifle Range. Implementation of the work plan involves the excavation of approximately 12,000 to 16,000 cubic yards of contaminated soil, which would be placed on-site and covered with imported clean soil (DTSC 2009). These cleanup and remediation activities ~~have been~~ were completed in January 2011. Contaminated soil in the area was excavated, consolidated onto a 1.35-acre portion of the site, and covered with 2 feet of clean soil to prevent exposure to contaminants. SFRPD will continue to monitor and periodically report to the Department of Toxic Substances Control on the effectiveness of this corrective action.

Refer also to Response BI-7, RTC p. 4-365, for a discussion of potential impacts of lagoon drainage on sediment and water quality and California red-legged frog larvae.

Comment BI-6 Adequacy of Sharp Park sensitive-species analysis

The response to Comment BI-6 addresses all or part of the following individual comment:

GGAS-1-31

- Golden Gate Audubon does not agree with the analysis provided under Impact BI-6 that the plan for Sharp Park as laid out in the DEIR will result in impacts that are less than significant to sensitive species with mitigation. (See DEIR, at 319-343) Golden Gate Audubon believes that the breadth of impacts has not been adequately described or studied in the DEIR and is concerned that the incomplete nature of the DEIR in this regard constitutes a potentially fatal flaw that is subject to challenge. Golden Gate Audubon also believes that implementation of the proposed Sharp Park project would inevitably conflict with the federal Endangered Species Act and potentially other federal and state laws, resulting in difficulty in obtaining permits and perhaps further litigation regarding the matter. Golden Gate Audubon reiterates its recommendation to the Planning Department that it tier off study of the Sharp Park project for further study and subsequent review and approval. [GGAS-1-31]

Response BI-6

This comment does not agree that impacts to sensitive species at Sharp Park would be less than significant with mitigation (as concluded in Impact BI-6 of the Draft EIR).

The conclusions reached in the Draft EIR concerning the effects of the proposed project on sensitive species and the adequacy of the mitigation measures identified are supported by substantial evidence. As stated on Draft EIR p. 322, the sensitive species present within the Laguna Salada Wetland Complex are the San Francisco garter snake, California red-legged frog, western pond turtle, and saltmarsh common yellowthroat. Impact BI-6 evaluates the potential effects of both the Sharp Park restoration activities and maintenance activities on each of these species and identifies detailed mitigation measures to lessen or avoid potentially significant impacts related to these activities. The commenter provides no support for the general opinions expressed concerning the analysis provided under Impact BI-6 or the breadth of impacts described in the Draft EIR.

As discussed in Response PD-13, RTC p. 4-175, a primary purpose of the actions described in the SNRAMP and the Draft EIR with respect to Sharp Park is to contribute to the recovery of the California red-legged frog and San Francisco garter snake. Because the Sharp Park restoration project is considered a recovery action, take of the San Francisco garter snake may be authorized by CDFW. It is noted that the Western pond turtle is not a state-listed threatened or endangered species, but is a California Species of Special Concern. The proposal described in this Draft EIR for Sharp Park (at the Laguna Salada wetland complex, where the restoration would occur) was developed in close coordination with the USFWS, CDFW, and consulting biological experts and determined to be appropriate for the recovery of the San Francisco garter snake population.

During the review of the proposed project, the resource agencies would determine the permitting requirements for the project. In order to clarify that the restoration actions described in the SNRAMP and Draft EIR are voluntary, the following text is added to the beginning of the only full paragraph on Draft EIR p. 98:

> The Sharp Park Restoration project is a voluntary and discretionary action by the City, a primary purpose of which is to provide higher quality habitat for the San Francisco garter snake, a State and Federally endangered species, as well as a species identified as fully protected under the State Fish and Game Code, and the California red-legged frog, a State threatened species; further, it is an action that is consistent with the species recovery objectives of both the federal Endangered Species Act and the California Endangered Species Act. The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. …

As stated in the Draft EIR, SFRPD would acquire all required permits and approvals, including those under CESA and FESA, from state and federal agencies before commencing work on the Sharp Park restoration project (refer to Draft EIR p. 293). The mitigation measures identified in the Draft EIR would be included, as appropriate, in applications for these permits. The state and federal resource agencies may impose additional conditions they determine to be necessary for resource protection in connection with issuance of permits for the project. Accordingly, implementation of the proposed Sharp Park project would not conflict with state or federal laws including CESA and FESA.

Comment BI-7 Impacts of lagoon drainage on sediment and water quality

The response to Comment BI-7 addresses all or part of the following individual comments:

SFPGA-3-12	Baye-1-02	Baye-1-04
Baye-1-06	Baye-1-11	Baye-1-13
Baye-1-14		

- Description of restoration project preconstruction mitigation measures is incomplete. (a) On page 102, first complete paragraph, the DEIR states that water levels in Laguna Salada, Horse Stable Pond, and the connecting channel between them, would be temporarily lowered to allow equipment to access the shoreline, and surveys would then be performed and any observed CRLF or SFGS would be relocated. This discussion should be expanded to (1) note that the capture and relocation of CRLF or SFGS may only be performed by a qualified biologist who possesses appropriate permits from the U.S. Fish and Wildlife Service and the California Department of Fish and Game, and (2) require that as part of this pre-construction process a silt fence will be installed and maintained in a manner that would prevent CRLF or SFGS from re-entering the construction zones. [SFPGA-3-12]

- **2. The DEIR fails to analyze and mitigate significant predictable impacts of preconstruction lagoon drainage, and dredging sulfidic, anoxic coastal lagoon sediments.**

  The DEIR's level of CEQA analysis of the proposed 60,000 cubic yard maximum dredging project at Laguna Salada is inadequate for a highly sensitive coastal wetland complex inhabited by two federally listed wetland-dependent endangered species (California red-legged frog, San Francisco garter snake), regardless of intended "habitat restoration" or enhancement aims. Outstanding aspects of this deficiency are evident in the lack of DEIR analysis of the following proposed "restoration" actions and impacts, as well as the omission of reasonable and feasible alternative "restoration" methods:

  > draining (dewatering) Laguna Salada prior to construction and dredging, proposed in the Sharp Park Conceptual Restoration Alternatives Report cited by the DEIR (Tetra Tech 2009, Appendix I of the DEIR)

  > if the lagoon is not drained prior to construction activities, sediment and water quality impacts of dredging in a closed fresh-brackish lagoon system where red-legged frog tadpoles are present;

  > omission of any feasible alternative methods of wetland habitat enhancement other than dredging, such as modification of lagoon water level and flooding management.

  > omission of wetland fill at the northeast end of the lagoon, where marsh is currently mown to function as golf turf, to convert them to elevated upland golf fairways (failure to identify wetlands regulated under current policy criteria of the California Coastal Commission, as well as erroneous omissions from the past Clean Water Act Section 404 wetland delineation)

  The proposed draining of Laguna Salada to prepare for "restoration" construction is clearly articulated in Appendix I of the DEIR (Tetra Tech 2009; DEIR Appendix I, p. 48), but the

impacts of draining the lagoon are not assessed in the DEIR. This is an incredibly oversized omission; dewatering the lagoon alone would be sufficient as a significant impact to trigger an EIR. Dewatering the lagoon would kill any late-maturing California red-legged frog tadpoles present in any part of the lagoon prior to dewatering, and would be expected to result in "take". This would be a highly significant impact requiring mitigation, and the only feasible mitigation measure would be to avoid draining the lagoon, i.e., an alternative method. Incredibly, the restoration plan on which the DEIR relies suggests as the only mitigation for draining the lagoon an absurd "capture and relocation" (to where?) of endangered species stranded by lagoon dewatering, with vague, unspecified actions arising during future endangered species consultation to address the uncertain feasibility of mitigation:

> … although every effort would be made to capture and relocate sensitive wildlife resources prior to construction, the possibility of harm to listed species remains although every effort would be made to capture and relocate sensitive wildlife resources prior to construction, the possibility of harm to listed species remains. Impacts to listed species would be addressed extensively during the Section 7 consultation process with USFWS and during similar consultation with CDFG, and standard and specific practices to minimize the potential for take will be developed at that time. [Tetra Tech 2009, p. 48]

The DEIR simply includes no impact analysis or mitigation for the immensely significant impact of dewatering the lagoon prior to project construction.

If the lagoon is drained, the exposure of sulfidic anoxic lagoon bottom sediments to oxygen on the drained lagoon would release hydrogen sulfide (also not addressed in air quality impacts), and cause rapid oxidation of ferrous and other reactive reduced sulfide compounds, releasing abundant sulfuric acid, ferric oxides, phosphates, and ammonia – all of which would be potentially toxic to aquatic or amphibious wildlife. The DEIR fails to disclose obvious strong indicators of highly sulfidic, anoxic sediments exposed during summer drawdown (low water levels) in the lagoon, as shown below.

> [Caption:] **Iron oxide surface films and iron sulfide accumulation of muds exposed by artificial lagoon drawdown.** Iron oxide (orange-brown mineral films indicative of oxidation of iron sulfide and acid sulfates in brackish coastal sediments subject to alternating strong hypoxia and oxidation) are apparent in drawdown-emergent muds at the northeast end of Laguna Salada (left). Organic-rich sediment immediately below the iron oxide-stained surface sediment film is deep black (right), indicative of toxic iron sulfide, formed under strong anoxic bottom conditions, exposed at the marsh surface by artificial drawdown of the lagoon.

If the lagoon is not drained for dredging, dredging would cause suspension of anoxic, sulfidic bottom sediments in the water column of the lagoon, which would potentially cause hypoxia (severe oxygen deficiency associated with high mortality of fish, amphibians, and invertebrates in the water column) and mobilization of toxic sulfides and ammonia. The DEIR severely underestimates the potential severity, complexity, and persistence of wetland impacts due to dredging anoxic, sulfidic organic lagoon bottom and marsh sediments (DEIR,

p. 370). The DEIR treats potential impacts of sulfidic anoxic sediment dredging only qualitatively, without any explicit assessment of the severity or level of significance of sediment and water quality impacts in the body of the DEIR.

The DEIR provides no sediment testing data or analysis of potential impacts of dredging anoxic, sulfidic organic brackish to fresh (past seawater-influenced, sulfur-enriched) lagoon bed sediments. Suspension of highly reduced organic "black ooze" organic sediments of the lagoon bed has high potential for causing potentially lethal impacts to California red-legged frog tadpoles due to mobilization of toxic sulfides (hydrogen sulfide, ferrous sulfide), ammonia, and subsequent short-term water column hypoxia, and persistent aerobic formation of toxic acid sulfates and nitrates. The DEIR similarly provides no assessment of potential eutrophication impacts (excessive nutrient loading) of the lagoon due to liberation of ammonia/ nitrate and phosphates from suspended anoxic dredged bed sediments. The DEIR impermissibly defers dredge sediment testing analysis and mitigation to future permit processes, as part of a programmatic rather than project-specific mitigation measure (Mitigation HY-3).

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

> fails to disclose the dewatering (draining) of the lagoon as a restoration construction measure proposed in Appendix I of the DEIR;

> fails to analyze sediment and water quality impacts of mobilizing sulfidic, anoxic lagoon bed sediment, and subsequent acid sulfate soil formation; [Baye-1-02]

- The DEIR specifically fails to identify, assess, avoid, or mitigate potential significant acute impacts of dredging to California red-legged frog larvae (tadpoles. the aquatic life-history phase) due to hypoxia and sulfide toxicity due to dredging-induced suspended sulfidic sediments and organic matter in the water column. The DEIR also fails to address overwhelming potential impacts of draining and dewatering the lagoon, a destructive method of facilitating lagoon excavation proposed in the Sharp Park Conceptual Restoration Alternatives Report (p. 45).

  Because the DEIR is intended to be project-specific for Sharp Park, and is the lead CEQA document for the project, the deferral of potentially significant dredge sediment impacts and mitigation to future (CEQA responsible and trustee) regulatory agency review is inappropriate, and I believe it is also impermissible under CEQA.

  4. Summary of CEQA deficiencies and recommendations for remedies.

  In summary, the DEIR:

  > fails to analyze impacts or mitigate impacts of lagoon drainage and dewatering;

  The DEIR consequently fails to provide adequate project-level CEQA analysis for the highly significant potential Sharp Park Restoration project impacts, and provides inadequate even for programmatic CEQA of this project.

In my independent opinion as a professional coastal ecologist with extensive experience in management of coastal lagoon wetland ecosystems in this region, the proposed Sharp Park "restoration" project, as currently proposed, is likely to cause risks of more long-term significant environmental harm than good. Risks of long-term harm to the lagoon ecosystem and its resident endangered species would be due to inadequate planning, inadequate scientific understanding and analysis of the lagoon's degradation, inadequate scientific peer review of project design, inadequate CEQA analysis of the impacts of the proposed "restoration" project, and inadequate CEQA analysis of feasible alternatives. [Baye-1-04]

- The mitigation measures for Laguna Salada dredging water quality impacts in the DEIR (HY-3) were as cursory and inadequate as the impact analysis: they relied on generalized programmatic, generic best management practices that do not address specific issues of dredging sulfidic lagoon bottom sediments (HY-1, BI-12). The DEIR cannot defer substantive mitigation to future mandatory permits from other agencies (BI-12a mitigation) to address the impacts caused by projects of the CEQA lead agency. The few substantive physical mitigation measures identified for sulfidic sediment dredging (such as addition of lime to dredge spoil sediment) do not address potentially significant water column and water quality impacts in the lagoon itself, which may include acute anoxia or hypoxia, acute short-term concentration of hydrogen sulfide, ferrous sulfide, and ammonia, and long-term liberation of metals (including heavy metals) and acid sulfates. The few programmatic mitigation measures for dredging are based on future dredge sediment testing without any corresponding physical actions to actually minimize impacts: they contain no contingency measures to avoid or minimize impacts if anoxic sulfidic sediments are widespread and problematic for dredging — as should be expected from strong field indicators of widespread intensive formation of ferrous sulfide in bed sediment below surface, and rust-colored ferric oxide films at the surface of the emergent northeastern lagoon flats in summer. The rigor of mitigation feasibility assessment, like the corresponding impact analysis for water quality impacts of dredging, were grossly deficient even for an Initial Study, let alone a full project-level DEIR.

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

> fails to present essential dredge sediment testing data specific to anoxic sulfidic lagoon bed sediments, and analyze sediment (and contaminant) fates and impacts in the context of the sensitive wetland and endangered species habitat, and impermissibly defers dredge sediment testing data analysis and mitigation to post-EIR permitting; [Baye-1-06]

- In addition, the report utterly neglects one of the principal constraints on dredging or excavating anoxic, organic wetland soils – excessive release of toxic sulfides, and their subsequent acid sulfate oxidation products. Failure to address sulfide and sulfate toxicity in wetland excavation can result in extreme mortality of wildlife, and inhibition of wetland revegetation. This omission adds to the strained technical credibility of the report. [Baye-1-11]

- Most astonishing of all is the report's assumption (p. 48) that the lagoon should or must be drained in order to implement "enhancement" work. This not only technically in error, it is absurd. Amphibious excavation equipment (floating or low ground-pressure tracked vehicles) is routinely used in wetland engineering, and is the professional standard for minimizing impacts during wetland construction. Draining wetlands at Laguna Salada would cause intolerable impacts (likely including increased salinity intrusion) and is unwarranted for any reasonable enhancement alternative. [Baye-1-13]
- The number of significant errors of omission and invalid assumptions about wetland ecology in the report suggest that the authors lack adequate experience and expertise for coastal wetland planning, and failed to solicit adequate technical peer review or supplemental consulting services to remedy techmcal deficiencies.

  Conclusion. The Sharp Park conceptual alternatives report is fundamentally flawed as a coastal habitat planning document for both short-term and long-term conservation or land uses. The report either omits or misinterprets fundamental geomorphic and hydrologic controls of coastal lagoon wetland ecology that are essential to long-term conservation planning. The habitat enhancement recommendations in the report utilize unrealistic ecological and wetland engineering assumptions, and are likely to be infeasible in the long term. Many of the report's basic assumptions conflict with or are unsupported by the scientific literature on coastal processes, wetlands and lagoons. In my professional opinion, the report should be either set aside or subject to rigorous interdisciplinary scientific peer review, including expertise in coastal geomorphology and engineering, wetland hydrology, and ecology. [Baye-1-14]

Response BI-7

These comments questions whether draining the lagoon in Sharp Park is necessary; the extent to which sediment and water quality impacts could occur; the potential for the exposure of sulfidic anoxic lagoon bottom sediments to oxygenate in the lagoon; the potential for alternative methods of wetland habitat enhancement (e.g., other excavation equipment); and the extent of wetlands impacted in the northeastern portion of the lagoon. One comment also suggests that the description of proposed restoration project is incomplete and makes suggestions for how it could be expanded and/or revised.

These comments also address impacts to California red-legged frog larvae (including the aquatic life-history phase) due to hypoxia and sulfide toxicity as a result of dredging-induced suspended sulfidic sediments and organic matter in the water column and questions the Draft EIR's analysis of impacts of draining and/or dewatering the lagoon.

As mentioned, these comments address several issues. While some of these issues are related, they require separate responses in order to fully address the comment; therefore, the following headings are provided: draining the lagoon; sediment and water quality impacts; acid sulfate soil conditions (Sharp Park); use of suction hydraulic equipment; sediment testing and mitigation; alternative methods of habitat enhancement; and wetlands in the northeastern portion of the lagoon.

Draining the Lagoon

The proposed project does not include draining the lagoon in Sharp Park in order to conduct restoration activities. Instead, water levels would be lowered by use of the pumps, but, once it drops below the level of the culvert, it would remain at a static level. While the Sharp Park Conceptual Restoration Alternatives Report indicated that the lagoon and pond would be drained, SFRPD subsequently determined that it would not be necessary in order to complete the restoration activities. The work that would be required is accurately described in Draft EIR Chapter III, Project Description, p. 102, which identifies the construction activities required to implement the restoration plan, as follows:

> "To facilitate deepening of Laguna Salada, Horse Stable Pond, and the channel that connects them, as well as removal of encroaching bulrushes and tules, the water levels would be lowered temporarily to allow equipment to access the shoreline for removal of accumulated vegetation and sediments. This would be accomplished by operating the pumps at Horse Stable Pond to draw water through the wetland complex and out to the Pacific Ocean. It is anticipated that the water level in the wetland complex would be lowered from an approximate elevation of 7.5 feet above mean sea level (msl) to an elevation of approximately 4.5 feet msl, a decrease of 3 feet. Following lowering of the water levels, a qualified USFWS-approved biologist would survey the entire project area for California red-legged frogs and San Francisco garter snakes. If individuals are found during the survey, the biologist would relocate them to appropriate aquatic habitat, such as that near Mori Point, located south of Horse Stable Pond (or other suitable location as agreed to as part of consultation with the USFWS and/or CDFG); these activities would be conducted in coordination with the USFWS and CDFG."

The text on the fourth paragraph of Draft EIR p. 103 has been changed to clarify the specific species that are being discussed, as follows:

> To protect the California red-legged frogs and San Francisco garter snakes during restoration work, the SFRPD anticipates conducting the restoration activities between May 1 and October 15 and would continue to coordinate the planning and undertaking of these activities with the USFWS and CDFG; this activity period avoids the breeding season for the California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. …

If water levels in Horse Stable Pond or Laguna Salada fall below sea and beach groundwater levels, then saline groundwater may flow into the lagoon from the beach.[86] The California red-legged frog cannot breed when salinity levels exceed approximately four parts per thousand (ppt).[87] Although salinity levels may increase in Horse Stable Pond during construction activities, consistent with the Draft EIR, construction is prohibited from November 15 through April 15 (and allowed between

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86 U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California*, October 2, 2012 ("Biological Opinion").

87 Swaim Biological Incorporated, *Sharp Park Wildlife Surveys,* December 4, 2008.

May 1 and October 15)[88] to avoid the breeding season of California red-legged frog; however, the exact dates restoration-related construction activities are allowed or prohibited will ultimately be determined by the resource agencies as part of the permitting process.

After construction is complete, winter storm runoff would result in substantial freshwater inputs to the wetland complex, causing any increased salinity levels to return to baseline levels. Therefore, the potential impacts to California red-legged frog associated with increased salinity levels would be temporary, would occur outside the breeding season for California red-legged frog, and would not be considered significant.

Refer also to Response HY-2, RTC p. 4-493, for a further discussion of the salinity assessment prepared for the Pumphouse Project, and refer to Response AL-11, RTC p. 4-600, for further evidence that increasing the system's storage capacity through extensive dredging would not result in diminished water levels or compromised water quality (including salinity levels).

Sediment and Water Quality Impacts

Sediment and water quality impacts associated with the proposed dredging activities at Sharp Park are presented in Impact HY-3 (on Draft EIR pp. 370 to 372) and Impact BI-6 (on Draft EIR pp. 320 to 330).

Acid Sulfate Soil Conditions (Sharp Park)

Since publication of the Draft EIR in 2011, a Final Mitigated Negative Declaration (FMND) was prepared for the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project (Pumphouse Project), which includes, among other project elements, removal of sediment and emergent vegetation within Horse Stable Pond and the connecting channel that links Horse Stable Pond with Laguna Salada. The Pumphouse Project contains similar elements, although smaller in scale, to what is proposed as part of the SNRAMP project for Sharp Park; therefore, the information and analysis provided in the FMND with respect to acid sulfate soil conditions would apply to the SNRAMP project, and is provided as a series of text changes to the SNRAMP Draft EIR.

The text on Draft EIR pp. 370 to 371 (last paragraph) has been changed, as follows:

> Dredged materials could result in potential impacts on water quality through conversion of the chemical characteristics of the soil after exposure to oxygen. Coastal lagoons, such as Laguna Salada and Horse Stable Pond, are sometimes favorable environments for the accumulation of sulfide minerals from biological decay and lack of oxygen. The sulfides can be converted to sulfuric acid when exposed to atmospheric oxygen by dredging them and placing them on the ground surface. Although not expected to significantly alter surface water pH, acidic soils could have undesirable localized effects on sensitive aquatic habitat. As described in Section III.F.2 (page 99), "Prior to on-site use of dredged material, the sediments to be removed as part of the wetland

[88] To clarify, the SNRAMP Draft EIR allows restoration (or construction) activities between May 1 and October 15 and prohibits restoration (or construction) activities between November 15 and April 15.

restoration project would be tested for elevated concentrations of sulfides and other characteristics to determine whether the sediments would serve as soils suitable for supporting desired vegetation. If the sediment proves unsuitable, it would be placed in a nonsensitive location or treated to render it capable of supporting the desired vegetation. Treatment may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils or adding lime to neutralize acidic soils." ~~sediments would be tested to determine if elevated concentrations of sulfides are present and if the sediments could serve as soils suitable for supporting desired vegetation. Treatment of acidic soils may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils, placing the dredged material in a nonsensitive location, or treating the dredged material with lime to neutralize the acid.~~

Environmental effects that could occur from excavating sediments in the presence of acid sulfate soils may include one or more of the following: (1) increase in sulfuric acid; (2) decline in pH; (3) increase in dissolved metal concentrations (aluminum, iron, and arsenic); and (4) increased incidence of hypoxia.[89] Any of the above effects could result in significant impacts (e.g., effects that could jeopardize the continued existence of a population of special-status species or effects to water quality beyond thresholds indicated in state or federal water quality standards).

A literature search indicates that very little research has been done on acid sulfate soils in the San Francisco Bay Area. One case in which acid sulfate soils have arisen as a concern is at the Bair Island tidal marsh restoration area, in Redwood City, California. In that case, the main concern was that sediments that had been excavated and stockpiled for re-use at the site contained sulfides that converted to sulfates as the sediments dried out. Re-use of these materials could result in acidic and hypoxic conditions. Aside from the case above, the literature search did not identify other case studies where acid sulfate soils effects have occurred in Bay Area restoration sites.[90]

Removal of sediment in the connecting channel between Horse Stable Pond and Laguna Salada was reported to have occurred more than 10 years ago. While it was smaller in scale than what is proposed as part of the SNRAMP project, at that time, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified. Also, at the time of the previous removal, it was reported that the bottom of Horse Stable Pond was lined with gravel. The previous sediment removal activity removed sediments that had accumulated after the seawall was constructed. Because the sediment to be removed as part of the proposed project is likely to have only accumulated since the last removal activity, it is unlikely that acid sulfate soils would exist in the sediments to be excavated. Sources of these sediments include input from the watershed during storms, as well as accumulated organic matter from dead and decaying vegetation in the watershed complex. This means that these sediments accumulated without the saline conditions that allow acid sulfate soils to form and can be eliminated as a contributor to acid sulfate soils conditions,[91] supporting the conclusion that the proposed sediment and vegetation removal would not likely result in the substantial disturbance of acid sulfate soils in the water column and would not, in turn, result in a significant impact to special-status species.

In summary, other reasons supporting the conclusion that it would be unlikely for hypoxic conditions to occur during the proposed sediment and emergent vegetation removal include the

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89 Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc., *Acid Sulfate Soils Technical Memorandum,* August 27, 2013.

90 Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc., *Acid Sulfate Soils Technical Memorandum,* August 27, 2013.

91 Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc., *Acid Sulfate Soils Technical Memorandum,* August 27, 2013.

following: (1) when sediment was previously removed from the connecting channel approximately 10 years ago, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified; (2) the sediment to be removed as part of the proposed project has only accumulated since the last removal activity, which would have removed all the sediment that accumulated before the current seawall was constructed, and, therefore, has accumulated without the saline conditions that allow acid sulfate soils to form; (3) the Biological Opinion for the Pumphouse Project concluded that the project would not jeopardize the continued existence of California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; and (4) in compliance with the Pumphouse project, soil sampling was completed and no acid soil sulfates were found. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR.

On November 22, 2013, Fugro Consultants (Fugro) collected shallow sediment samples from four locations (one on the west side of Laguna Salada, two at Horse Stable Pond, and one in the connecting channel).[92] The purpose of the sediment sampling and analyses was to evaluate the potential for acid sulfate soil conditions in advance of planned soil and vegetation removal. The sediment samples collected by Fugro were then analyzed by Tetra Tech.[93] Page 3 of the Tetra Tech memorandum concluded that "There is no indication that acid sulfate soils are found within the upper 3 feet of sediments, which is the depth proposed for sediment and vegetation removal. The sulfate concentrations found near the surface of the sediment cores in all cases reflect sources from the surrounding land use activity." Page 3 further concludes that "Nothing in the sediment analysis showed any naturally-occurring biological reason that excavation of sediments could cause elevated pH levels, therefore if elevated pH levels do occur they would likely be evidence of an artificial deposit of material that can elevate pH if allowed into the water column." These reports were provided to the USFWS and CDFW. In response,[94] Mr. Erickson, on behalf of the USFWS, stated that "I have reviewed the information you submitted to the Service, and agree with the methods and conclusions of the report."

In order to ensure potential impacts are mitigated to a less-than-significant level, in the unlikely event that anoxic conditions materialize, pertinent aspects of Pumphouse FMND Mitigation Measure M-BIO-2b, Protection of Special-Status Species and Water Quality from Acid Sulfate Soils and Other Components, p. 124, are incorporated into Draft EIR Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326. Pumphouse FMND Mitigation Measure M-BIO-2b was subject to public review and comment,

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92 Fugro Consultants. Memorandum from Glenn Young, PG, LEED AP, and Jeriann Alexander, PE, REPA, Fugro Consultants, to Matt Jasmine, to Matt Jasmin, SFRPD. *Sediment Sampling and Analyses Sharp Park Habitat Restoration Project, Pacifica, California,* October 10, 2014.

93 Tetra Tech. Memorandum from David Munro and Robert Plotnikoff, Tetra Tech, to Sarah Jones, San Francisco Planning Department. *Sediment Core Chemistry Evaluation, Laguna Salada and Horse Stable Pond Sediment and Vegetation Removal Project,* April 28, 2015.

94 Email from Peter Bjorn Erickson, USFWS, to Stacy Bradley, SFRPD, May 19, 2015.

which allows SNRAMP Draft EIR Mitigation M-BI-6a to be further informed by that public process. In addition, the two mitigation measures are consistent with one another, which further supports a consistent implementation effort.

As described in the Pumphouse Project FMND on p. 84, the toxic pathways analysis method for analyzing the potential for bioaccumulation of toxics in the environment is an approach recommended by the USEPA for determining risk to wildlife and plants. Pathways analysis is used to determine environmental conditions that would mobilize toxics and increase exposure that could have chronic or acute effects. If this analysis indicates that their presence could potentially result in substantial stress to special-status species, the mitigation measure requires SFRPD to implement remediation measures, as approved by the USFWS and CDFW, to ensure that impacts to special-status species are reduced to a less-than-significant level. Further, this mitigation measure also provides for post-construction monitoring of pH levels for a period of six weeks after the proposed sediment and vegetation removal is completed to ensure that conditions are within the established toxicity standards; if monitoring indicates that additional remediation is necessary, the mitigation measure requires such remediation to be completed.

Similar to the Pumphouse FMND Mitigation Measure M-BIO-2b, Protection of Special-Status Species and Water Quality from Acid Sulfate Soils and Other Components, p. 80, SNRAMP Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, would also require soil sampling tests, as necessary, prior to commencement of the proposed sediment and vegetation removal, and review of the results of such soil sampling tests by resource agencies, including the USFWS, CDFW, and any other applicable responsible agencies. If soil sampling shows that acid sulfate soils could be present and/or there is the potential for anoxic conditions in the water column, the mitigation measure requires SFRPD to perform a toxic pathways analysis to determine potential risks and toxicities to species that may be affected by localized increases in acidity, hypoxia, or dissolved metals concentration and to determine the appropriate remediation measures.

While hypoxic conditions are unlikely to occur for all of the reasons provided in the above text change to the Draft EIR, in the event that they do materialize, the text on Draft EIR pp. 326 to 328 (Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326) has been changed, as follows:

> **M-BI-6a: Protection of Protected Species during Implementation of the Sharp Park Restoration Project**
>
> The SFRPD shall implement the following, subject to modification during the required regulatory approval processes:
>
> **Avoidance Measures:**
>
> ■ The number of access routes, the size of staging areas, and the total area of activity would be the minimum necessary to achieve the project goals and to the extent feasible access routes shall be located in upland areas;

- Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project;
- The construction documents for the Sharp Park restoration project would identify construction staging areas, access corridors, and work zones that are least impactful to biological resources, as well as golf play and operations. Avoidance of wetlands and other biological resource areas, however, would take precedence over avoidance of golf play areas, such that golf play and operations would be impacted rather than biological resources;
- After surveying the construction site for special-status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no San Francisco garter snakes, California red-legged frogs, or western pond turtles enter the area; fencing will meet CDFG specifications so as to avoid impacts to species potentially getting trapped in the fence.
- No restoration and construction shall occur between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows, although shrubs and willow posts may be planted by hand after the first rains, and weeds may be removed within 15 feet of aquatic areas during these times;
- Before moving any vehicles that remain stationary for longer than 30 minutes, the biological monitor would inspect those vehicles to ensure that no animals had crawled beneath them for cover;
- During project activities, all trash that could attract nonnative predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

Pre-Construction and Construction Activities:

- Prior to commencement of any on-site work related to the proposed removal of sediment and emergent vegetation in the Laguna Salada wetland complex, which includes the Horse Stable Pond and the connecting channel and culverts that link Horse Stable Pond and Laguna Salada, additional sediment core sampling tests shall be conducted, as necessary, in the manner specified in this mitigation measure to determine whether there are elevated concentrations of sulfides or other soil characteristics that would render the soils unsuitable for supporting the desired vegetation.

  The results of the sediment core sampling tests shall be submitted to the USFWS and CDFW for review prior to commencement of any on-site remediation work or sediment/vegetation removal work at Horse Stable Pond or the connecting channel and culverts.

  If remediation measures are required based on the results of the sediment core sampling tests, the SFRPD shall submit a remediation and monitoring plan (prepared by a qualified biological/hydrological consultant) to all applicable resource agencies for review prior to implementation of the remediation measures. Alternatively, the soils could be placed in a nonsensitive location. Copies of all correspondence with the resource agencies shall be submitted to the ERO. The sediment core sampling tests shall include the following elements:

1. Work Plan

   A Work Plan for sediment core sampling tests shall be prepared by a qualified SFRPD biological/hydrological consultant and submitted to the USFWS and CDFW for review. The Work Plan shall describe, at a minimum, compliance with Tasks 2 through 5 of this part of the mitigation measure, as well as the "During and Post-Construction pH Monitoring" requirement (see following section). Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

2. Sampling of Sediment Cores

   The locations of any additional sampling shall be determined pursuant to the work plan developed in accordance with Task 1, above. Sample sediment cores shall include the soils between the current surface sediment level and approximately two to three feet below the current surface. This depth shall be at least one foot below the proposed depth of the future sediment-water interface.

3. Analysis of Sediment Cores and Estimation of the Potential for Formation of Acid Sulfate Soils

   The sediment cores shall be analyzed every five centimeters over the first 20 centimeters of core depth and then every 10 centimeters, or as appropriate based on field conditions, for the remainder of the core length for the following components: Total Organic Carbon (TOC), carbonate/bicarbonate, sulfate, sulfide, sulfites, pH, calcium, sodium, iron, aluminum, chloride, conductivity, redox potential, refractory organics, organic nitrogen, total phosphorus, ammonia, nitrate+nitrite nitrogen, soluble reactive phosphorus, organic phosphorus, loosely-sorbed phosphorus, iron-phosphorus, iron-phosphorus, aluminum-phosphorus, and calcium- phosphorus. Sediment core chemistry shall be analyzed to assess the potential reduction of sulfate to form hydrogen sulfate, iron sulfides, and reduction buffering capacity relative to acid-neutralizing capacity.

   In addition, sediment oxygen demand (SOD) in the sediment cores shall be measured. Results shall be compared to the total oxidizable organic material, which would be estimated from the difference of TOC and refractory organic carbon (labile carbon). These results shall be used in the analysis of potential for formation of anoxic conditions within the Laguna Salada Wetlands Complex.

   Sediment cores shall be analyzed based on Toxicity Reference Values (TRVs) from the USEPA and Screening Quick Reference Tables (SQuiRT) from the National Oceanic Atmospheric Administration.[95] A draft summary of potential toxics shall be provided to the USFW, CDFW, and ERO for review and, if needed, revision will be made to the toxicity ranges appropriate for use in analyzing the sediment cores.

[95] NOAA, Office of Response and Restoration. SQuiRT Cards. This document is available online at: http://response.restoration.noaa.gov/cpr/sediment/squirt/squirt.html, accessed on July 17, 2013.

The potential for formation of acid sulfate soils and anoxic conditions in the water column shall be estimated based on this analysis and in coordination with the USFWS and CDFW. If this analysis determines that acid sulfate soils could be present in this location, the SFRPD shall perform a toxic pathway analysis to determine the appropriate remediation measures. The analysis results and determination shall be submitted to the USFWS, CDFW, and ERO.

4. Toxics Pathway Analysis

Should the potential for acid sulfate soils and anoxic conditions be present, a toxics pathway analysis shall be conducted for potential risks and toxicities to species that may be affected by localized increases in acidity, hypoxia, or dissolved metals concentration. During this Task, toxicity standards shall be established in coordination with the USFWS, CDFW, and ERO based on the results of Tasks 2 and 3 above, site-specific hydrologic conditions including water exchange and dissolved oxygen levels, the species that are known to be present, and literature review. The results of this task shall be submitted to the USFWS and CDFW and any applicable responsible agencies for review and comment. Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

Should the results of the sediment core tests reveal that there has been an appreciable increase in the amount of nitrogen and related compounds in the sediment cores, any necessary measures to remediate such compounds shall be undertaken in accordance with Task 5, below. The SFRPD shall hire a qualified biological/hydrological consultant to prepare a remediation and monitoring plan which shall be submitted to the USFWS and CDFW for review and approval. Copies of all correspondence with the resource agencies shall be submitted to the ERO for review.

5. Remediation

If results of the sediment core chemistry analysis reveal the potential for reduction of sulfate to form hydrogen sulfate, iron sulfides, and its reduction in buffering capacity relative to acid-neutralizing capacity, or if the toxics pathway analysis indicates that their presence could potentially result in substantial stress to special-status species, the SFRPD shall implement remediation measures.

Remediation measures could include, but are not limited to:

a. Addition of lime to neutralize any acid that exists or which may form during the sediment removal process;

b. Injection of sodium nitrate to oxidize the sediments, thereby satisfying the sediment oxygen demand; or

c. Use of suction hydraulic sediment removal that reduces re-suspension of any form of sediments.

Depending on the severity of the condition (e.g., hypoxia), the remediation measure selected for implementation would be the least intensive beginning with Item a, when signs of hypoxia are present, to the most intensive with Item c, when hypoxia is persistent and/or widespread. The SFRPD shall select the remediation measure in consultation with the USFWS and CDFW. The

remediation measure shall be selected based on immediate threats to species and sensitive life stages present during occurrence of the hypoxic condition.

- A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and the proper protocol should a protected species be encountered. The training shall include a discussion of the importance of maintaining speed limits and respecting exclusion zones. The SFRPD and its construction contractor shall confirm that all workers have been trained appropriately.
- Two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the USFWS and/or CDFG to determine whether relocating any life stages is appropriate. Collection of California red-legged frogs, San Francisco garter snakes, and western pond turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat;
- Upland vegetation in all construction areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of protected species prior to disturbance and prior to construction equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake, western pond turtles, and California red-legged frogs will be conducted in the impact area.
- Prior to construction near wetlands or ponds, all rodent burrows in the construction area will be hand excavated until the burrows terminate or to a maximum depth of 30 centimeters in areas where soil or fill will be removed or placed.

Biological Monitor:

- A biological monitor familiar with the identification and life history of California red-legged frog, San Francisco garter snake, western pond turtle, and other potentially present protected species, and with the appropriate agency authorization, shall be designated to periodically inspect onsite compliance with all mitigation measures.
- The biological monitor shall perform a daily survey of the entire project area during construction activities. During these surveys, the monitor shall inspect the exclusion fencing for individuals trapped within the fence and determine the need for fence repair. Throughout the duration of the project, the monitor shall continue to perform daily fence surveys and compliance reviews at the project site. The monitor shall be designated prior to project implementation and shall have at least one specialty environmental monitor on call, with a valid 10(a)(1)(A) permit to handle listed species. The specialty monitor shall direct all personnel in regards to interactions with protected species, perform authorized species relocations, and supervise all reporting on such species.
- Bullfrog monitoring will occur and egg masses detected shall be removed.

During and Post Construction pH Monitoring:

During sediment and vegetation removal in the Laguna Salada Wetland Complex, pH levels immediately above the sediment shall be monitored by the SFRPD to ensure that

> implementation of the proposed project would not adversely affect special-status species.[96] To ensure that residual acid sulfates in the water column would not adversely impact special-status species, pH levels in Horse Stable Pond and the connecting channel shall be monitored by the SFRPD for a period of six weeks after the proposed sediment and vegetation removal is completed. A remediation measure, such as addition of lime or injection of sodium nitrate, shall be implemented if the monitoring warrants such a remediation measure to protect special-status species based on the toxicity standards that are established in accordance with Task 4 above.[97]

Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326 in the Draft EIR, specifically indicates that two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the USFWS and/or CDFG to determine whether relocating any life stages is appropriate. Collection of California red-legged frogs, San Francisco garter snakes, and western pond turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat. The mitigation measure also states that after surveying the construction site for special-status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no San Francisco garter snakes, California red-legged frogs, or western pond turtles enter the area; fencing will meet CDFW specifications so as to avoid impacts to species potentially getting trapped in the fence.

As stated, amended Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, describes the specific measures and performance standards required to mitigate adverse impacts to special-status species as a result of potential acid sulfate soil conditions in the unlikely event that they occur. Draft EIR Section V.H, Hydrology and Water Quality, also identifies Mitigation Measure M-BI-12b, Laguna Salada Restoration Project Wetland Mitigation Plan, p. 340, which addresses post-construction monitoring of water quality; Mitigation Measure M-HZ-13, Emergency Response Plan for Accidental Releases of Hazardous Materials, p. 395, which addresses the procedures to follow if unanticipated spills of hazardous materials occur; and Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, which describes the National Pollutant Discharge

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[96] pH is an indicator of anoxic conditions at the sediment-surface water interface. Under anoxic conditions, hydrogen ion availability increases and binds with sulfides mobilized from sediments. Rates of transformation of sulfur are mediated by microorganisms in both the sediments and surface water. Suspension of hydrogen sulfide (H_2S) in the water column is oxidized in surface water to form sulfuric acid (H_2SO_4).

[97] David Munro, Tetra Tech, Inc., Email to Stacy Bradley, SFRPD, Sharp Park Appeal: M-BI-2b – Post Construction Monitoring, January 7, 2014.

Elimination System (NPDES) General Construction Permit process. The text on Draft EIR p. 372 (after the third paragraph) has been changed to refer to Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, and to present an impact conclusion, as follows:

> In order to ensure that hypoxic conditions do not materialize and to mitigate such conditions in the unlikely event that they do occur, Mitigation Measure M-BI-6a would be implemented by the SFRPD to reduce the potential for adverse impacts to special-status species as a result of acid sulfate soils and other components by prescribing avoidance measures, pre-construction activities (e.g., worker education program, aquatic habitat surveys, hand-clearing of vegetation, and hand excavation of burrows, sediment core sampling tests, and toxic pathways analysis), remediation activities (if the results of the sediment core chemistry analysis reveals the potential for the reduction of sulfate or if the toxics pathway analysis indicates that their presence could potentially result in substantial stress to special-status species), and monitoring (e.g., biological and pH). Therefore, with implementation of Mitigation Measure M-BI-6a, a ***less-than-significant*** impact to special-status species (as a result of acid sulfate soil conditions) would occur.

In addition, Draft EIR Section V.G, Biological Resources, has been amended to include analyses and conclusions from the Pumphouse FMND concerning potential impacts to the California red-legged frog caused by acid sulfate soil conditions, as well as the findings of the USFWS's formal endangered species consultation for the Pumphouse Project (also referred to as the "Biological Opinion") for both the California red-legged frog and the San Francisco garter snake.[98]

The text on Draft EIR pp. 323 to 324 (beginning with the last paragraph on Draft EIR p. 323) have been changed to address impacts caused by potential anoxic conditions to the California red-legged frog or San Francisco garter snake, followed by a discussion of the findings of the Biological Opinion for the Pumphouse Project, as follows:

> ***California Red-Legged Frog.*** During restoration, impacts to California red-legged frogs from the Sharp Park restoration project would be similar to those described above for San Francisco garter snakes. Temporary impacts from construction activities would result in the disturbance of feeding, breeding, and dispersal behaviors. The removal of encroaching vegetation may disturb California red-legged frogs sheltering within the plants. Project activities that may cause California red-legged frogs to move out of their resident habitat may cause injury or mortality due to lack of adequate forage or cover. Impacts also would occur from construction activities involving vehicle traffic and the use of heavy equipment which could result in direct mortality of individuals. Short-term impacts of construction activities that result in injury, mortality, and habitat disturbance would result in significant impacts on the frog. Implementing Mitigation Measure M-BI-6a includes pre-activity surveys, a worker education program, a biological monitor during construction activities, in addition to an on-call specialty environmental monitor with a valid 10(a)(1)(A) permit to handle California red-legged frogs and relocate as needed, and additional avoidance and minimization measures which include vegetation being cleared by hand equipment to a height of 4 inches and checked for the presence of frogs prior to construction and vehicles

[98] U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California*, October 2, 2012 ("Biological Opinion").

entering the site. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. These measures would reduce impacts to California red-legged frogs from restoration activities. As described above, Mitigation Measure M-BI-6a would ensure that measures are taken to effectively move individuals out of harm's way. This measure would reduce the impact to California red-legged frogs by avoiding and minimizing impacts sufficiently to ensure no injury or mortality of individual frogs to the maximum extent feasible.

Sedimentation. ~~Additionally,~~ California red-legged frogs may be adversely affected by increased sedimentation caused by runoff associated with the project activities. Erosion control measures such as straw mulch, sediment traps, and wattles would be installed to eliminate the potential for sediment discharge in to the wetlands during the construction process, as described under Mitigation Measure M-HY-1. Implementing Mitigation Measures M-HY-1 and M-BI-6a, which includes measures to install silt fencing would reduce impacts to California red-legged frogs from sedimentation during restoration by avoiding and minimizing impacts to the California red-legged frog and its habitat to sufficiently avoid injury or mortality of the frog. With implementation of M-BI-6a and M-HY-1, the short-term impacts of Sharp Park restoration activities on the California red-legged frog as a result of sedimentation would be ***less than significant***.

Acid Sulfate Soil Conditions. When exposed to dissolved or atmospheric oxygen, sulfides transform to sulfuric acid, which in turn results in the formation of acid sulfate soils. Environmental effects that could occur from excavating sediments in the presence of acid sulfate soils may include one or more of the following: (1) increase in sulfuric acid; (2) decline in pH; (3) increase in dissolved metal concentrations (aluminum, iron, and arsenic); and (4) increased incidence of hypoxia.[99] Any of the above effects could result in significant impacts (e.g., effects that could jeopardize the continued existence of a population of special-status species or effects to water quality beyond thresholds indicated in state or federal water quality standards).

A literature search indicates that very little research has been done on acid sulfate soils in the San Francisco Bay Area. One case in which acid sulfate soils have arisen as a concern is at the Bair Island tidal marsh restoration area, in Redwood City, California. In that case, the main concern was that sediments that had been excavated and stockpiled for re-use at the site contained sulfides that converted to sulfates as the sediments dried out. Re-use of these materials could result in acidic and hypoxic conditions. Aside from the case above, the literature search did not identify other studies where acid sulfate soils effects have occurred in Bay Area restoration sites.[100]

Removal of sediment in the connecting channel between Horse Stable Pond and Laguna Salada was reported to have occurred more than 10 years ago. While it was smaller in scale than what is proposed as part of the SNRAMP project, at that time, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified. Also, at the time of the previous removal, it was reported that the bottom of Horse Stable Pond was lined with gravel. The previous sediment removal activity removed sediments that had accumulated after the seawall was constructed. Because the sediment to be removed as part of the proposed project is likely to have only accumulated since the last removal activity, it is unlikely that acid sulfate soils would exist in the sediments to be excavated. Sources of these sediments include input from the watershed during storms, as well as accumulated organic matter from dead and decaying vegetation in the watershed complex. This means that these sediments accumulated without the saline conditions that allow acid sulfate soils to form and can be eliminated as a

[99] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum.*

[100] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum.*

contributor to acid sulfate soils conditions,[101] supporting the conclusion that the proposed sediment and vegetation removal would not likely result in the substantial disturbance of acid sulfate soils in the water column and would not, in turn, result in a significant impact to special-status species.

In the event the acidification is detected to a degree harmful to special-status species, to ensure that residual acid sulfates in the water column would not adversely impact special-status species, Mitigation Measure M-BI-6a requires monitoring of water quality for a period of six weeks after the proposed sediment and vegetation removal is completed; it also prescribes remediation measures if the monitoring determines that such activities are warranted based on the exceedance of toxicity standards. If acid sulfate soils are present, suction hydraulic equipment could also be used to minimize suspension of sediments relative to other sediment removal methods, allowing sulfides to settle out of the water column more quickly, as indicated in Draft EIR Chapter III, Project Description, page 102.

In summary, other reasons supporting the conclusion that it would be unlikely for hypoxic conditions to occur during the proposed sediment and emergent vegetation removal include the following: (1) when sediment was previously removed from the connecting channel approximately 10 years ago, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified; (2) the sediment to be removed as part of the proposed project has only accumulated since the last removal activity, which would have removed all the sediment that accumulated before the current seawall was constructed, and, therefore, has accumulated without the saline conditions that allow acid sulfate soils to form; (3) the Biological Opinion for the Pumphouse Project concluded that the project would not jeopardize the continued existence of California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; and (4) in compliance with the Pumphouse project, soil sampling was completed and no acid soil sulfates were found. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR.

Should any anoxic conditions materialize, they are expected to be localized and short-term. California red-legged frog larvae and juveniles are likely to escape these small, short-lived anoxic zones as the zones dissipate with settling of the sediment and dilution by the pond.[102,103] The Biological Opinion for the Pumphouse Project concluded that the implementation of Conservation Measures would minimize the likelihood that adult or juvenile California red-legged frog would be present and would reduce potential adverse effects on the California red-legged frog due to anoxic conditions to a less-than-significant level. Similar conservation measures are included in a mitigation measure in the SNRAMP Draft EIR, and the Draft EIR independently made the same less-than-significant conclusion regarding impacts to the California red-legged frog.

Construction Effects. The Biological Opinion for the Pumphouse Project noted that because California red-legged frog and San Francisco garter snake have been observed throughout the project site, the effects of the construction activities to wetland and upland habitat and to individual California red-legged frog and San Francisco garter snake will be throughout the construction footprint. Injury, exposure disorientation and disruption of normal behaviors will

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101 Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum.*

102 Robert Plotnikoff, Tetra Tech, Inc. Email to Stacy Bradley, SFRPD, Suggested Change to the MND, December 3, 2013.

103 Robert Plotnikoff, Tetra Tech, Inc. Email to Alexis Ward, SFRPD and David Munro, Tetra Tech, Inc., Sharp Park, December 30, 2013.

likely result from the removal and/or disturbance of vegetation, sediments, and cover sites, including animal burrows, boulders or rocks, or organic debris, such as downed trees or logs in the Horse Stable Pond and the connecting channel. Construction noise, vibration, and increased human activity during construction may interfere with normal behaviors such as feeding, sheltering, movement between refugia and foraging grounds, and other essential behaviors. This can result in avoidance of areas that have suitable habitat and can cause disturbance to the species. Direct effects may include injury or mortality from being crushed by earth moving equipment, construction debris, and worker foot traffic. Work activities, including noise and vibration, may result in adverse effects to California red-legged frog and San Francisco garter snake by causing them to leave the work area. This disturbance may increase the potential for predation and desiccation.

However, the Biological Opinion[104] issued by the USFWS for the Pumphouse project ultimately concluded that the project would not be likely to jeopardize the continued existence of the California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; relevant measures to the Sharp Park Restoration Project are also contained in SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a. These measures limit construction activities to May 1 through October 15 and also include measures to protect species, such as pre-construction avoidance and survey tasks, site monitoring by USFWS/CDFW-approved biologists during construction activities, limitations on vehicle speeds in the project area, erosion control measures, and others. These Conservation Measures are intended to minimize the likelihood for the potential take of individual California red-legged frog and San Francisco garter snake.

The Biological Opinion for the Pumphouse Project also discusses the possibility of California red-legged frog mortality through entrainment (individuals being pulled along with water and trapped against screening or pulled into the pumps) of egg masses and individual larvae at the pumps (see pages 33 and 34 in the Biological Opinion). The Biological Opinion discusses the restoration actions and conservation measures that the SFRPD will undertake in order to reduce these effects and protect the species. The same or similar these Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR (SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a), which would minimize the likelihood of the potential take of individual California red-legged frog through entrainment. The continued existence of California red-legged frog would not be jeopardized, and, therefore, SNRAMP construction impacts leading to frog mortality through entrainment at Sharp Park would be ***less than significant***.

Depletion of oxygen in the water column. Anoxic sediments containing sulfides have associated bacteria like *Thiobacillus* sp. that reduce sulfur. Bacterial respiration near the bottom of a waterbody can modify oxygen concentrations in overlying water, causing some level of anoxia. When this condition occurs, the pH of the water begins to decline, resulting in an acidic environment. Depletion of oxygen in the water column is mediated by the rate of photosynthesis during peak portions of a day. The degree to which water becomes acidified depends on the length of time that sulfides are suspended in the water column and the amount of sulfides in the water column. In general, the longer that sulfidic soils are suspended in the water column, the more chance there is

[104] U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California,* October 2, 2012 ("Biological Opinion").

for acidic conditions to occur. This could cause mortality of California red-legged frog larvae and juveniles.[105] However, the Biological Opinion[106] issued by the USFWS for the Pumphouse Project ultimately concluded that the project would not be likely to jeopardize the continued existence of the California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR (SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a). A ***less-than-significant*** impact would occur with respect to depletion of oxygen in the water column as a result of implementation of the SNRAMP project at Sharp Park.

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to California red-legged frogs by converting freshwater marsh, where tadpoles are often unable to penetrate the dense vegetation and where female frogs may lay their eggs only to be left stranded above water, to open water habitat. The removal of dense emergent vegetation will allow for a higher quality of breeding habitat for the frogs which will result in an increased survival of egg masses and tadpoles. The conversion of freshwater marsh habitat to open water would discourage the growth of dense stands of bulrush and cattails that have overgrown the wetlands and reduced the quality of habitat for California red-legged frogs.

Use of Suction Hydraulic Equipment

While Draft EIR Chapter III, Project Description, p. 99, indicates that excavating equipment would be used for the restoration activities, suction hydraulic equipment could be used to minimize the disturbance of sediments relative to other sediment removal methods. Accordingly, the text of the Draft EIR has been revised to address this possibility in two locations, adding the same explanatory text in both locations. The following paragraph has been added to Draft EIR p. 102 (after the first partial paragraph) the to Draft EIR p. 375 (after the first paragraph of the Impact HY-9 discussion):

To facilitate the proposed sediment and emergent vegetation removal and to reduce potential impacts to California red-legged frog, suction hydraulic equipment may be used in consultation with the USFWS and CDFW to minimize the disturbance of sediments in the water. While generally resulting in a higher percentage of water in the excavated materials than a clamshell dredge, the use of suction hydraulic equipment generally results in less turbidity and overall disturbance at the point of use than a clamshell. In sensitive environments, the use of suction hydraulic equipment is often preferred, provided that the excavated materials and residual water are properly handled. If suction hydraulic equipment is to be used as part of this project, the slurry that is created by suction hydraulic equipment would go into a settling area until the sediments settle out and the decant water can be tested for its acidity. If the result of such testing indicates that the water is pH neutral, it would either be released into the Horse Stable Pond or pumped into

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[105] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Technical Memorandum, Revised Review of Acid Sulfate Soils, Potential Release Mechanism, and Risk of Release in the Horse Stable Pond and Connecting Channel Sediment Removal Project*. August 27, 2013 ("Acid Sulfate Soils Technical Memorandum").

[106] U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California*, October 2, 2012 ("Biological Opinion").

> the Pacific Ocean.[107] No permit is required for discharges from the Laguna Salada Wetland Complex into the Pacific Ocean because both the Laguna Salada Wetland Complex and the Pacific Ocean are considered "waters of the United States" under the federal Clean Water Act. However, should any permit be required by SFBRWQCB or any other resource agency for the proposed SNRAMP project, SFRPD will seek such a permit and comply with any and all conditions that are attached to the permit,[108] as already indicated by Table 3, Potentially Required Regulatory Approvals, p. 81.

Sediment Testing and Mitigation

The commenter also indicated that sediment testing and mitigation at Sharp Park was impermissibly deferred to a future permitting process as part of a programmatic, rather than project-related, mitigation measure. While Impact HY-3 indicates that the SFRPD would be required to obtain a Section 401 water quality certification and implement Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366; Mitigation Measure M-BI-12a, Protection of Wetlands during the Sharp Park Restoration Project, p. 339; and Mitigation Measure M-BI-12b, Laguna Salada Restoration Project Wetland Mitigation Plan, p. 340, which are all programmatic in nature and identify measures to avoid, minimize, and restore affected wetlands and waters of the state, and require preparation of a stormwater pollution prevention plan, there are other project-related mitigation measures provided in the Draft EIR (as amended in this RTC document) that relate to sediment testing, analysis, and remediation. As stated on Draft EIR p. 96, Sharp Park is evaluated at a project level of detail; therefore, Draft EIR Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, which is presented under "Project-level Impacts (Sharp Park Restoration)" and provides specific measures for sediment testing, analysis, and remediation at Sharp Park, is also a project-specific mitigation measure. This mitigation measure indicates the need for consultation with various resource agencies, and, as required by law, it is assumed that SFRPD would obtain any and all necessary permits for the proposed activities. Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, provides the required level of specificity and detail for sediment testing and mitigation, including specific performance standards, such that mitigation is not deferred.

Alternative Methods of Habitat Enhancement

Refer to Response AL-11, RTC p. 4-600, for a discussion of alternative methods of habitat enhancement (other than dredging), such as modification of lagoon water level and flooding management.

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[107] San Francisco Planning Department, *Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project Final Mitigated Negative Declaration*, January 17, 2014, p. 88.

[108] San Francisco Planning Department, *Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project Final Mitigated Negative Declaration*, January 17, 2014, p. 103.

Wetlands in the Northeastern Portion of the Lagoon

Refer to Response BI-25, RTC p. 4-424, for a discussion of wetlands in the northeastern portion of the lagoon.

Summary

Because the comments addressed in this response (Baye–1–14) covers all of the commenter's previous comments, refer also to Response BI-25, RTC p. 4-424; Response HY-5, RTC p. 4-501; Response AL-11, RTC p. 4-600; Response G-9, RTC p. 4-37; Response HY-2, RTC p. 4-493; Response BI-8, RTC p. 4-382; and Response BI-10, RTC p. 4-384.

Comment BI-8 Cost of off-site disposal of dredged material

The response to Comment BI-8 addresses all or part of the following individual comment:

Baye-1-10

- **3. The report's design and estimated costs of the "full restoration" alternative are unrealistic. grossly inflated. and inconsistent with professional wetland restoration precedents of lagoon restoration.**

  The conceptual alternatives report arbitrarily assumes that excavated soils for "full restoration" of wetlands would require off-site disposal (p. 53). Off-site fill disposal is a principal cost factor for the full restoration alternative. The off-site disposal assumption is invalid. I have designed wetlands and provided peer review services for innumerable coastal wetland restoration plans during the last 20 years, and I know of no coastal wetland restoration plan that has made this assumption.

  Only plans for the most constrained coastal wetland restoration sites consider off-site fill disposal as a last resort. Balancing cut/ fill to the greatest extent possible, minimizing fill import or export to the extent feasible, is a standard planning objective for restoration feasibility. The report failed to consider beneficial re-use applications of locally excavated sediments, including obviously needed ones like flood control berms or platforms, upland/wetland and riparian transition zones, and upland refuge mounds peripheral to wetlands. [Baye-1-10]

Response BI-8

This comment questions the cost of off-site disposal of dredged material for an alternative considered but rejected from further evaluation. For the reasons discussed on Draft EIR pp. 526 to 527, which conclude alternative would result in greater significant unavoidable impacts, this alternative was not evaluated in the EIR.

With regards to the proposed project, Draft EIR p. 100 indicates that off-site disposal of all of the dredged material from Sharp Park would not occur. Instead, most of the material would be used on-

site and approximately 20,000 cubic yards would be stockpiled or spread at the Sharp Park rifle range site or disposed of at the Sharp Park organic dump.

Off-site disposal was considered in the Sharp Park Conceptual Restoration Alternative Report for the No Golf Alternative, but it was found to be substantially more costly and it would require a significant number of truck trips to dispose of the dredged material in an off-site location. For the SNRAMP, given that much of the current golf course configuration would be maintained, the excavated material was determined to be suitable for use on site for both golf course substrate and restoration activities; therefore, the SNRAMP assumed that all material would be reused on-site.

Refer also to Response G-4, RTC p. 4-29, which reflects that a cost analysis for the project isn't germane with respect to a CEQA analysis.

Comment BI-9 Contamination from dog urine

The response to Comment BI-9 addresses all or part of the following individual comment:

Kushner-1-06

- Another oddity in dEIR is that with all of the attention the voluminous document gives to dogs, nowhere is dog urine mentioned. Good people do "pick up after" their dogs, but certainly not the urine. With an estimated 130,000 dogs in San Francisco, dog urine is an environmental hazard to many, many plants. Surely this oversight in the dEIR is unintentional, but it should be corrected. [Kushner-1-06]

Response BI-9

This comment questions whether dog urine could present hazardous conditions for plants.

Implementation of the SNRAMP would reduce off-leash dog use in order to maintain and enhance sensitive plants and wildlife. The DPAs and trails within the Natural Areas are generally located away from sensitive habitats. The proposed project does not include any actions or elements that would be expected to significantly increase the number of dogs within Natural Areas. Therefore, the proposed project is not anticipated to result in a substantial increase in the amount of dog urine, whether or not this urine may or may not have adverse impacts to plant species.

However, with respect to the potential impacts caused by dog urine, which is part of the existing conditions, the fundamental problem is related to the nitrogen content of urine and its uptake by plants, whether native, nonnative, ornamental, or even lawns. There are no widely available studies that specifically address the impacts of dog urine on native plants, although there are studies that

address potential impacts on lawns.[109] These studies affirm that lawn damage can occur as a result of nitrogen contained in dog urine. To avoid potential impacts, the primary method is to restrict dogs through the use of leashes, fencing, or other methods to control where dogs may urinate. If impacts were to occur, whether related to dog urine or any other factor that could influence the success of the program, as stated on Draft EIR pp. 94 to 96, the SNRAMP includes a Monitoring Plan to evaluate the success of revegetation activities and Draft EIR p. 90 describes the adaptive management approach that would be undertaken to reassess and improve the activities proposed under the SNRAMP on an ongoing basis.

Refer also to Response G-25, RTC p. 4-106, which states that Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, Draft EIR p. 298 calls for the SFRPD to continue to evaluate the impacts of DPAs and, where substantial adverse impacts to special-status species are confirmed, SFRPD shall take actions to protect those species.

Comment BI-10 Role of fertilizers on lagoon wetlands

The response to Comment BI-10 addresses all or part of the following individual comment:

Baye-1-12

- Furthermore, the report ignores the obvious role of golf course and residential fertilizer contamination of lagoon wetlands as a factor in overgrowth of tule marsh (reduction in open water edge). [Baye-1-12]

Response BI-10

This comment addresses the role of fertilizers on the lagoon wetlands.

While the proposed SNRAMP project, which includes future restoration activities at Sharp Park, is entirely separate and independent from the existing and ongoing operation of the adjacent golf course and/or residential uses, as discussed in Response PD-13, RTC p. 4-175, the Biological Opinion[110] for the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project places limitations on the use of pesticides at the golf course. Biological Opinion p. 15 states that "During the 10 year duration of the Project, only organic fertilizers, such as pro-biotics, blood meal, lime, and compost tea, will be used at Sharp Park, and they will only be applied to the greens, tees and surrounds. No fertilizers will be applied to fairways." The same page of the Biological Opinion

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109 Dr. Steve Thompson, DVM, "Dog-On-It" Lawn Problems, Texas A&M Agrilife Extension; A.W. Allard, Lawn burn and dog urine, *Canine Practice* (March/April 1981), 8 (2): 26–32. This document is available online at: http://aggie-horticulture.tamu.edu/archives/parsons/turf/Dog_lawn_problems.html, accessed June 7, 2016.

110 A Biological Opinion is issued by the USFWS to provide written documentation of the agency's opinion as to whether a project is likely to jeopardize a listed species or destroy or adversely modify a listed species' critical habitat. At issue for the SNRAMP project was whether there would be effects to the federally threatened California red-legged frog *(Rana draytonii),* the endangered San Francisco garter snake *(Thamnophis sirtalis tetrataenia),* and the endangered mission blue butterfly *(Icaricia icarioides missionensis).*

goes to say that "During the 10 year duration of the Project, the City will not use any chemical pesticides on the golf course or associated landscaped areas at Sharp Park. Golf course pests and weeds will be controlled either by hand weeding or promoting healthy soil ecosystems." It is likely that similarly prohibitions will be identified in the Biological Opinion for the Sharp Park Restoration project to similarly ensure or increase the change of restoration success well.

Comment BI-11	**SNRAMP use of native vs. nonnative/invasive plants in terms of habitat diversity and the ability to support native or sensitive species**

The response to Comment BI-11 addresses all or part of the following individual comment:

SFFA-3-14

- The DEIR states repeatedly throughout the document that habitat will be improved by the eradication of non-native plants and the presumed replacement by native plants. In fact this is offered as the basis for most claims in the DEIR that the "restoration" project will not harm the environment. For example, although the DEIR acknowledges that the environment may be harmed by the methods used to eradicate non-native plants, this harm is theoretically mitigated by the claim that the eventual development of native habitat will compensate for that harm. These claims are not supported by either the reality of restoration efforts in the past 15 years or by scientific evidence which does not substantiate a claim that native vegetation provides habitat for animals that is superior to non-native vegetation.

  Although non-native vegetation has been removed repeatedly in many natural areas, the native plants that are planted in their place rarely persist for longer than a few months. These newly planted areas are quickly over run by non-native weeds. We will provide examples of such failed "restorations" in a subsequent section of this comment (Part V).

  More importantly, neither SNRAMP nor the DEIR provide any scientific evidence to support the contention that native vegetation provides superior habitat to animals. In fact, all available scientific evidence contradicts this claim.

  Because eucalyptus trees are one of the primary targets for eradication, we will focus on the specific claim that the eucalyptus forest is a "biological desert." We are frequently told that "nothing grows" under the eucalypts and that they are not providing food or habitat to insects, birds, and other animals.

  Professor Dov Sax (Brown University) tested these claims while a student at UC Berkeley. **He studied the eucalyptus forest in Berkeley, California, and compared it to native oak-bay woodland in the same location. He found little difference in the species frequency and diversity in these two types of forest.**

  He studied six forests of about 1 hectare each, three of eucalypts and three of native oaks and bays in Berkeley, California. The sites were not contiguous, but were selected so that they were of similar elevation, slope, slope orientation, and type of adjacent vegetation. He conducted inventories of species in spring and autumn. He counted the number of:

  > Species of plants in the understory

> Species of invertebrates (insects) in samples of equal size and depth of the leaf litter

> Species of amphibians

> Species of birds

> Species of rodents

He reported his findings in Global Ecology and Biogeography[ii]:

> "Species richness was nearly identical for understory plants, leaf-litter invertebrates, amphibians and birds; only rodents had significantly fewer species in eucalypt sites. Species diversity patterns … were qualitatively identical to those for species richness, except for leaf-litter invertebrates, which were significantly more diverse in eucalypt sites during the spring."

Professor Sax also surveyed the literature comparing biodiversity in native vs non-native forest in his article. He reports similar findings for comparisons between non-native forests and local native forests all over the world:

> In Spain, species of invertebrates found in the leaf-litter of eucalyptus plantations were found to be similar to those found in native forests, while species richness of understory plants was found to be greater in the native forests.
>
> In Ethiopia the richness of understory species was found to be as great in eucalyptus plantations as in the native forest.
>
> In the Mexican state of Michoacan, species richness and abundance of birds were found to be similar in eucalyptus and native forests.
>
> In Australia species richness of mammals and of soil microarthropods were found to be similar in native forests and in non-native forests of pine.

The only caveat to these general findings is that fewer species were found in **new** plantations of non-natives less than 5 years old. This helps to illustrate a general principle that is often ignored by native plant advocates. That is, that **nature and its inhabitants are capable of changing and adapting to changed conditions. In the case of non-native forests in the San Francisco Bay Area, they have existed here for over 100 years. The plants and animals in our forests have "learned" to live in them long ago.**

The scientific literature informs us that wildlife does not necessarily benefit from native plant restorations and sometimes they are harmed by them. The assumption that native animals are dependent upon native plants underestimates the ability of animals to adapt to changing conditions.

Art Shapiro (UC Davis) has been studying California butterflies for over 35 years. His own observations as well as the work of other scientists have informed him that **"… the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna, including most of the familiar species of urban, suburban and agricultural environments. Some of these species are now almost completely**

dependent on exotics and would disappear were weed control more effective than it currently is."[iii]

He explains that this is particularly true on the coast of California because this is where the highest concentration of introduced species of plants is naturalized and the butterfly population is less diverse because of the cool, foggy climate. There are apparently few non-native plants in the desert and alpine regions of California and so butterflies in those regions have not had the opportunity or need to adapt to new plants.

Professor Shapiro also speculates in this study that **other insects have adapted to non-native plants as well:** "Introduced hosts, having a broader geographic range than native hosts, may permit the expansion of the insect population geographically."

Birds have also adapted to non-native plants and trees. Researchers at UC Davis surveyed over 1,000 ornithologists in 4 states, including California, about their observations of native birds and non-native plants. Responses from 173 ornithologists reported 1,143 "interactions" of birds with introduced plants considered invasive. Forty-seven percent (47%) of those interactions were birds eating the fruit or seeds of non-native plants and trees considered invasive. Other interactions were nesting, perching, gleaning [eating insects], etc. [iv]

Interactions were frequently reported in non-native blackberry, which is found in most parks in San Francisco. It is one of the most productive food sources for birds in San Francisco. Unfortunately, it is being eradicated by the Natural Areas Program along with a long list of non-native shrubs which provide food and cover, such as cotoneaster, fennel, etc. The loss of food and cover has a drastically negative impact on the animals that live in our parks.

The non-native blackberry also provides cover for wildlife. It is an impenetrable bramble both physically and visually. Birds and small mammals hide and make nests and dens in these thickets. Coyotes are resident in San Francisco. The thick undergrowth which has been removed in some parks by the Natural Areas Program now allows unleashed dogs to pursue them in areas where they were protected before. If the safe havens of urban wildlife are destroyed, the animals may seek shelter elsewhere, a move that may be dangerous for them. When animals move into residential neighborhoods they are considered a nuisance and are often killed.

Native plant restorations also require the use of herbicides to eradicate non-native trees and plants. Herbicides are being sprayed in the blackberries and other berry-producing non-native plants which are a major food source for wildlife. **One study performed by the US Forest Service for the EPA reported that the use of Garlon significantly reduced the reproductive success of birds.**[v] **Garlon is also highly toxic to aquatic life.**

Finally, we provide a current and local example of the scientific evidence that native plants do not provide habitat that is superior to that provided by non-native plants. The California Academy of Sciences finds that several years after planting its roof with native plants, it is now dominated by non-native species of plants in the two quadrants that are not being weeded, replanted and reseeded with natives. **Their monitoring project recently reported that there were an equal number of insect species found in the quadrants dominated by**

> **native plants and those dominated by non-native plants.** Where equal numbers of insects are found, we can expect to find equal numbers of birds and other animals for which insects are food.
>
> The final EIR must provide scientific evidence that native plants provide superior habitat for wildlife. If it is unable to provide such evidence, these claims must be removed from the final EIR. Without such reassurances, the final EIR must conclude that the eradication of non-native plants will have a significant negative impact on the biological resources in San Francisco's natural areas. [SFFA-3-14]

Response BI-11

These comments focus on whether native vegetation provides superior habitat to nonnative and/or invasive vegetation.

Some of the expressed goals and objectives of the SNRAMP are to maintain and enhance native plant and animal communities; reestablish native community diversity, structure, and ecosystem function where degraded; and promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity; therefore, the proposed project seeks to maintain and enhance native species rather than maintain and/or expand the use of the Natural Areas for nonnative species.

Response G-12, RTC p. 4-60, provides the definition of invasive species that is contained in Executive Order 13112, which is a species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.[111] A majority of nonnative species cause no harm (meaning they are not invasive), and some are even beneficial. In contrast, invasive species in the Natural Areas, have a detrimental effect on native habitats by outcompeting the native species, thus creating a monoculture, which reduces biodiversity (see IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species). In fact, the California Invasive Plant Council states that:

> "When plants that evolved in one region of the globe are moved by humans to another region, a few of them flourish, crowding out native vegetation and the wildlife that feeds on it. Some invasives can even change ecosystem processes such as hydrology, fire regimes, and soil chemistry. These invasive plants have a competitive advantage because they are no longer controlled by their natural predators, and can quickly spread out of control. In California, approximately 3% of the plant species growing in the wild are considered invasive, but they inhabit a much greater proportion of the landscape."[112]

Invasive species often compete so successfully in new ecosystems that they displace native species and disrupt important ecosystem processes. Invasive species are capable of displacing native species

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111 www.invasivespeciesinfo.gov/docs/council/isacdef.pdf, accessed on September 14, 2015.

112 http://www.cal-ipc.org/ip/definitions/index.php, accessed on August 7, 2014.

either because they are adapted to similar climatic conditions, they lack predators or pests, or they have other characteristics that allow them to thrive. If left alone, the Natural Areas would contain only a handful of native plants, and the animals that rely on a diversity of flora could go extinct.[113]

As stated on Draft EIR p. 296, invasive species removal projects would replace invasive trees and other vegetation with native plants, thus improving native habitats and reducing competition from invasive species. Additionally, one of the primary goals of the SNRAMP is to protect and restore sensitive habitats; to this end, the SNRAMP includes recommended actions for augmenting special-status plant populations, such as Recommended Actions VP-1d (Augment existing sensitive plant populations) and EM-1d (Augment existing sensitive plants to prevent extinction of rare or uncommon plant species), which recommends augmenting sensitive plant populations to prevent extinction of rare or uncommon plants, and CH-1c (Reintroduce populations of rare plant species to help prevent local extinctions of these species in San Francisco), which recommends reintroducing populations of rare plant species. As a result, protected plant species populations may increase; thus, long-term impacts on protected plant species from vegetation removal are anticipated to be beneficial. Draft EIR p. 304 similarly concludes that replacing existing invasive trees and other vegetation with native plants may increase populations of protected bird species. Beneficial impacts as a result of increasing native habitat was also identified for the California red-legged frog (Draft EIR p. 310), San Francisco garter snake (Draft EIR p. 311), western pond turtle (Draft EIR p. 312), sensitive status species (Draft EIR p. 312), and sensitive natural communities (Draft EIR p. 330).

As stated in Section V.G.3 (Biological Resources, Impacts), Draft EIR pp. 290 to 344, while the removal of invasive species could result in short-term impacts to terrestrial wildlife, aquatic species, and/or sensitive plants or plant communities, replacing the vegetation with native plants would improve native habitat conditions, reduce competition from invasive species, and increase biodiversity. Refer also to Response BI-13, RTC p. 4-397, for a more detailed discussion of short-term impacts that could occur and the various mitigation measures recommended in the Draft EIR to ensure that impacts are reduced to a less-than-significant level.

As more fully discussed in Response G-2, RTC p. 4-15, the Recreation and Open Space Element (ROSE) of the City's General Plan (updated in April 2014) requires the City to protect and enhance the biodiversity, habitat value, and ecological integrity of open spaces and encourage sustainable practices in the design and management of the City's open space system (Objective 4). In addition, refer to Response PD-11, RTC p. 4-159, for a discussion of the City's other policy guidance that supports the protection and maintenance of biodiversity within the Natural Areas, including the SNRAMP itself and the San Francisco Department of the Environment's Biodiversity Program including guidance provided in the City's *Sustainability Plan* regarding the protection of Natural Areas in San Francisco. Refer also to Response HZ-1, RTC p. 4-531, for a discussion of the various

[113] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on August 6, 2014.

ways that the SFRPD controls, monitors, and uses herbicides/pesticides and eliminates or reduces impacts on wildlife, and Refer to Response BI-13, RTC p. 4-397, for a discussion of potential impacts of the proposed project on bird populations, other animals, and insects; that planting native plants does not compensate for impacts; and that native plants are not as valuable as invasive species.

In summary, the EIR accurately and fully analyzes and discloses the impacts of the SNRAMP project, specifically with respect to impacts to sensitive species and common species, and the impacts associated with the removal of invasive vegetation, as raised by the commenters.

Comment BI-12 Tree removal at Mount Davidson

The response to Comment BI-12 addresses all or part of the following individual comments:

MPIC-1-03 MPIC-1-04 MPIC-2-12
WTPCC-1-02

- However, even the environmental effect of the proposed removal of 1600 trees is not satisfactorily studied by the draft EIR. For one thing, the projected number of 1600 trees to be removed does not represent all of the trees that would be removed from this historic Sutro forest, because additional trees will have to be removed for reasons not included in the MRA, such as the SFPUC tank and other utility projects, storm damage, and tree death due to age and/or lack of maintenance. [MPIC-1-03]
- To us, the goal of all of the SNRAMP alternatives for Mt. Davidson Park appears to be to deter public recreational use of this Park and make large portions of it into an oak and prairie landscape. This goal is unacceptable to the neighborhood of Miraloma Park, which borders on the Mt. Davidson forest and for which this forest is a major recreational resource and therefore a mainstay of our quality of life and property values. This goal is also inconsistent with historic Park uses and the original status of Blue Mountain, later renamed Mt. Davidson (see below). [MPIC-1-04]The projected 1600 trees to be removed does not represent all of the trees that would be removed from this historic forest. Additional trees will and have been removed for reasons not addressed, such as the SFPUC tank and pipeline upgrade, installation of utility lines, storm damage, vandalism, and tree death due to age and/or lack of maintenance. The Natural Areas Program does not document how many trees have been removed from the forest already, and so the 1600 goal is a moving target and is unenforceable. Approximately 100 trees were removed in 2008 to move the Mt. Davidson pipeline from the native plant area to the area designated for forest preservation. Only 5 replacement trees were planted.

  The evident goal of the SNRAMP for Mt. Davidson Park is to deter public recreational use and to double the existing native plant area of the park by converting a third of the forest area (10.2 acres) into a prairie/coastal scrub landscape. The SNRAMP estimate of 353 trees per acre on Mt. Davidson is half of that estimated by UCSF for their forest on Mt. Sutro, which is similar in density and age. The SNRAMP forest management goals of 50-100 square feet of basal area per acre in the MA-1 area would leave only 23-46 trees per acre, assuming an average tree diameter of 20 inches; 100-200 sqf basal area for MA-2 would leave 46-92

average 20-inch trees per acre and just 92-275 trees of this average size per acre in the MA-3 forest zone. The result would be even more than 1600 trees permanently removed, especially if the total trees per acre are now closer to 750 than 350. This goes beyond "thinning … to improve the health of the forest by relieving crowding," as the DEIR describes the plan. No evidence is provided that this extensive clearing will improve the health of the forest. In any case, such major clearing is unacceptable to the neighborhood of Miraloma Park, which borders on the Mt. Davidson forest and for which this forest is a prime recreational resource and a mainstay of our quality of life and property values. [MPIC-2-12]

- WTPCC opposes NAP plans to remove healthy trees simply because they are non-native or simply to allow more sunlight to reach newly planted, sun-loving natives on the forest floor. We fully support the removal of hazardous trees in our parks, but NAP's plans go far beyond that.

  We are concerned that the actual number of trees removed will be much higher than the 18,500 listed. NAP does not include any trees or saplings less than 15 feet tall in its count of trees to be removed, yet the SNRAMP makes clear that these "smaller" trees or saplings will be cut down along with the taller ones. A 2007 US Forest Service report noted that just over half (51.4%) of the trees in San Francisco are less than six inches in diameter at breast height. This diameter corresponds to a tree less than 15 feet in height. The removal of these smaller trees will significantly amplify the impact of the removal of the taller trees on aesthetics, erosion, and windthrow in natural areas, yet the Draft NAP DEIR did not consider these additional impacts.

  WTPCC is concerned that claims in the Draft DEIR that trees cut down will be replaced on a one-to-one basis by native trees are misleading. The SNRAMP makes no promise to replace trees. In particular, the SNRAMP specifically states that the 15,000+ trees removed at Sharp Park will not be replaced since the natural area will be converted to coastal scrub. In addition, there were few native trees in San Francisco before the Europeans settled the area; the climate was too harsh. Native trees do not grow well in the windy, foggy, sandy or rocky soils present in most natural areas. For example, about a decade ago, NAP planted 25 oak trees at Tank Hill to replace 25 trees cut down by NAP. Only 5 of the replacement oak are still alive, and only one of those has grown.

  Our concerns about the 1,600 tree removals planned for Mt. Davidson in particular include:

  > Increased erosion from the loss of the trees

  > Increased water runoff during storms and the potential for damage to park neighbors' property from the water or mudslides

  > These concerns were not adequately addressed in the DEIR. [WTPCC-1-02]

Response BI-12

These comments express concern about tree removal at Mount Davidson, including the cumulative impacts of tree removal at Mount Davidson in combination with a 2008 tank and pipeline upgrade conducted by SFPUC, which resulted in the removal of 100 trees. Some comments express concern

that the SNRAMP actually proposes much more tree removal than indicated in the Draft EIR; questions the outcome of previous revegetation efforts; and identifies potential impacts of tree removal on erosion, increased runoff during storms and mudslides, windthrow, and aesthetics.

CEQA requires than an EIR evaluate the environmental impacts of a proposed project based on the existing conditions as they exist at the time of the Notice of Preparation (NOP) (CEQA Guidelines Section 15126.2). With regards to the SFPUC Tank and Utility Relocation Project, this project was associated with the seismic retrofit of the water system on Mount Davidson. According to SFPUC, up to 30 trees were removed as part of the project that was implemented in August 2008. While the NOP for the proposed project was published in April 2009, the effects of the SFPUC Tank and Utility Relocation Project in terms of tree removal have already occurred and are already included as a past project for purposes of the cumulative analysis for the SNRAMP project. Presently unknown additional tree removal actions (such as storm-damage related tree removal) cannot be predicted; analysis of any associated impacts would be speculative and is not required in accordance with CEQA Guidelines Section 15064.

The Draft EIR addresses the removal of 1,600 trees at Mount Davidson in several places under Section V.G.3, Impacts, including Impact BI-1, Impact BI-3, and Impact BI-7. The number of trees in the Natural Areas was determined using a Global Positioning system "on-the-ground," with the data uploaded to SFRPD's GIS system. The trees were surveyed systematically and consistently, and the number of trees per acre that currently exist in Natural Areas was determined to be about 353 trees/acre as described on SNRAMP p. F-5 and F-6. The estimate of 1,600 trees to be removed at Mount Davidson is based on this estimate of existing trees and the target thinning conditions (50- to 100-square-foot basal area for MA-1 and 100- to 200-square-foot basal area for MA-2) described in SNRAMP Appendix F. This estimate of trees includes small trees (saplings that are 15 feet high or greater). As stated in Draft EIR Chapter III, Project Description, p. 112, General Recommendation GR-15c, tree removal would focus on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Other recommendations intended to improve the health of the urban forest are described in Draft EIR Chapter III, Project Description, p. 112, under General Recommendations GR-15a to GR-15h.

The proposal, as put forth in the Project Description and which forms the basis for the environmental analysis in the Draft EIR, is to remove 1,600 trees (defined as any tree 15 feet or taller, which includes taller saplings) at Mount Davidson. The commenter is correct in that the purpose of removing these trees is to enhance the existing grasslands and prairie-scrub habitat. The Draft EIR accurately describes proposed tree removal and replacement on Draft EIR pp. 92 to 93 and throughout the document. As stated on Draft EIR p. 92:

> "[i]nvasive trees removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the

> same Natural Area … For Sharp Park in Pacifica, many of the trees would be replaced not with trees but with more appropriate native vegetation, specifically coastal scrub."

Should SFRPD propose additional tree removal not addressed in this Draft EIR, additional environmental analysis may be required in accordance with CEQA.

The commenters express concern that tree removal could have adverse impacts with respect to erosion, increased runoff during storms and mudslides, windthrow and aesthetics. These comments do not present any evidence that the proposed project would result in a significant impact that is not identified in the Draft EIR. The potential for tree removal to result in erosion impacts and adverse effects from runoff during storms is addressed in Draft EIR Section V.H, Hydrology and Water Quality, and was determined to be less than significant with mitigation and implementation of proposed best management practices (described on Draft EIR pp. 93 to 94) and General Recommendations GR-12a and GR-12b (described on Draft EIR p. 111). Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, includes numerous requirements to avoid and reduce erosion and stormwater impacts and would be implemented in addition to best management practices for erosion control as identified in General Recommendations GR-12a and GR-12b. The effects of tree removal on potential windthrow are addressed in Draft EIR Section V.E, Wind and Shadow, under Impact WS-1, Impact WS-2, Impact WS-3, and also are addressed in Section V.I, Hazards and Hazardous Materials, under Impact HZ-1, Impact HZ-3, and Impact HZ-5. The Draft EIR determined these impacts to all be less than significant. Aesthetic impacts of tree removal are addressed in Section V.C, Aesthetics, under Impact AE-1 to Impact AE-9, and were determined to be less than significant.

Comment BI-13	**Potential impacts of implementing the proposed habitat restoration and other management and maintenance actions on biological resources**

The response to Comment BI-13 addresses all or part of the following individual comments:

GGAS-1-30	MPIC-2-27	Art-1-03
Cook-1-03	Delacroix-1-03	Fox-1-03
Garber-1-03	Jungreis-1-03	Keating-1-02
Kessler-1-03	Kessler-2-03	Ray-1-03

- To the extent that maintenance activities will have impacts on birds and other sensitive species, Golden Gate Audubon believes that as long as best management practices are in place, monitored, and enforced, impacts to native species should be minimized. (See DIER, at 313-316) For example, trail-clearing, maintenance, or tree cutting during the breeding season should follow protocols identified in the DEIR to avoid disturbance to breeding birds or other animals. [GGAS-1-30]
- **The forest in Mt. Davidson Park provides important wildlife habitat. Claims that habitat for animals is improved by the eradication of non-native plants are unsupported by scientific evidence.**

The DEIR states repeatedly that habitat will be improved by the eradication of non-native plants and their presumed replacement by native plants. This statement is offered support for most claims in the DEIR that the "restoration" project will not harm the environment. For example, although the DEIR acknowledges that the environment may be harmed by the methods used to eradicate non-native plants, it maintains that this harm will, theoretically, be mitigated by the eventual development of native habitat that will compensate for that harm. This claim is not supported either by the reality of restoration efforts in the past 15 years or by scientific evidence, which does not substantiate a claim that native vegetation provides superior habitat for animals than non-native vegetation.

Although non-native vegetation has been removed repeatedly in many natural areas, the native plants that are planted in their place rarely persist for longer than a few months. These newly planted areas are quickly over-run by non-native weeds. More importantly, neither SNRAMP nor the DEIR provide any scientific evidence to support the contention that native vegetation provides superior habitat for animals. In fact, all available scientific evidence contradicts this claim. Eucalyptus trees are one of the primary targets for eradication because of claims that the eucalyptus forest is a "biological desert," that "nothing grows" under eucalypts, and that they provide neither food nor habitat to insects, birds, and other animals. Professor Dov Sax (Brown University) tested these claims while a student at UC Berkeley. **He compared the eucalyptus forest in Berkeley with native oak-bay woodland in the same location and found little difference in species frequency or diversity in these two types of forest.**

Sax studied 6 forests of about 1 hectare each, 3 of eucalypts and 3 of native oaks and bay trees. The sites were not contiguous, but were of similar elevation, slope, slope orientation, and type of adjacent vegetation. Inventories in spring and autumn counted species of plants and in the understory and insects in samples of equal size and depth of leaf litter, as well as amphibians, birds, and rodents.

> "Species richness was nearly identical for understory plants, leaf-litter invertebrates, amphibians and birds; only rodents had significantly fewer species in eucalypt sites. Species diversity patterns … were qualitatively identical to those for species richness, except for leaf-litter invertebrates, which were significantly more diverse in eucalypt sites during the spring." (Sax, 2002)

Sax also surveyed the literature comparing biodiversity in native versus non-native forest and reported similar findings for comparisons between non-native forests and local native forests all over the world:

> In Spain, species of invertebrates found in the leaf-litter of eucalyptus plantations were similar to those found in native forests, while species richness of understory plants was greater in the native forests.
>
> In Ethiopia, the richness of understory species was as great in eucalyptus plantations as in the native forest.

> In Michoacán, Mexico, species richness and abundance of birds were similar in eucalyptus and native forests.
>
> In Australia, species richness of mammals and of soil microarthropods were similar in native forests and in non-native forests of pine.

The only caveat to these general findings is that fewer species were found in **new** plantations of non-natives less than 5 years old. This illustrates a general principle that is often ignored by native plant advocates, that nature **and its inhabitants are capable of changing and adapting to changed conditions.** Non-native forests in the San Francisco Bay Area have been here for over 100 years. The plants and animals in our forests have "learned" to live in them long ago.

Wildlife does not necessarily benefit from native plant restorations and sometimes is harmed by them. The assumption that native animals are dependent upon native plants underestimates the ability of animals to adapt to changing conditions. Art Shapiro (UC Davis), who has studied California butterflies for over 35 years, has observed along with other scientists that

> **"…the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna**, including most of the familiar species of urban, suburban and agricultural environments. Some of these species are now almost completely dependent on exotics and would disappear were weed control more effective than it currently is." (Graves & Shapiro, 2003)

Shapiro explains that this is particularly true on the coast of California, where the highest concentration of introduced species of plants is naturalized and the butterfly population is less diverse because of the cool, foggy climate. There are fewer non-native plants in the desert and alpine regions of California, so butterflies in those regions have not had the opportunity or the need to adapt to new plants.

Shapiro speculates in this study that **other insects have adapted to non-native plants as well**: "Introduced hosts, having a broader geographic range than native hosts, may permit the expansion of the insect population geographically."

The non-native blackberry provides cover for much wildlife. It is an impenetrable bramble both physically and visually. Birds and small mammals hide and make nests and dens in these thickets. Coyotes are resident in San Francisco. The thick undergrowth removed in some parks by the NAP now allows unleashed dogs to pursue coyotes in areas where they were protected before. If the safe havens of urban wildlife are destroyed, the animals may seek shelter elsewhere, a move that may be dangerous for them.

Birds have adapted to non-native plants and trees. Researchers at UC Davis (Aslan & Rejmanek, 2010) surveyed over 1,000 ornithologists in 4 states, including California, about their observations of native birds and non-native plants. Reports from 173 ornithologists included 1,143 "interactions" of birds with introduced plants considered invasive. Of those interactions, 47% were birds eating the fruit or seeds of non-native plants and trees

considered invasive. Other interactions included nesting, perching, gleaning [eating insects], etc.[iv]

Interactions were frequently reported in non-native blackberry, found in most parks in San Francisco, and one of the most productive food sources for birds in San Francisco. Unfortunately, it is being eradicated by the Natural Areas Program because it is non-native.

Mt. Davidson currently has a large and healthy distribution of birds (114 species found from 5/31/11 - 6/1/12; see Attachment E), 90% of which rely on trees and forest for food, safety, and a place to breed. Because of the nature of their current habitat, none of the species present on Mt. Davidson are threatened or of special concern. The data presented in table 6-2-2 (Sensitive species known to occur at Mount Davidson) of the SNRAMP is incorrect. No empirical data were used and cited in the conclusions of the DEIR. Bird information cited were opinions submitted by the Golden Gate Audubon Society, an amateur lobbying group located in Alameda County that is known to have special interests.

No explanation is provided of the term "Species of Local Concern (SLC)" used in Table 6-2-2. Does the Federal and State or local government recognize this as a legitimate and legal conservation status? None of the 18 species listed in table 6-2-2 is considered either threatened or endangered by Federal, State, or local authorities or experts. All of the 18 species are listed as "Species of Least Concern" by the International Union for the Conservation of Nature (IUCN). San Francisco Field Ornithologists (SFFO), an organization that collects and publishes data about local birds, considers nine of the birds listed in table 6-2-2 as "seen on most bird outings." The other ten species are described as "common; abundant; expected to be seen on every outing in moderate or large numbers." If Table 6-2-2 is meant to convey the impression that birds are doing poorly in the current environment of Mt. Davidson, it fails to demonstrate this factually. On the contrary, Mt. Davidson hosts a habitat where birds are not threatened but live and prosper in abundance.

Native plant restorations also require the use of herbicides to eradicate non-native trees and plants. Herbicides are being sprayed on blackberries and other berry-producing non-native plants that are a major food source for wildlife. **One study performed by the US Forest Service for the EPA reported that the use of Garlon significantly reduced the reproductive success of birds** (Marin Municipal Water District).

There is a current and local example of scientific evidence that native plants do not provide habitat that is superior to that provided by non-native plants. The California Academy of Sciences found that several years after planting its roof with native plants this roof is now dominated by non-native species of plants in the two quadrants that are not being weeded, replanted, and reseeded with natives. **Their monitoring project recently reported that there were an equal number of insect species found in the quadrants dominated by native plants and those dominated by non-native plants.** Where equal numbers of insects are found, we would expect to find equal numbers of birds and other animals for which insects are food.

The final EIR cannot reassure the public that the implementation of SNRAMP will not harm wildlife because the NAP has already violated the laws that theoretically protect wildlife.

The final EIR must prohibit the use of herbicides known to be harmful to butterflies on Twin Peaks, where the endangered Mission Blue butterfly has been reintroduced by the Natural Areas Program. [MPIC-2-27]

- San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees. Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal. [Art-1-03] [Delacroix-1-03] [Fox-1-03] [Ray-1-03]
- San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees. [Cook-1-03] [Jungreis-1-03]
- I visit Laguna Salada at Sharp Park frequently. The cattails at Laguna Salada provide important shelter for migratory birds from predators. Removal of cattails ass [sic] proposed would result in the loss of shelter and nesting sites for birds. [Garber-1-03]
- The plan seems to confuse "native plant" restoration with "natural areas." Some areas have a current natural condition of a reasonable adaptive ecological system even if deviating from the identified preferred "native" plant base. I am concerned about short term negative impact to the current bird population as a result of the destruction required to convert the areas to the identified preferred native plant habitat. In particular, please take note of the loss of the great blue heron nesting areas caused by prior native plant area clear cutting. [Keating-1-02]
- The trees, as well as other plants targeted for removal (including blackberry brambles and vines) form valuable habitat for birds, animals and insects. By focusing on a handful of species, the needs of all the others are neglected. The areas of Native Plants do not appear to be superior habitat in general. With a few exceptions, they do not provide the cover or the food resources birds and animals need. Thousands of eucalyptus trees and thousands of cubic feet of bushy habitat are being destroyed. [Kessler-1-03] [Kessler-2-03]

Response BI-13

These comments express concern about potential impacts of the proposed project on bird populations, other animals, and insects; that planting native plants does not compensate for impacts; and that native plants are not as valuable as invasive species. Further, comments expressed concern about the sensitive species list and about the use of herbicides on wildlife, including Mission blue butterflies.

The Draft EIR identifies the potential impacts of implementing the proposed habitat restoration and other management and maintenance actions on sensitive species (Draft EIR pp. 294 to 346). As discussed on SNRAMP p. 3-13, the list of special-status species discussed in the SNRAMP are from a number of sources including federal and state lists as well as "watch lists" developed by local conservation organizations, pursuant to CEQA Guidelines Section 153800. These are referred to in

the Draft EIR as species of local concern (SLC). The Draft EIR evaluates the impacts to special-status species as described on Draft EIR pp. 273 to 275. The Draft EIR determines that the proposed project would have short-term impacts to birds and other sensitive species, but that, consistent with the objectives of the SNRAMP, the project would have long-term beneficial effects on biological resources, as disturbed areas would be repopulated with more diverse, native species. The SNRAMP includes General Recommendations to ensure that short-term impacts to birds are minimized. For example, the project proposes General Recommendation GR-4b, which would require that all vegetation management activities be conducted outside the breeding season for bird species (February 1 through August 31, as designated by CDFW), unless these activities had already begun before the breeding season and had already removed nesting habitat or a breeding bird survey was conducted prior to vegetation removal activities, and had determined that no nesting birds were present. If active nests (or large abandoned stick nests) are discovered as part of the breeding bird survey, a 150-foot-radius avoidance buffer would be established around the nest sites to prevent the nesting birds from being disturbed by construction activities. In addition, as described in Draft EIR Chapter III, Project Description, p. 136, the DPA in Lake Merced is proposed for closure to avoid disturbance to breeding birds.

Impact BI-2 (Draft EIR pp. 303 to 305) determines that vegetation removal could have a short-term impact on special-status bird species and identifies Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, to reduce this potential impact to a less-than-significant level. Impact BI-3 evaluates the effects of invasive weed and tree removal on other sensitive terrestrial species including protected butterfly species, the dusky-footed woodrat, and western red bat. The Draft EIR determines that short-term impacts from vegetation removal on these species would be reduced to a less-than-significant level through the implementation of Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298. This mitigation measure includes requirements such as installation of temporary fencing and the use of biological monitors to limit disturbance of sensitive habitat areas and species during restoration activities such as invasive plant removal, restoration of temporarily disturbed areas, and compensation for any permanent loss of habitat. In fact, the stated goals of the SNRAMP are not only to maintain viable populations of all special-status species, but also to maintain and enhance native plant and animal communities and enhance local biodiversity. Within the list of General Recommendations, which are management recommendations proposed throughout the various Natural Areas, the SNRAMP includes measures intended to preserve habitat for small mammal use and breeding and nesting bird habitat. The Draft EIR concludes that the long-term effects of the SNRAMP would be to restore and increase biodiversity to the Natural Areas.

Tree removal, as described on Draft EIR p. 92, would avoid the bird breeding season and would involve measures to protect nesting birds when tree removal must occur during that season. With respect to the removal of bird habitat, and as stated on SNRAMP pp. 1-5 and 1-6, trees would be selectively removed in a prescribed number of acres and/or in compliance with forestry statements

(SNRAMP Appendix F) over a 20-year period, limiting tree removal at any one time. During this time, new trees would be planted and saplings would grow to become mature trees, providing replacement bird habitat. As discussed and evaluated in Draft EIR Section VI.F.3, Greenhouse Gas Emissions, "Vegetation Sequestration of Carbon" section, pp. 455 to 457, tree removal would be conducted to promote forest health and foster native species, and would focus on removing trees that are dead, dying, diseased, insect-infested, storm-damaged, or hazardous, or whose growth is suppressed by overcrowding.

The proposed measures to protect sensitive wildlife species and birds described above would also protect habitat for common wildlife species such as mammals and insects. As described above, vegetation clearing would be limited during the spring, the breeding season for most animals. In addition, the areas of vegetation clearing would be relatively small and ample nearby undisturbed habitat would exist where common wildlife species could find refuge. As described in Issue GR-15 in the SNRAMP, more than half of the acreage of urban forests in San Francisco are categorized as MA-3 and would not undergo habitat restoration. As described in GR-10, invasive plants that are host plants for common butterfly species would also be preserved in many grassland areas.

With respect to impacts on common wildlife species, nonnative vegetation removal may affect common species, such as raccoons, squirrels, rats, and possums. However, these impacts would be short-term and temporary as all disturbed areas would be revegetated with native species, and common species can adapt to both nonnative and native habitat types. Further, because these species are acclimated to urban environments, it is expected that they would move to other areas, either within the same Natural Area or in other areas of the city. Lastly, the CEQA thresholds of significance for biological resources, which are provided on Draft EIR pp. 290 and 291, require an EIR to address impacts on sensitive species and habitats, not common species.

One commenter makes reference to loss of great blue heron nesting areas caused by vegetation clearing. Known great blue heron nesting sites are protected in the SNRAMP, as described in Issue LM-3 on SNRAMP pp. 6.1-15 and 6.1-17, and for all nesting birds in GR-4b. The potential impacts to special-status breeding birds associated with invasive vegetation removal are discussed in Impact BI-2 on Draft EIR p. 303. The SFRPD has no record of an incident in which great blue heron nesting areas were lost. Without further information that the proposed project would result in a significant impact, the Draft EIR properly concludes that impacts to breeding birds would be less than significant with mitigation.

The removal of cattails at Sharp Park would result in temporary impacts to birds through the disturbance and loss of nesting habitat from construction activities. Of the existing 19.5 acres of freshwater marsh, 14 acres would remain following restoration. Approximately 5.5 acres of freshwater marsh would be converted to open water habitat, which is optimal habitat for the federally listed wildlife species that occur at Sharp Park and is consistent with the historical wetland habitat types as described on Draft EIR p. 338. While some freshwater habitat would be permanently

converted to open water habitat as a result of proposed project activities, the majority of the freshwater marsh habitat would not be impacted, and other wetland habitats including open water and wet meadow habitat would remain undisturbed or would be increased. Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, as discussed above, would require compensation for this permanent loss of habitat through a mitigation bank, in-lieu funds, or off-site preservation subject to resource agency approval.

Some comments above question whether native plant revegetation compensates for the removal of invasive plants and whether native plants support more biological diversity than invasive species. Refer also to Response PD-11, Response BI-15, Response BI-11, RTC p. 4-388, and Response BI-31, RTC pp. 4-159, 4-402, and 4-439, for additional responses to these comments.

Comment BI-14	**Mitigation measures should include 30-day notice prior to any tree removal or trail closure**

The response to Comment BI-14 addresses all or part of the following individual comment:

MPIC-1-15

- In summary and conclusion, mitigation measures for any approved Natural Areas Plan tree removal and trail closure should include 30-day advance notification to the MPIC of specific cutting planned and the right of interactive review and potential adjustment of specific removals by the MPIC – the neighborhood most heavily impacted by the Plan. [MPIC-1-15]

Response BI-14

This comment requests that the Miraloma Park Improvement Club (MPIC) is given a 30-day notice prior to tree removal and trail closures.

A lead agency may only require mitigation measures under CEQA when a measure is necessary to substantially lessen or avoid significant impacts of a proposed project on the environment (refer to CEQA Guidelines Section 15041). Neither the analysis of project impacts contained in the Draft EIR nor the commenter establishes how advance direct notification of tree removal would lessen or avoid a significant impact of the project on the physical environment. To impose this requirement as a mitigation measure would, therefore, exceed the authority provided under CEQA.

SFRPD's Tree Removal Procedures require a 30-day notice for any tree removals, as discussed in Draft EIR Section III.E.5, Management Practices, p. 93. Prior to planned tree removals, SFRPD posts a notification of proposed tree removal sign on each individual tree that is planned for removal. Individuals and neighborhood organizations are not notified directly of the proposed removals. The posting includes a contact number for questions or concerns. No trees are to be removed during this 30-day period. In addition, the Urban Forestry Ordinance has a 30-day noticing requirement for the removal of street trees, significant trees, and landmark trees, which also prohibits the removal of trees during the noticing period unless the tree(s) could cause manifest danger, in which case the

tree(s) could be removed immediately, with noticing occurring after the removal. As stated on Draft EIR p. 157, no landmark trees are proposed for removal under the SNRAMP.

Comment BI-15	**Effects of retaining nonnative and/or invasive species (including blue gum eucalyptus) on native habitats**

The response to Comment BI-15 addresses all or part of the following individual comments:

CNPS-1-02	SFT-1-01	Gaar-1-01
Langille-1-05	Stringer-1-02	Wilson-1-02

- It is proper to evaluate the effects of tree removal, but the effects of non-removal should also be evaluated. One of those effects is the unstable conditions the trees create. The shading, wind protection, and summer fog drip drastically changes the environment, inviting in English and Algerian ivy, and Cape ivy (*Delairea odorata*). Not only are all the native plants of the area eliminated, the eucalyptus and cypress trees themselves are unable to regenerate. The consequence is what we see beginning to happen on Mt Davidson now: trees toppling because of the weight of the ivy and the cutting off of light from the tree crown, making it unable to photosynthesize. Regardless of whether the trees remain, are thinned, or removed, the impacts of non-removal need identification. [CNPS-1-02]
- The Preferred Project should fully address the long-term sustainable management and control of invasive plants due to the retention of weed-nurturing eucalyptus groves in the MA-3 areas. [SFT-1-01]
- Corona Heights. The proposed action item in the Natural Areas Management Plan to remove 16 invasive Monterey Pine trees is a positive first step in the goal to restore the native grassland of Corona Heights. More trees would need to be removed (specifically adjacent to Museum Way) if the Maximum Restoration Alternative is adopted. If the Natural Areas Management Plan or the Maximum Restoration Alternative are not adopted and implemented then the DEIR should address the specific negative environmental impacts that would occur to the biological resources of Corona Heights. The DEIR should list the plants, insects, reptiles and birds that could be lost if the native plant community is further degraded by the growth of the trees and the spread of the invasive exotic plants that the non-native trees promote. [Gaar-1-01]
- The Plan is NOT radical. In fact, the Proposed Project neglects to fully address the long-term sustainable management and control of invasive plants, due to the retention of weed-nurturing eucalyptus groves in the MA-3 areas, which designation perpetuates a fragmented approach to natural resources management. [Langille-1-05, Wilson-1-02]
- I am an ecologist working in similar environments and am concerned that the removal of eucalyptus groves in the MA-3 areas was not fully evaluated. The threat these trees pose in the long term to the goal of preserving biodiversity is significant and the Proposed plan is-in my opinion- inadequate at addressing them. [Stringer-1-02]

Response BI-15

These comments request that the Draft EIR evaluate the effects of not removing invasive exotic plants and nonnative trees, thereby addressing the relative environmental benefits of invasive plant removal. These comments also express concern about the impacts of not removing eucalyptus trees in MA-3 areas under the proposed project.

SNRAMP Management Areas and Removal of Invasive Species

Nonnative plants and animals are commonly found throughout many of the Natural Areas, and accordingly the SNRAMP classifies the land within the Natural Areas into three management area categories (MA-1, MA-2, MA-3) based on the level of habitat complexity and sensitivity, and the presence of significant plant and animal species. The SNRAMP focuses restoration efforts on those areas that have the most sensitive and diverse habitats (MA-1) and focuses on recreation and preservation of greenspace in the least sensitive areas (MA-3).

Invasive plants are not proposed to be removed in MA-3 areas under the proposed project, and are not being removed in these areas now; the project would have no effects related to invasive plant removal in MA-3 areas compared to the existing conditions.

Effects of Nonnative and/or Invasive Species (Including Blue Gum Eucalyptus) on Native Habitats

As articulated on Draft EIR pp. 84 to 87 and also stated in Response PD-11, RTC p. 4-159, the SNRAMP sets forth several goals related to conservation and restoration. Among those goals are to maintain and enhance native plant and animal communities and local biodiversity; to decrease the extent of invasive exotic species cover; and to re-establish native community diversity, structure, and ecosystem function where degraded (SNRAMP p. 2-1). Response BI-21, RTC p. 4-410, goes on to say that nonnative species have a detrimental effect on native habitats by outcompeting the native species, thus creating a monoculture, which reduces biodiversity (refer to IUCN Guidelines for the Prevention of Biodiversity Loss Caused By Alien Invasive Species).

According to Columbia University's Introduced Species Summary Project:

> "The loss of biodiversity and habitat is a great threat from the Tasmanian Blue Gum tree, as it is from any eucalyptus. It creates virtual monocultures and can rapidly take over surrounding compatible areas, completely changing the ecosystem. That monoculture creates a loss of habitats for many species that relied on the previous system. Due to its great capacity for taking over a wide variety of habitats, the Blue Gum eucalyptus could possibly spread to a great range of systems where there is enough water content and create huge monocultures."[114]

[114] http://www.columbia.edu/itc/cerc/danoff-burg/invasion_bio/inv_spp_summ/Eucalyptus_globulus.html, accessed on April 20, 2016.

Further, it has few natural predators, possesses rapid growth rates, and shades and poisons nearby sun-loving natives by exuding natural herbicides.[115] As an example, coastal scrub requires light to reach the forest floor in order to persist; therefore, species that shade this sensitive habitat, such as invasive blue gum eucalyptus trees, would be removed in select areas. As another example, when the understory of the forest is densely populated with invasive species, it becomes almost impossible for young oak trees to successfully germinate, become established, and reach maturity.

On April 13, 2015, following the June 11, 2012, close of the public comment period for the SNRAMP Draft EIR, the San Francisco Forest Alliance submitted another letter regarding the updated status of blue gum eucalyptus according to the California Invasive Plant Council (CAL-IPC).[116] While the CAL-IPC has changed their "invasiveness" status in overall score from "Moderate" to "Limited," CAL-IPC also states that this change is due to a large degree to evaluating eucalyptus across the entire state, rather than focusing on coastal areas where it is most prone to spreading (such as in San Francisco).[117] CAL-IPC goes on to state (in its Assessment of Tasmanian Blue Gum, a link to which is provided in the previous footnote) that, "Some stands were planted so densely that few other plants grow within the stand, while less dense stands often contain more plant diversity. Some stands are regenerating and expanding in size, while others in less favorable conditions are not. Some stands are within areas now being managed primarily for ecological values, others are not. Where stands do occur in areas being managed for ecological values, it makes clear sense to assess their ecological impact as an invasive plant." The same Assessment further states that eucalyptus "stands displace native plant communities. Plant communities can be severely altered in circumstances where blue gum was planted at high density and growing conditions are favorable. Plant communities in other places can be significantly less impacted." And, further, eucalyptus "stands can form near monocultures in areas where they were planted at high densities (Griffiths & Villablanca 2013). On Angel Island in San Francisco Bay, native trees were only found in eucalyptus plantings where the blue gums had been widely spaced, and these natives were "not vigorous (McBride, Sugihara, and Amme 1988)." Similarly, the Assessment also indicates that "Though not all *E. globulus* stands are expanding, those in moist coastal habitats often expand at a significant rate." In summary, while their invasiveness status has been changed, CAL-IPC encourages land managers to look at blue gum forests on a case-by-case basis and there is still considerable evidence to support the management of eucalyptus as an invasive species in most of the Natural Areas in San Francisco.

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115 http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on November 11, 2015.

116 http://www.cal-ipc.org/ip/inventory/pdf/Eucalyptus_globulus_PAF_2015March.pdf, accessed November 11, 2015.

117 http://www.cal-ipc.org/ip/inventory/pdf/Eucalyptus_globulus_PAF_2015March.pdf, accessed on November 11, 2015.

Benefits of Forest Thinning

As also stated in Response AE-1, RTC p. 4-219 forest thinning, which would occur as a result of the removal of eucalyptus trees, results in an increase in the average diameter of the residual trees, promotes tree growth, and improves forest health through the removal of suppressed trees. More importantly, thinning allows promotion and establishment of a native understory and diversity and decreases the site dominance of invasive tree species, improving the overall health of the forest by relieving overcrowding and promoting habitat for a large array of wildlife.[118] The benefits of forest thinning are reiterated by Utah State University, Forest Extension Program, which states that "Thinning your forest and grazing the understory can result in increased tree quality and size, due to decreased competition for light, water, and nutrients" and providing "important shelter and forage for wildlife."[119] The United States Department of Agriculture also supports forest thinning, stating that "Many late-successional forests in the Pacific Northwest are characterized by the high levels of biodiversity they support, variable tree spacing, and multiple layers in the overhead canopy. They are a stark contrast to young, dense stands or stands managed primarily for timber where there is little variation in tree spacing and species composition. Because little light reaches the forest floor in these types of forest stands, the understory is often sparse to nonexistent."[120]

Effects of Retaining Invasive Species (No Project Alternative)

The effects of retaining (or not removing) invasive species are also addressed in the Draft EIR in the analysis of the No Project Alternative, specifically Draft EIR pp. 470 and 471, stating that:

> "As discussed above, the No Project Alternative does not include large-scale programmatic habitat restoration or invasive species removal; therefore, habitat restoration under the No Project Alternative would be less effective. Encroachment of invasive species and conversion of native habitat to nonnative habitat would be more likely under the No Project Alternative and could threaten the continued existence of sensitive plant species, especially those of limited distribution in the Natural Areas. This potentially significant impact of the No Project Alternative could be mitigated only by implementing the restoration activities identified in the SNRAMP; therefore, the long-term impacts on special status plant species would be potentially significant."

With respect to the evaluation of alternatives, in accordance with CEQA Guidelines Section 15126.6, an EIR's analysis of project alternatives shall focus on alternatives to the project that would avoid or substantially lessen any of the significant impacts identified in the EIR, and an EIR need not evaluate every conceivable alternative to the proposed project; rather, the EIR alternatives analysis must describe a reasonable range of alternatives that would feasibly obtain most of the basic project

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118 http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on August 6, 2014.

119 http://extension.usu.edu/htm/publications/file=14601, accessed on April 20, 2016.

120 www.fs.fed.us/pnw/sciencef/scifi112.pdf, accessed on April 20, 2016.

objectives and would avoid or substantially lessen the significant environmental impacts of the project.

Nevertheless, the effect of removing less nonnative vegetation than what is proposed by the SNRAMP is best characterized by the No Project Alternative. As described on Draft EIR p. 465, the No Project Alternative assumed that SFRPD would continue management activities authorized under the 1995 Management Plan, but that none of the programmatic projects would occur. Therefore, habitat restoration and invasive tree and vegetation removal would be smaller in scale under the No Project Alternative as compared to the proposed project. The effects of the No Project Alternative on biological resources are discussed on Draft EIR pp. 470 to 475. Draft EIR p. 471 concludes, with respect to special-status plant species, that "… habitat restoration under the No Project Alternative would be less effective. Encroachment of invasive species and conversion of native habitat to nonnative habitat would be more likely to occur under the No Project Alternative and could threaten the continued existence of sensitive plant species, especially those of limited distribution in the Natural Areas. This potentially significant impact of the No Project Alternative could be mitigated only by implementing the restoration activities identified in the SNRAMP; therefore, the long-term impacts on special-status plant species would be potentially significant." Similar conclusions are drawn for potential impacts of the No Project Alternative on special-status wildlife species, especially those present at the Sharp Park Natural Area. Therefore, the effects of less removal of invasive vegetation and exotic invasive plants, to the degree applicable under CEQA, are evaluated in the Draft EIR under the No Project Alternative.

Comments regarding the Maximum Restoration Alternatives are addressed in Response AL-, RTC p. 4-562.

Comment BI-16 California Red Legged Frogs in Laguna Salada

The response to Comment BI-16 addresses all or part of the following individual comment:

Bowman-2-09

- Side Note: The Lagoon is not a critical habitat for any species. It is not any more critical to the frogs than the water bodies in Golden Gate Park that may also support the California Red Legged Frog. The 22,000 acre San Francisco Peninsula Watershed is the critical habitat for the frogs, which are actually common along the coast but have declined in the Sierras. Because it was a salt water lagoon, it is also questionable as to whether the frogs where introduced or naturally *exist in the lagoon. There is also no substantive evidence that recreation is harming the frogs in the lagoon*. [Bowman-2-09]

Response BI-16

This comment states that Laguna Salada is not designated as critical habitat and that there is no substantive evidence that recreation is harming frogs in the lagoon.

The commenter is correct in that Laguna Salada is not designated as critical habitat by the USFWS; however, CEQA requires analysis of potential impacts to special-status species and their habitat regardless of critical habitat designations or whether they are naturally occurring at a site. The Sharp Park property is known habitat for the California red-legged frog and the San Francisco garter snake; therefore, impacts to this species associated with the Sharp Park restoration project are discussed in Impact BI-6 on Draft EIR p. 320. The USFWS issued a Biological Opinion in association with the Pumphouse Project at Sharp Park that assesses the impacts of recreation activities on California red-legged frog and San Francisco garter snake, and outlines the specific conservation measures that must be employed in order to avoid a significant impact to either the California red-legged frog or the San Francisco garter snake.

On the Biological Opinion p. 23, the USFWS states that habitat loss, nonnative species introduction, and urban encroachment are the primary factors that have adversely affected the California red-legged frog throughout its habitat. Humans can also facilitate the spread of disease by encouraging the further introduction of nonnative carriers and by acting as carriers themselves. Human activities, such as recreation, can also introduce stress by other means, such as habitat fragmentation, that results in the listed species being more susceptible to the effects of disease.

Specifically, with respect to Laguna Salada, Biological Opinion p. 29 states that California red-legged frog and San Francisco garter snake are affected by ongoing operation and maintenance of Sharp Park Golf Course. Activities at Sharp Park Golf Course that affect these species include pumping of water from Horse Stable Pond to the Pacific Ocean to control winter flood waters. Pumping may cause frog egg masses to become stranded and desiccated; cause entrainment of egg masses and juvenile frogs. Over time, this could reduce habitat quality in Horse Stable Pond and Laguna Salada by encouraging encroachment of cattails and tules, thus altering the salinity levels in both waterbodies. For the reasons listed above, recreational uses can affect the California red-legged frog. However, golf course and Natural Areas management activities consider and address potential negative effects on the California red-legged frog.

Comment BI-17 Disagree with Draft EIR identification of feral geese

The response to Comment BI-17 addresses all or part of the following individual comment:

Bose-1-07

- Pg 466: Feral geese. The geese in San Francisco, including the ubiquitous Canada Geese, are not feral (meaning domesticated animals living in the wild). They are authentic wild geese and as such are protected species. [Bose-1-07]

Response BI-17

This comment states that geese in San Francisco are not feral.

The reference of feral geese in the Draft EIR is taken from the description in the 1995 Management Plan's general policies and management actions contained in the discussion of the "No Project Alternative" and reflects the terminology within the 1995 Management Plan. The commenter is correct that the 1995 Management Plan's characterization of Canada geese as a "feral" species is inaccurate. However, this error derives from the 1995 Management Plan and not the Draft EIR. Therefore, the text on Draft EIR p. 466 (eleventh bullet) has been changed as follows:

- Cooperate with other agencies to address issues of such species as feral cats, domestic dogs, and ~~feral~~ geese[121]

Canada geese present within San Francisco receive the same protection as all migratory birds under the Migratory Bird Treaty Act. In compliance with that act, the SFRPD would be required to avoid harming or removing the nests of all migratory bird species. The implementation of Recommendation GR-4b in the SNRAMP would ensure that direct impacts to nesting birds would be avoided and minimized. Refer also to Response BI-13, RTC p. 4-397, for a further discussion of measures to avoid or reduce impacts to nesting birds.

Comment BI-18 Scrub habitat should be clearly defined

The response to Comment BI-18 addresses all or part of the following individual comment:

CNPS-1-04

- There is mention of scrub, without identifying it as a habitat. We have many different types of ecosystems or habitats: wetlands, grasslands, shrublands, oak woodlands, &c. Scrub as a habitat type should be identified as a scientific community--e.g., North Coastal Scrub. French broom and Himalayan blackberry do not fit in that category. [CNPS-1-04]

Response BI-18

The comment states that scrub should be mentioned in the Draft EIR as a scientific community.

In Draft EIR Section V.G.2, Environmental Setting, all of the habitat types within the Natural Areas are presented. This includes northern Francisco coastal scrub, central dune scrub, central coast riparian scrub, and nonnative scrub, which all correspond to the Sawyer et al. classification system. Coastal scrub habitat is identified in Table 10 as a sensitive habitat type. The use of the general term "scrub" in the Draft EIR is intended to encompass one or more of these more specific habitat types.

[121] Geese in San Francisco are not feral; however, they were incorrectly identified as feral in the 1995 SNRAMP.

Comment BI-19	**Impacts and associated mitigation for wetlands and other coastal resources**

The response to Comment BI-19 addresses all or part of the following individual comments:

CCC-1-02 CCC-1-04

- Proposed project activities, from the perspective of the Coastal Act, should not result in the filling of wetlands, as defined under Section 30121 of the Coastal Act, or mowing of wetland vegetation. Additionally, there should not be significant modifications of wetland hydrology. The City will be required to ensure that all wetlands are correctly delineated according to Coastal Act Section 30121 and Section 13577 of the Administrative Regulations. Potential impacts to wetlands and other significant coastal resources must be clearly identified along with appropriate measures to mitigate those impacts. [CCC-1-02]
- Lake Merced is located within the Coastal Zone. The DEIR correctly identifies the City of San Francisco as the agency responsible for issuing a CDP for any projects located within 100 feet of the lake. It should be additionally noted that the City's final action on a CDP is appealable to the Coastal Commission. Additionally, the open waters of the lake are under the retained jurisdiction of the Coastal Commission. Any proposal that involves that area requires a CDP from the Commission. [CCC-1-04]

Response BI-19

These comments state that the Proposed Project should not result in the filling of wetlands or a significant modification of wetland hydrology. The comments also state that while the City is responsible for issuing a coastal development permit for any project within 100 feet of Lake Merced, the decision is appealable to the CCC, and, further, the open waters of the Lake are under the retained jurisdiction of the CCC.

Impacts of the proposed project on wetlands and other sensitive habitats are addressed in Draft EIR Section V.G, Biological Resources (in particular, refer to Impact BI-6, beginning on Draft EIR p. 319, regarding impacts of the Sharp Park restoration on wetlands and special-status species habitat located in the Coastal Zone and Response BI-25, RTC p. 4-424).

Draft EIR Mitigation Measure M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, p. 298, includes measures to avoid, minimize, restore, and compensate for impacts on habitat supporting sensitive species, riparian habitat, and wetlands. It is noted in Draft EIR Section V.G.1, Regulatory Setting, p. 271, that the proposed Sharp Park restoration activities would require a coastal development permit from the CCC. Additionally, it is noted that for projects within the coastal zone, even those that are not yet fully defined by the SFRPD (including actions within the coastal zone at Lake Merced), coastal development permits would be sought as project details are known.

Comment BI-20 Draft EIR does not address impacts to common wildlife

The response to Comment BI-20 addresses all or part of the following individual comments:

WTPCC-1-08	Hess-1-03	Johns-1-04
Kessler-1-10	Kessler-2-10	

- WTPCC opposes the destruction of existing habitat needed by the wildlife and birds currently living in the parks. For example, NAP has removed underbrush in Glen Canyon that is used by coyotes to hide from people and dogs, and replaced it with grasslands. Unlike the underbrush, the grasslands provide little "cover" for the coyotes or other wildlife living in the natural area. [WTPCC-1-08]
- (3) Some of the animals and birds I have spotted that would lose this important habitat include hawks, owls, coyotes, hummingbirds, skunks, rabbits, opossum, red-winged blackbirds, ravens and crows. What a terrible thing it would be to destroy their home. [Hess-1-03]
- 2. And has anyone studied the habitat issues? What happens to our hawks, turkey buzzards, and other birds that rely on that forest for life? And what happens to the coyotes, skunks, racoons, and other animals that rely on that forest for life? [Johns-1-04]
- And what about birds, raptors and furry animal life that are not on the endangered lists – wildlife which already lives in these areas now? There is no mention of these in the EIR. [Kessler-1-10] [Kessler-2-10]

Response BI-20

These comments express that the Draft EIR should address impacts to common wildlife, including coyotes in Glen Canyon.

The stated goals of the SNRAMP are not only to maintain viable populations of all special-status species, but also to maintain and enhance native plant and animal communities and enhance local biodiversity. Within the list of General Recommendations, which are management recommendations proposed throughout the various Natural Areas, the SNRAMP includes measures intended to preserve habitat for small mammal use and breeding and nesting bird habitat. The EIR recognizes that the Natural Areas are important habitat for wildlife species, including migrating and resident birds and coyotes. The EIR's primary responsibility is to identify sensitive wildlife that could be impacted by the project, evaluate the significance of the impact, and identify mitigation to reduce or eliminate impacts determined to be significant. CEQA Guidelines Section 15065 directs lead agencies to consider other species when the effects might cause a fish or wildlife population to drop below self-sustaining levels, but this was not considered a possible outcome of the SNRAMP because the underlying purpose of the Project, as articulated in two of the CEQA objectives, is to identify issues and impacts adversely affecting ecosystem functions and biological diversity and identify, prioritize, and implement restoration and management actions designed to promote the

functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity.

Draft EIR pp. 290 and 291 discuss the criteria used in the Draft EIR to identify potentially significant impacts on biological resources. Potential effects of the SNRAMP on birds and other wildlife species under these criteria are discussed on Draft EIR pp. 294 to 344. The Draft EIR concludes that implementation of programmatic projects and routine maintenance activities under the SNRAMP would not result in significant adverse impacts on biological resources.

As stated in Recommendation GR-1c, restoration activities shall be conducted during the appropriate time of year and, at any one time, the area of vegetation removal shall be relatively small. With respect to common species, these species/habitats are abundant throughout the San Francisco Bay region. Further, common species are adapted to urban environments with high degrees of disturbance and would be expected to use nearby areas for shelter, foraging and breeding while restoration areas are temporarily impacted. Refer also to Response PD-18, RTC p. 4-188, for a discussion of coyotes at Glen Park.

Comment BI-21	**Biodiversity would decrease with removal of plants and planting of native coastal dune plants**

The response to Comment BI-21 addresses all or part of the following individual comments:

Art-1-04	Cook-1-05	Delacroix-1-04
Fox-1-04	Jungreis-1-05	Ray-1-04

- Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity. We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants. [Art-1-04] [Delacroix-1-04] [Fox-1-04] [Ray-1-04]
- Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would <u>decrease</u> wildlife biodiversity. NOT increase wildlife biodiversity. [Cook-1-05] [Jungreis-1-05]

Response BI-21

These comments indicate that the reintroduction of native plants would decrease biodiversity.

As stated in the Draft EIR, the removal of invasive species, such as iceplant, eucalyptus, Ehrharta grass, and radish would occur within the native coastal dune habitat, which is identified as a sensitive habitat. In most cases, these were not plants that were intentionally planted, but have spread on their own due to their invasive nature. Coastal scrub requires light in order to persist; therefore, species that shade this sensitive habitat, such as invasive blue gum eucalyptus trees, would be removed in select areas.

Response G-12, RTC p. 4-60, provides the definition of invasive species that is contained in Executive Order 13112, which is a species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.[122] A majority of nonnative species cause no harm (meaning they are not invasive), and some are even beneficial. Following the removal of invasive species, native species would be replanted in order to enhance the natural habitat, as well as stabilize the coastal dunes. Invasive species have a detrimental effect on native habitats by outcompeting the native species, thus creating a monoculture, which reduces biodiversity (refer to IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species). As articulated on Draft EIR pp. 84 to 87, some of the expressed goals and objectives of the SNRAMP are to maintain and enhance native plant and animal communities; reestablish native community diversity, structure, and ecosystem function where degraded; and promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity.

Comment BI-22 Distinction regarding native and nonnative predators

The response to Comment BI-22 addresses all or part of the following individual comment:

CNPS-1-03

- Feral cats are identified as predators, which they are. But the connotation in the DEIR implies that predators are bad. They are not; native predators are a part of the system that nature has employed for millions of years to bring balance and stability. Nonnative feral cats should be identified as deleterious and destabilizing to natural ecosystems and biodiversity. [CNPS-1-03]

Response BI-22

This comment indicates that the Draft EIR should describe nonnative feral cats as deleterious and destabilizing to natural ecosystems and biodiversity.

The Planning Department concurs with this distinction.

The text on Draft EIR p. 320 (second bullet) has been changed to further address predators in the Draft EIR, as follows:

- Converting about half an acre of wet meadow/freshwater marsh wetland to an upland refuge in the middle of the lagoon to provide snakes and frogs with refugia from feral cats and other <u>nonnative</u> predators; creating about an acre of replacement wet meadow wetland along the northern and western edges of the lagoon in place of coastal scrub habitat, achieving no net loss of wetland habitat; and

[122] http://www.invasivespeciesinfo.gov/docs/council/isacdef.pdf, accessed on September 14, 2015.

As well, the text on Draft EIR p. 327 (third bullet) has been changed, as follows:

- During project activities, all trash that could attract nonnative predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

Comment BI-23 Feral cat and predator control

The response to Comment BI-23 addresses all or part of the following individual comments:

GGAS-1-02 Bartley-1-06 Bartley-1-09
Gravanis-1-05 Gravanis-1-06

- Overall, the Project Description adequately describes the SNRAMP program and the purpose of the DEIR. We appreciate that the DEIR provides a list of special management concerns that exist in San Francisco, especially in its Natural Areas. These include
  - > Loss of special status or unusual native species or habitats;
  - > Loss of diversity and components of a healthy ecosystem;
  - > Effect of nonnative invasive species on the local native flora and fauna;
  - > Erosion of Natural Areas from inappropriately located or constructed trails and access roads;
  - > Effect of human uses (recreation, poor trail location or too many trails, and a general increase in use) that conflict with conservation values; and
  - > Effects of feral animals and domestic pets on native flora and fauna.

  We will address these specific concerns in the Recommendations and Environmental Impacts sections below, but we note that while the DEIR calls out these issues, it does not prescribe adequate management measures to deal with each. Of particular concern is the Planning Department's decision to allow feral cat feeding stations to continue to be operated in San Francisco's Natural Areas. In fact, the DEIR's failure to study the impacts of feral cat feeding stations in the Natural Area may be a fatal flaw that renders it vulnerable to challenge.

  Feral cat colonies and feeding stations should not be tolerated in any portion of the Natural Areas. The destructive impact on birds and other wildlife has been well documented. Feral cat feeding stations also feed non-native rats and other species which eat native bird eggs and chicks (raccoons, common raven and western scrub jays). There is an estimated population of 60 million feral cats in the US and their negative financial impact in the US cost $17 billion.

  Unfortunately, the DEIR states the intent to "[i]mplement the feral cat control policy from the Quail Recovery Plan approved by the San Francisco Commission on the Environment." (DEIR, at 110)

Section 2.4.3 of the Quail Recovery Plan states:

> Board of Supervisors Resolution No. 631-00 specifically requires a quail recovery effort that will be implemented "without killing other animals." Removal or relocation of predators may result in death and other unintended negative consequences. Therefore, any proposed removal or relocation of predators of any kind must be submitted in writing to the San Francisco Recreation and Park Department for review and recommendation. In each proposed case, the Department will consult with San Francisco SPCA to determine whether the relocation or removal is feasible and, if so, how best it can be done. If the relocation or removal is approved by SFRPD, the Department will utilize the pro bono services of SF/SPCA to accomplish the task unless SF/SPCA declines to participate.

(Quail Recovery Plan, at 3). The Board of Supervisors Resolution No. 631-00 was intended to specifically apply to the Quail Recovery Plan, not to the SNRAMP. It is an extremely unwise management decision to import the strictures of Resolution No. 631-00 into a management for natural areas.

First, Resolution No. 631-00 was intended to apply only to the Save the Quail campaign and was not subject to debate or public input as part of a larger management scheme for all of San Francisco. Second, the Resolution was not considered with the special needs and sensitivities of the Natural Areas Program or its prioritization of the protection of biodiversity. Third, the Resolution was ill-founded in the first instance and constitutes a significant and unnecessary conflict with the goal of protecting native wildlife in the City.

In any event, the DEIR as written prohibits the use of lethal control for "any animal", including feral cats. It also effectively delegates decision-making authority about the potential removal or other control of feral cats to the SPCA, which is not a government entity and which has unfortunately consistently demonstrated that it prioritizes non-native feral cats over the wellbeing of native birds, lizards, mammals and insects that suffer significant impacts from feral cat colonies and feral cat feeding stations. While the SPCA has repeatedly verbally expressed concern about native animals, it has never once made efforts to reduce their impacts on native wildlife. Rather, it has consistently fought every reasonable effort to do so. With this language, the Planning Department is putting a non-wildlife organization at the forefront of decisions that have significant impacts on native wildlife and native ecosystems in the Natural Areas Program.

Perhaps more importantly to the viability of the DEIR, Golden Gate Audubon argues that if the Planning Department intends to implement a prohibition against lethal control in the NAP, the environmental impacts of that policy must be fully reviewed in the DEIR. The current DEIR provides no data or other information about this policy. If the Planning Department fails to conduct the necessary environmental review, Golden Gate Audubon will consider the DEIR to be fatally flaws and will consider an appeal and all necessary legal challenges.

It would be far wise for the NAP to develop feral cat control as part of its Integrated Pest Management (IPM) program. (See, Hildreth, A. et al. 2010. Feral Cats and Their

Management. University of Nebraska, Lincoln Extension, at 4) As part of a planned IPM program, the effort could involve a series of prophylactic measures to prevent feral cat populations from expanding to the point that lethal control would be necessary. (Id.) A well-planned, comprehensive program would also reduce the need for extremely expensive and controversial Trap-Neuter-Release ("TNR") efforts, which are of questionable value in reducing colony sizes.

The Planning Department's effort to sweep this issue under the rug is one of the most glaring flaws in the DEIR. As expressed above, unless this issue is given much greater consideration and the environmental impacts of the policy are fully studied and mitigated – Golden Gate Audubon will be in the unhappy and unwanted position of consider a challenge to the adequacy of the DEIR.

Golden Gate Audubon is most concerned with this section's failure to discuss the environmental impacts of implementing General Recommendation 7, especially GR 7a, as formal policy in implanting the SNRAMP. The DEIR does not discuss the environmental impacts arising from GR 7 and does not consider any alternatives to perpetuating feral cat colonies in Natural Areas. The DEIR should be revised to consider different alternatives, including the absolute exclusion of feral and free-ranging cats in Natural Areas and to consider the impacts of all reasonable alternatives for cat population management.

The DEIR would be improved by acknowledging that the total San Francisco population of California Quail is approximately 12 birds. The quail have been extirpated from much of the city due to management, including tolerance of feral cat colonies and off-leash dog activities. The quail should be considered a locally significant bird and provided special status protection consideration in the DEIR.

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- Thank you for including feral cat considerations in several parts of the SNRAMP. Feral cats and their feeding stations should not be permitted in any of the natural areas parks and open spaces. It is a biological fact that the allowance of feral cats has been a primary cause for steep declines in avian diversity in San Francisco including the near extirpation of the California Quail. [Bartley-1-06]
- Trash containers at all parks need to be wildlife resistant. Population levels of meso-level predators such as Common Raven have grown exponentially in the last twenty years in part due to access to human food waste. These animals in turn have a negative impact on other native species such as raptors who are primary natural pest control agents. Also Norway rat populations have increased due to access to garbage and until rodenticides are outlawed for

use by citizens use of them on rats will continue which has a double whammy effect on Owls and Raptors when they catch a poisoned rat that in turn kills them (in an excruciating manner). Increased education and enforcement of wildlife feeding laws will also help in this regard. [Bartley-1-09]

- Predators – Putting the feral cat problem under the heading "Predators" seems like an odd choice. While feral cats are indeed predators, that's not what makes them a problem. Natural predator-prey relationships are a good thing, part of the systems and processes that we are trying to protect and restore; the problem with feral cats is that they are predators that are not indigenous to our local ecosystems.

  GR-7c – Undertake control of non-cat predators only where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations. Why is there no differentiation between native and non-native predators? While native predators do sometimes need to be controlled, largely due to disproportionate population growth caused by human activity, the approaches to control should be different.

  GR-7b – Develop outreach materials to educate neighbors and users of Natural Areas about feral cats; Also needed are measures to educate the public about not feeding, intentionally or otherwise, any animals, predator or not, native or not. [Gravanis-1-05]

- "P.41 During project activities, all trash that could attract predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas." All trash that could attract any species, predator or not, should be contained and removed immediately. [Gravanis-1-06]

Response BI-23

These comments express both support for the proposed management actions for control of feral cats and a preference for more aggressive feral cat control measures than those proposed under the SNRAMP, further stating that the Draft EIR is inadequate because it does not identify the environmental impacts of not implementing more aggressive feral cat controls. They also indicate that native and nonnative (e.g., feral cats) predators should be controlled differently. Lastly, these comments also request that trash containers be wildlife resistant and that trash is removed immediately to control predation from other animals.

The purpose of the Draft EIR is to identify potentially significant adverse environmental consequences of the proposed project. Because predation on birds and other native wildlife by feral cats is an existing condition, the proposed feral cat management measures would have a beneficial effect on the environment relative to the environmental baseline. Although a more aggressive feral cat control program could have greater environmental benefits than the project as proposed, CEQA does not require project modifications (i.e. mitigation measures or project alternatives) in response to environmentally beneficial effects of a proposed project.

Details on feral animal issues and the associated management approaches can be found in the SNRAMP document, specifically Recommendations GR-7a, GR-7b, and GR-7c. These recommendations are also summarized on Draft EIR p. 110. Recommendation GR-7a includes gradually moving feeding stations away from wildlife habitat areas at Lake Merced and Golden Gate Park Oak Woodlands to protect wildlife and relocating feral cats and feral cat colonies. More specifically, Recommendation GR-7 states that the SFRPD shall implement the policy toward feral cat control as adopted from the Quail Recovery Plan and approved by the Commission on the Environment on January 14, 2004. The Quail Recovery Plan reads, "[r]emoval and relocation of predators may result in the death and other unintended negative consequences. Therefore, any proposed removal or relocation of predators of any kind must be submitted in writing to the SFRPD for review and recommendation. In each proposed case, the Department will consult with the San Francisco SPCA to determine whether the relocation or removal is feasible and, if so, how best it can be done. If the relocation or removal is approved by SFRPD, the Department will utilize the pro bono services of SF/SPCA to accomplish the task unless SF/SPCA declines to participate." Recommendation GR-7b includes an outreach effort to educate neighbors and users of the Natural Areas about feral cats, including adoption and spaying/neutering, and Recommendation GR-7c suggests predator control, but only in situations where the predators are concentrated in such a manner that they are having a substantial effect on native wildlife populations. For purposes of SNRAMP, "feral cat control" refers to managing feral cats such that the location of feral cats and cat colonies minimizes the risk of cat predation on wildlife. It does not refer to "trap and kill." Additionally, the establishment of new feral cat colonies would be discouraged in Natural Areas where colonies could threaten wildlife. While the presence of feral cats as well as other predators (such as ravens or rats) is an existing condition, implementation of the SNRAMP, including the recommendations previously discussed, would represent an improvement over existing conditions. Comments about the establishment of feral cat colonies will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project.

With respect to general predator control, and as previously stated, General Recommendation GR-7c states that the SFRPD can undertake control of non-cat predators where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations, allowing SFRPD staff the flexibility to use control measures that are specific to the predator of concern in a given situation. General Recommendation GR-7b, which recommends that SFRPD develops outreach materials to educate neighbors and users of Natural Areas about feral cats, was developed to specifically address the feral cat population, which the SFRPD considers the greatest predatory threat to native wildlife, and it could be applied to other predators, as well.

It would not be practical to contain and remove all trash immediately in terms of the manpower needed to conduct such an effort on a daily basis in the 31 Natural Areas. To discourage users from leaving trash in Natural Areas and other SFRPD parks, the SFRPD encourages park users to "Leave No Trace" and remove all trash with them when leaving the park. The SFRPD may consider the use

of wildlife-resistant trash containers, but because this would not affect the EIR's environmental impact analysis, no changes to the document text have been made; however, the above comments have been forwarded to the SFRPD staff and Commission for their consideration.

Refer also to Response BI-22, RTC p. 4-411, for a discussion of native and nonnative predator control.

Comment BI-24 Distinction between native and nonnative species and invasive species

The response to Comment BI-24 addresses all or part of the following individual comments:

MPIC-2-13	SFFA-3-02	WTPCC-1-15
Art-1-05	Bose-1-08	Cook-1-04
Delacroix-1-05	Fox-1-05	Hess-1-02
Jungreis-1-04	Kessler-1-02	Kessler-2-02
Ray-1-05	PH-Antonini-02	PH-Antonini-04

- The DEIR also justifies the destruction of thousands of trees on the grounds that they are non-native and "invasive":

  > Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur. (DEIR, page 456)

  In fact, there is no evidence that any of these trees are "invasive." Although the California Invasive Plant Council has classified eucalyptus as "moderately invasive," there is no scientific evidence to support this claim. According to the US Forest Database of Plants and Trees, "It [blue gum eucalyptus] does not spread far and rarely invades wildlands." (http://www.fs.fed.us/database/feis/plants/tree/eucglo/all.html)

  In "Vegetation Change and Fire Hazard in the San Francisco Bay Area Open Spaces," William Russell (US Geological Survey) and Joe McBride (UC Berkeley) used aerial photos of Bay Area parks taken over a 60-year period from 1939 to 1997 to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Point Reyes, Bolinas Ridge), and one on the Peninsula (Skyline). These photos revealed that grasslands are acceding to shrubland, dominated by native coyote brush and manzanita. Eucalyptus and Monterey pine forests actually decreased during the period of study. In those cases in which forests increased in size, they were native forests of oaks or Douglas fir. In other words, **these researchers found no evidence that non-native trees are invading native trees or shrubs.** [MPIC-2-13]

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  > Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur. (DEIR, page 456)

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William Russell (USGS) and Joe McBride (UC Berkeley) (Russell and McBride 2003) used aerial photos of Bay Area parks taken over a 60 year period from 1939 to 1997, to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Pt Reyes, Bolinas Ridge), and one on the Peninsula (Skyline).

These photos revealed that grasslands are succeeding to shrubland, dominated by native coyote brush and manzanita. (They also noted that this conversion increases fire hazards.) **Eucalyptus and Monterey pine forests actually decreased during the period of study.** In those cases in which forests increased in size, they were native forests of oaks or Douglas fir. In other words, **they found no evidence that non-native trees are invading native trees or shrubs in open spaces in the Bay Area.**

The California Invasive Plant Council classifies *Acacia dealbata* (Silver wattle) as "moderately invasive" and the impact of *Acacia melanoxylon* (Black acacia) as "limited" and adds "impacts are low in most areas." In fact, acacia does not spread unless it is cut down when it then resprouts vigorously from the roots unless it is poisoned repeatedly or the roots are dug out of the ground with heavy equipment.

Neither Monterey cypress nor Monterey pine are invasive. Even the California Invasive Plant Council agrees with that assessment. And both are California natives with fossil evidence that they existed on the San Francisco peninsula in the distant past.

On Mt. Davidson, plans to destroy 1,600 trees over 15 feet tall include many Monterey cypresses. In this particular "natural area," it is therefore not accurate to say that "most" trees that will be removed are invasive. Table 6.2-1 in SNRAMP claims that only .10 acres of Mt. Davidson are forested with Monterey cypress. This is not accurate. Acres of Monterey cypress on Mt. Davidson are much greater. Since these species are also native to California and have existed in San Francisco in the past, it is an exaggeration to call them non-native. [SFFA-3-02]

- Although oaks are native to California, I would be surprised if they were native to San Francisco. We don't get the kind of sun that oaks need to thrive. It's too moist here, especially west of Twin Peaks. You can literally count all the oaks currently in the city. We have one in St. Francis Wood. I know of one on Russian Hill. The arboretum probably has the most- and that's not many. Eucalyptus, on the other hand, thrive here. We have the kind of microclimate in which they do well with all our other plants.

  The natural habitat west of twin peaks was sand dunes. The earliest settlers in the Presidio called it a god-forsaken wasteland wind-swept with sand- it was practically uninhabitable. The soldiers dreaded being there. So trees were planted as windscreens and to hold the

sandy soil. Sutro Forest helped the surrounding homes by breaking the wind. Why would anyone want to go back to those sandy wind- swept days? [WTPCC-1-15]

- I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created. [Art-1-05] [Delacroix-1-05] [Fox-1-05] [Ray-1-05]
- Throughout the DEIR, the term invasive is used repeatedly as a pejorative, without any definition, and without any parameters for establishing whether a particular species is actually invasive at that location. In particular, there is no evidence that the eucalyptus and Monterey pine/cypress scheduled for removal have in any way invaded the landscapes they are in. They were planted there.

  In fact, the research elsewhere in the Bay Area actually shows that these forests are declining, not invading. In Vegetation Change and Fire Hazard in the San Francisco Bay Area Open Spaces, William Russell (USGS) and Joe McBride (UC Berkeley) used aerial photos of Bay Area parks taken over a 60 year period from 1939 to 1997, to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Pt Reyes, Bolinas Ridge), and one on the Peninsula (Skyline). These photos revealed that grasslands are succeeding to shrubland, dominated by native coyote brush and manzanita. Eucalyptus and Monterey pine forests actually decreased during the period of study, and thus cannot be considered invasive. [Bose-1-08]
- Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal. [Cook-1-04] [Jungreis-1-04]
- (2) The trees have been there for over 100 years. It is not on a sprinkler or drip irrigation system because the trees create their own mini-atmosphere of fog and keep the area moist for vegetation and animals. NAP's claims that it isn't "natural" are ill-founded because not only does it survive on its' own but it also provides a significant habitat for animals and birds. We do not believe an area must be "original natural" to merit survival. [Hess-1-02]
- The report repeatedly mentions "invasive trees", usually in reference to eucalyptus. This tree has not been shown to be invasive. The trees that are here were planted, many of them a century or more ago. The main issue appears to be that they are occupying land that Native Plant advocates want to convert to Native Plant areas. [Kessler-1-02] [Kessler-2-02]
- So I think to -- you know, I don't know what native plants are really native. There couldn't have been very much from the pictures I've seen, but maybe some scrub grass and an occasional tree here or there, but not a lot. Uhm, so you know, I think we have to look carefully at a lot of these areas. [PH-Antonini-02]
- The other thing in regards to Sharp Park in particular, I'm glad the one speaker brought up the fact that before there was a break water, you know, the Laguna Salida [sic] means Salt Lake, and it was basically – or salt lagoon, you know, which was a salty environment that would not have supported the red-legged frog and the garter snake. So we actually created a

> breeding ground and, you know, to eliminate the break water would, of course, eliminate those species. So I think that part of this whole thing is protecting something that was never there in the first place, but I'm not saying that we shouldn't protect them, but they're not really indigenous to the area. [PH-Antonini-04]

Response BI-24

These comments focus on the distinction between native and nonnative or invasive species, with specific reference to eucalyptus, Monterey cypress, Monterey pine, acacia, and California red-legged frog and San Francisco garter snake. The comments also question whether nonnative trees are invading native trees and the plans for tree removal at Mount Davidson.

Draft EIR Appendix D contains Table C-3, which lists all of the plant species recorded within the Natural Areas and indicates which Natural Areas they are found within and whether they are a native species or not. According to the California Native Plant Society (CNPS), native plants are those plants that grew here prior to European contact.[123] Response G-12, RTC p. 4-60, provides the definition of invasive species that is contained in Executive Order 13112, which is a species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.[124] A majority of nonnative species cause no harm (meaning they are not invasive), and some are even beneficial.

The trees planned for removal, including those at Mount Davidson, are invasive species and do not contain any native or historic tree species. Some of the replacement trees would be oak species (because oak woodland habitat is dominant within the region, and is also native), but other species would also include, but are not limited to, California Bay laurel and California wax myrtle. In fact, in response to one of the commenters question about whether oak trees were native to San Francisco, various types of tree nuts were an important food source, and the acorn of the coast live oak had been the most favored by the Ohlones, who occupied the territory from San Francisco to Monterey for an estimated 2000 years; in addition, trees were also documented at the Presidio when the Spanish landed. While one of the commenters contends that oak trees were planted as windscreens to hold the sandy soil, and it is possible that some trees were planted for this purpose, oak trees were also documented to occur during Native American and Spanish settlement, making them native to the area.

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123 http://www.cnps.org/cnps/nativeplants/, accessed on August 7, 2014.

124 http://www.invasivespeciesinfo.gov/docs/council/isacdef.pdf, accessed on September 14, 2015.

The SNRAMP identifies invasive plant species, including eucalyptus, as responsible for historic and present loss of biodiversity. These species are capable of spreading rapidly and displacing native plants because they are adapted to similar climatic conditions, lack predators or pests, and have other auto-ecological characteristics that allow them to thrive. Refer also to Response BI-15, RTC p. 4-402, and Response BI-36, RTC p. 4-470, for a more detailed discussion of the damage that can be caused by invasive species.

Eucalyptus is native to Australia and the neighboring islands of Indonesia, Timor, and New Guinea. While eucalyptus trees were intentionally planted in many locations across San Francisco, the behavior of those established trees to spread and take over additional land areas supports their identification as "invasive." It is considered a nonnative species that can block native propagules[125] from establishing,[126] and it is specifically considered an invasive species according to the California Invasive Plant Council.[127] The California Invasive Plant Council goes on to say that:

> "Within groves [of eucalyptus], biological diversity is lost due to displacement of native plant communities and corresponding wildlife habitat. Abundance and diversity of understory vegetation is dependent on stand density. Understory establishment is inhibited by the production of allelopathic[128] chemicals and by the physical barrier formed by high volumes of forest debris consisting of bark strips, limbs, and branches. The fuel complex formed by this debris is extremely flammable, and under severe weather conditions could produce drifting burning material with the potential to ignite numerous spot fires. Because stringy bark is carried away while burning, eucalyptus forests are considered the worst in the world for spreading spot fires. The Oakland hills firestorm was both intense and difficult to control because of the many stands of eucalyptus. Individual trees growing near structures or in public use areas are hazardous because of the potential for branch failure. Stature and growth form are distinctive and unlike native tree species, which compromises the visual quality of natural landscapes."

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125 With respect to plants, a propagule is any plant material used for the purpose of plant propagations.

126 Todd Keeler-Wolf and Allan A. Schoenherr, *Terrestrial Vegetation of California*, edited by Michael G. Barbour, Third Edition. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA, 94103, as part of Case File No. 2012.1427E 400 with three-days advance notice.

127 http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm@usernumber=48&surveynumber=182.php, accessed on August 7, 2014.

128 Allelopathy is the inhibitory effect of one living plant upon another by the release of toxic substances.

The Monterey pine is also considered invasive by the NPS. The NPS states that in southern Marin County, large expanses of coastal scrub vegetation have been colonized by Monterey pine (*Pinus radiata*) cultivars.[129] The NPS goes on to state that Monterey pine cultivars have been planted throughout the world and are invasive on at least three other continents besides North America.[130]

In terms of the Monterey Cypress, according to the California Invasive Plant Council, Monterey cypress is native to the Monterey coast area, but is considered moderately invasive in other parts of California where it spreads from planted windbreaks or hedgerows into surrounding vegetation.[131]

Refer also to Response BI-11, RTC p. 4-388, for a further discussion of invasive species and potential impacts on native species and Response BI-12, RTC p. 4-391, for a discussion of the revegetation plans at Mount Davidson. The importance of preserving and restoring biodiversity and native plant communities in San Francisco's Natural Areas is further discussed in Response PD-11, RTC p. 4-159, and Response PD-4, Opposition to the project – habitat restoration, RTC p. 4-139.

With respect to whether the California red-legged frog and the San Francisco garter snake are indigenous to the area, the California red-legged frog is endemic (or native) to California and northern Baja California[132] and the San Francisco garter snake is also native to California.[133] However, the geographic ranges of both of these species have reduced, which is, in part, the reason they are considered threatened (California red-legged frog) and endangered (San Francisco garter snake) by the USFWS. Table 9, which is provided in Section V.G, Biological Resources, of the Draft EIR states that while the California red-legged frog was historically observed at Lake Merced and was since believed to be extirpated, it was recently observed at Sharp Park. The San Francisco garter snake was reported near Horse Stable Pond in Sharp Park in 2008.

All of the Natural Areas, including Laguna Salada, have been significantly altered by development and other human activities from their condition prior to European settlement. However, in accordance with CEQA Guidelines Section 15125(a), the physical environmental conditions that

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129 Robert Steers, Jen Jordan, James Cartan, and Kaitlyn Hacker, Invasive pine tree impacts on coastal scrub vegetation in the Marin Headlands, San Francisco Area Network, Inventory and Monitoring Program, Ft Cronkhite, Sausalito, n.d., http://www.cal-ipc.org/symposia/archive/pdf/2010/posterSteers.pdf, accessed on August 7, 2014. Also http://www.sfnps.org/download_product/1982/0, accessed on August 7, 2014.

130 Robert Steers, Jen Jordan, James Cartan, and Kaitlyn Hacker, Invasive pine tree impacts on coastal scrub vegetation in the Marin Headlands, San Francisco Area Network, Inventory and Monitoring Program, Ft Cronkhite, Sausalito, n.d., http://www.cal-ipc.org/symposia/archive/pdf/2010/posterSteers.pdf, accessed on August 7, 2014.

131 http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm@usernumber=48&surveynumber=182.php, accessed on August 7, 2014.

132 http://www.californiaherps.com/frogs/pages/r.draytonii.html, accessed on October 5, 2015.

133 http://www.fws.gov/sacramento/outreach/Featured-Stories/SF-Garter-Snake/outreach_featured-stories_sf-garter-snake.htm, accessed on October 5, 2015.

existed at the time that the notice of preparation of the Draft EIR was published form the baseline from which the Planning Department should determine the environmental consequences of the proposed project. Accordingly, the Draft EIR considers the environmental effects of the proposed actions under the SNRAMP to replace existing nonnative plants with native plant species and the effects of the proposed Sharp Park restoration actions on special-status species and sensitive habitats that are present at the site today.

Comment BI-25 Extent of wetlands filled for the conversion of marsh to fairways

The response to Comment BI-25 addresses all or part of the following individual comment:

Baye-1-01

- **1. The DEIR fails to identify the extent of wetlands filled for the purpose of conversion of marsh to golf fairways rather than enhanced upland habitat for endangered species, and fails to identify mitigation for wetland filled to enhance upland golf greens.**

  The DEIR fails to disclose that a significant area of existing wetlands bordering the northeastern end of the lagoon would be filled and converted to upland golf greens, rather than filled to provide enhanced habitat for endangered wildlife. This fill is shown in Figure 14 of Appendix I (Tetra Tech 2009) and described in a text box in a misleading and inaccurate way as "raise fairways to reduce flooding" along the inland side of the "habitat boundary" mapped near hole 14. Neither the restoration plan nor the DEIR identify the fairway areas to be filled and raised above flood elevations as including existing wetlands consisting of freshwater marsh mown down to a low turf to function as part of a fairway. The mown marsh is in fact composed of dominant marsh vegetation identical to the marsh that isn't mown on the other side of the artificial habitat boundary. The "habitat boundary" in fact is the line of mowing that encroaches into the marsh, not the boundary between upland and wetland soils and vegetation. It is entirely artificial, nominal boundary. The mown marsh was identified as one of the existing degraded conditions of the Laguna Salada wetland complex in the January 2011 report on Laguna Salada restoration alternatives (PWA 2011), which was provided to the City of San Francisco. It was also shown and explained to representatives of the Recreation and Parks Department in a slide presentation at the November 2010 Sharp Park "working group" meeting at McLaren Hall.

  The mown marsh area lying within the proposed fill area falls entirely within the criteria for wetlands protected by policies of the California Coastal Commission, and it meets all criteria for wetlands under the current U.S. Army Corps of Engineers wetland delineation manual.

  The identification of the marsh as wetland is obscured by regular mowing that makes it resemble golf turf, but the mowing does not alter the basic jurisdictional criteria of the wetland determined by dominant obligate and facultative-wet wetland species, hydric soils, and winter flooding and saturation for multiple weeks. The fill of this mown marsh and its conversion to upland golf greens is neither identified as an impact, nor evaluated for impact significance, nor mitigated in any way.

[Caption:] Mowing of freshwater marsh with saturated soils at the surface mown to height of golf turf, annexing marsh to golf links at N Sharp Park; fresh-brackish marsh species composition of the mown marsh turf at marsh edge is identical with adjacent marsh: silverweed, threesquare bulrush. Mown marsh grades into facultative wetland grasses (creeping bentgrass) and brass-buttons. Mown marsh zone extended approximately 3 to 5 m (variable) from the unmown emergent marsh edge in 2010.

[Caption:] The golf turf mowing encroaching the northeast end of Laguna Salada, extending directly into the marsh and riparian woodland zones. The apparent golf turf is mown marsh with vegetation composed of the same fresh-brackish obligate and facultative-wet marsh plant species on the lagoon side of the photos: coast bulrush (*Schoenoplectus pungens*) silverweed (*Potentilla anserina* ssp. *pacifica*), creeping bentgrass (*Agrostis stolonifera*) and brass-buttons, *Cotula coronopifolia*. The seasonally flooded outer marsh and its terrestrial ecotone are replaced by turf even with pumped drawdown of the lagoon. Photos: June-August 2010.

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

> fails to disclose fill and conversion of wetlands to uplands used not for purposes of upland habitat enhancement, but for golf recreational enhancement, and fails to assess impacts or mitigate for net fill and conversion of wetland to golf uplands. [Baye-1-01]

Response BI-25

This comment indicates that the Draft EIR fails to identify the extent of wetlands filled for the conversion of marsh to fairways at Sharp Park and includes photos.

CEQA requires an analysis of the potential impacts that could result from implementation of the project and project alternatives as compared to baseline conditions. As the commenter notes, there are areas currently used as fairways in the east portion of the Laguna Salada that will be raised under the project to reduce flooding to the fairways (associated with Holes 10, 14, 15, and 18). In addition, existing Hole 18 would be raised to allow a two percent slope relative to Hole 14. These areas are currently used as an operational golf course (i.e., mown fairways and a hole) and, after being raised, would remain as an operational golf course (i.e., mown fairways and a hole) after the project is completed. The SNRAMP does not propose to convert any marsh areas to fairways or other golf course uses. The Draft EIR concluded that raising these fairways and Hole 18 would not cause significant physical environmental impacts, including, but not limited to, impacts to hydrology, biological resources, cultural resources, or aesthetics, as compared to baseline conditions.

To the extent that the existing fairways and Hole 18 may be considered wetlands by the CCC, and thus would pose additional regulatory requirements, those regulatory requirements are disclosed in the Draft EIR and explained further below. These potential regulatory requirements do not change the environmental impacts analysis from a CEQA perspective.

As the commenter notes, there are different wetland delineation methodologies established by the USACE and CCC. The USACE delineates wetlands using a three-parameter approach, where

hydrophytic vegetation, hydric soils, and wetland hydrology must all be present (in most circumstances) in order for an area to be considered a wetland. The CCC uses a single-parameter approach where only one of the parameters — hydrophytic vegetation, hydric soils, or wetland hydrology — must be present to be considered a wetland.

The USACE claimed jurisdiction for the entire Laguna Salada wetland complex, excluding developed areas, upland areas, and fairways, and also confirmed the extent of jurisdictional wetlands associated with the wetland complex (USACE, letter to Ms. Kelly Bayer of Tetra Tech dated March 9, 2009). The Laguna Salada wetland complex is the area included in the (Sharp Park) Wetland Restoration and Habitat Recovery Project; however, as illustrated by Figure 2 of the Draft EIR (on Draft EIR p. 100), the Laguna Salada restoration footprint is larger than the area where proposed restoration and management activities are anticipated to occur under the SNRAMP (see SNRAMP Figure 6.4-5 on p. 6.4-25).

The USACE's determination of wetlands was based on information provided in a report prepared for the SFRPD titled "Jurisdictional Waters of the US and Wetland Determination Report, Laguna Salada Wetland Restoration and Habitat Recovery Project," Tetra Tech, Inc., November 2008.[134] This report concluded that there are a total of 27.42 acres of wetlands and other waters of the United States present within the proposed Laguna Salada restoration area. EIR p. 338 (Table 11) shows only 23 acres of USACE jurisdictional wetlands, reflecting the smaller footprint of the SNRAMP restoration and management areas.

Within the total of 23 acres of USACE jurisdictional wetlands within the SNRAMP restoration and management areas, the total area of short-term and long-term impacts to USACE wetlands as a result of the SNRAMP restoration and management activities at Sharp Park, as reflected on Draft EIR p. 338 (Table 11), is 5.5 acres. In terms of the nature of the impacts, as stated on Draft EIR p. 338:

> "Short-term impacts associated with the Laguna Salada restoration project include soil compaction and vegetation loss as a result of vehicle and heavy equipment use in and around the wetlands. As described in Section III.F.2 (page 104), following completion of each season's restoration activities, these areas would be scarified, recontoured, planted and hydroseeded with native vegetation to approximate their pre-disturbance condition, as needed based on the level of disturbance.
>
> Long-term impacts to wetlands at Sharp Park would occur as a result of restoration activities that would include dredging existing wetlands and recontouring the shoreline to create optimal habitat for California red-legged frog and San Francisco garter snake."

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134 Tetra Tech, Inc., *Jurisdictional Waters of the US and Wetland Determination Report, Laguna Salada Wetland Restoration and Habitat Recovery Project,* November 2008.

Draft EIR p. 339 goes on to say:

> "Restoration activities would be consistent with the ultimate goals of the Sharp Park restoration, which are to enhance habitat quality for protected species and other native wildlife, in addition to diversifying existing wetlands. The Sharp Park restoration project would restore and enhance the biological functionality of the wetland and upland complex to better support the various species present within that habitat system and would not be considered a substantial adverse effect to the Laguna Salada wetland complex. As a result, the Sharp Park restoration project is expected to result in long-term beneficial impacts to the wetland complex."

Similar to the USACE, in a letter from the CCC (to John R. Bock, Tetra Tech, dated May 31, 2011), the CCC claimed jurisdiction west of Highway 1, which covers the entire Laguna Salad restoration footprint (see Figure 2 of the Draft EIR), as well as additional areas surrounding that footprint. Therefore, in addition to the delineation of USACE wetlands for the Laguna Salada restoration project (using the three-parameter approach), the SFRPD also prepared a report titled "Single-Parameter Wetland Delineation for the Sharp Park Pumphouse Safety, Infrastructure Improvement and Habitat Enhancement Project," May 2013,[135] to determine whether there are additional wetland areas using CCC's single-parameter methodology that are not considered wetlands under the USACE's three-parameter methodology. The single-parameter wetland delineation focused on the areas potentially impacted by the Pumphouse Project and not the boundaries of the Laguna Salada restoration project.

The single-parameter wetland delineation showed two additional areas that satisfied the CCC definition of wetlands associated with the Pumphouse project – a fairway area and a wet meadow area at the northeast area of Laguna Salada (refer to Figure 3 of the single-parameter wetland delineation). The area of impact in the fairway area (caused by realignment and improvements to a cart path) was determined to total 1,700 square feet, or 0.04 acre of CCC jurisdictional wetlands (refer to Table 2 of the single-parameter wetland delineation). The cart path has since been realigned and improved, pursuant to the Pumphouse project description. No work was proposed within or adjacent to the wet meadow area as part of the Pumphouse project.

The wet meadow area is within the SNRAMP area proposed for restoration and management, but the precise area of additional wetlands that may be delineated using the single-parameter approach has not been determined. There may be other CCC wetlands that are outside of the Pumphouse project's area of impact, but within the potential SNRAMP area of impact that would classify as CCC wetlands but have not been identified. Whether or not additional areas are subject to CCC wetland delineation, the Draft EIR concluded that raising the fairways and Hole 18 would not cause significant physical environmental impacts, including, but not limited to, impacts to hydrology,

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135 San Francisco Recreation and Park Department, *Single-Parameter Wetland Delineation for the Sharp Park Pumphouse Safety, Infrastructure Improvement and Habitat Enhancement Project,* May 2013.

biological resources, cultural resources, or aesthetics, as compared to baseline conditions. However, to the extent the CCC may determine that these areas qualify as wetlands using the single-parameter approach, SFRPD would seek necessary permits and comply with any conditions required by the CCC.

To address impacts to wetlands—whether as designated by the USACE or the CCC, and whether as anticipated in the Draft EIR or as may exist at the time restoration and maintenance activities commence—Draft EIR pp. 339 and 340 states that:

> "Prior to implementing the proposed Sharp Park restoration activities, the SFRPD would be required to obtain a USFWS Biological Opinion, SFBRWQCB Section 401 water quality certification, a USACE Section 404 permit, and a coastal development permit from the California Coastal Commission; a CDFG streambed alteration agreement may also be required. These resource agencies may require protective wetland measures in addition to Mitigation Measures M-BI-12a and M-BI-12b, as discussed below.
>
> Implementing Mitigation Measure M-BI-12a requires the SFRPD to limit impacts on wetlands and water quality. Mitigation Measure M-BI-12b requires SFRPD to prepare a mitigation plan as part of the application for Section 401 water quality certification. Mitigation Measure M-BI-12a also incorporates requirements of both Sections 401 and 404 of the Clean Water Act and the CCC. Mitigation Measure M-BI-12b requires that the SFRPD prepare a monitoring program which would ensure that success criteria would be established to ensure that restoration of the Laguna Salada wetland complex is achieving the project objectives. Success criteria may include annual goals for the percent cover of native wetland vegetation, limitations on the amount of invasive species cover permissible, and the presence of hydric soils and wetland hydrology. With implementation of Mitigation Measures M-BI-12a and M-BI-12b, the Sharp Park restoration would not have a substantial adverse effect on wetlands protected under Section 404 of the Clean Water Act, resulting in a ***less than significant*** impact."

During the permit application process, all of the agencies, including the CCC, would make a final determination of existing and impacted wetland areas associated with the SNRAMP project.

Draft EIR Appendix I Figure 14, Conceptual Alternative A18, to which one of the commenters refers, is the same as Draft EIR Figure 3, Laguna Salada Restoration Features. Each of these figures shows that the areas to be raised to reduce flooding are existing fairways and a hole (Hole 18), none of which are claimed as jurisdictional by the USACE. The commenter's assertion that the SNRAMP would convert marsh areas to fairways is not accurate. As previously mentioned, the areas that would be raised are currently used as an operational golf course (i.e., mown fairways and a hole) and, after being raised, would remain as an operational golf course (mown fairways and a hole) after the project is completed.

Further, in terms of current and continuing mowing operations, the Pumphouse Biological Opinion (on pages 14 and 15) identifies the circumstances under which mowing can occur at the Golf Course. Importantly, the Biological Opinion establishes "no mow" zones, stating that:

> "a. A no-mow zone area, which includes the roughs adjacent to the wetlands, will be identified with stakes or other markers on the ground (see Figure 2-5 in biological assessment for boundaries of no-mow zone). Golf staff will be instructed not to mow in these areas. The land between Mori Point and Laguna Salada is an important movement corridor for the California red-legged frog and San Francisco garter snake. This area will be further evaluated by SFRPD biologists, in consultation with Service, to identify additional opportunities for movement and increases in the no-mow area. Based on this assessment, the extent of the no mow zones may be increased as long as the restrictions on mowing do not affect the playability of the golf course."

With respect to how mowing would be allowed outside of the no-mow zone, Pumphouse Biological Opinion p. 15 further requires the following:

> "d. All mower operators will be trained to identify the California red-legged frog and San Francisco garter snake and instructed to stop any activities if they observe any frog or any snake on the course.
>
> e. If any frog or any snake is encountered in the pathway of a mower, the operator will cease the mowing activity and wait for the animal to remove itself from harm's way or discontinue the mowing activity in that area for the day. If the animal does not move out of harm's way, the SFRPD biological monitor with the Natural Areas Program will be contacted. Work may not recommence in the area until the area has been determined to be clear of California red-legged frog or San Francisco garter snake."

Comment BI-26 Coastal development permit requirements

The response to Comment BI-26 addresses all or part of the following individual comment:

CCC-1-01

- Dredging of wetlands where there is no feasible, less environmentally-damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects is permitted for restoration purposes, pursuant to Section 30233 of the Coastal Act. The City will need to provide supporting analysis/evidence and documentation that the City's proposal is indeed the least environmentally-damaging alternative for restoration of the site. [CCC-1-01]

Response BI-26

This comment relates to the wetland restoration activities proposed at Sharp Park. The comment specifically references Section 30223 of the Coastal Act, which allows the diking, filling, or dredging

of open coastal waters, wetlands, estuaries, and lakes for restoration purposes where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. This comment is not related to adequacy or accuracy of the analysis in the EIR, but would be considered by the CCC and SFRPD when applying for a coastal development permit in connection with habitat restoration at Sharp Park.

The proposal for the Laguna Salada Restoration was developed based on early coordination with the USFWS, CDFW, and consulting biological experts with the goal of developing a restoration plan that would achieve recovery of the San Francisco garter snake population. The Draft EIR identifies a number of mitigation measures to protect environmental resources at Sharp Park including Mitigation Measure M-CP-7, Documentation of the Sharp Park Golf Course, p. 222; Mitigation Measure M-CP-10, Archeological Monitoring Program for the Programmatic Projects in Natural Areas with High Archaeological Sensitivity, Routine Maintenance Activities at Tank Hill and Lake Merced, and the Sharp Park Restoration Project, p. 225; Mitigation Measure M-CP-17, Paleontological Training Program and Alert Sheet for the Sharp Park Restoration Project, p. 235; Mitigation Measure M-CP-18, Human Remains, Associated or Unassociated Funerary Objects, p. 236; Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326; Mitigation Measure M-BI-6b, Protection of Protected Species during Maintenance of the Sharp Park Restoration Project, p. 328; Mitigation Measure M-BI-12a, Protection of Wetlands during the Sharp Park Restoration Project, p. 339; Mitigation Measure M-BI-12b, Laguna Salada Restoration Project Wetland Mitigation Plan, p. 340; Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366; and Mitigation Measure M-HZ-13, Emergency Response Plan for Accidental Releases of Hazardous Materials, p. 395.

Since the majority of the restoration activities would take place within areas under the jurisdiction of the CCC, a coastal development permit from the CCC would be required. Through its review of the coastal development permit, the CCC would ensure that the project would be consistent with the applicable provisions of the Coastal Act, including whether it is the least environmentally damaging alternative and whether feasible mitigation measures have been provided to minimize adverse environmental effects. The City would need to provide supporting evidence that the City's proposal for the Sharp Park restoration is the least environmentally-damaging alternative as part of a coastal development permit.

Comment BI-27 Glossary terms and definitions

The response to Comment BI-27 addresses all or part of the following individual comments:

CNPS-1-01 Bose-2-01 Gravanis-1-03
Gravanis-1-04 PH-Gaar-01

- There are problem areas. For example, the term Urban Forest is used throughout, in spite of the fact that it is not a scientific term and no definition of what constitutes an urban forest exists. The term should be stricken from the document, as it means different things to different people. For many, it means street trees, for others it means the artificial eucalyptus plantations (not forests) which are having a devastating effect on the biological diversity of the areas where they are planted, such as Mt. Davidson, McLaren Park, and Glen Canyon. [CNPS-1-01]
- The language around the issue of tree removal is extremely confusing to the lay-person.

  1. Two separate measures are used: The height of the tree, and "basal area."

  Tree height is intuitive and easily understood. For the purposes of the SNRAMP (and the DEIR) a "tree" is defined as a plant with a single stem exceeding 15 feet in height.

  However, the determination of extent of tree removal in the DEIR is worded in terms of "basal area."

  This term is never properly explained, either in the SNRAMP or in the DEIR, nor is the public given the formula in summary. This forces the public to make their own calculations and estimates, and impairs their ability to properly assess impacts.

  2. "Basal area" also appears to be a poor choice as a measure.

  (a) There is no easy equivalence between basal area and the measures the public finds more familiar: number of trees per acre, tree height, canopy cover.

  (b) According to US Forest Service, this is the definition of Basal Area:

  "Basal area (BA) is the area of the cross section of a tree stem, including the bark, measured at breast height (4.5 feet above the ground)." [http://www.fs.fed.us/postfirevegcondition/glossary.shtml]

  "Basal area per acre" is therefore the number of square feet of basal area of all the trees m one acre.

  Using a fixed basal area per acre target suggests that as trees grow larger, more will be felled. This is the opposite of what good management would suggest when San Francisco is seeking to increase its urban forest cover.

  (c) "Basal Area" does not consider the size or spread of branches or canopy. The canopy is an important determinant in a tree's pollution-fighting ability by trapping pollutants on its leaves. It also is critical to its ability to slow water impacts and run-offs by mediating rain-fall. The canopy is important from a wildlife standpoint. Finally, a tree's canopy also affects its aesthetics. [Bose-2-01]

- Glossary – I'm glad that the DEIR includes a glossary, but I hope it will be improved to make the contents of the document more accessible to the reader. Some examples:

  Urban forest – A significant stand of nonindigenous trees. Is that what is really meant by the term? If so, where it says, "GR-15b – Maintain a stocking rate that will perpetuate the urban forest and promote forest health," does it mean that we're not allowed to plant native trees in the "urban forests" (because they'd no longer be urban forests)? And what do the terms "forest" and "forested" mean? They are used several times, but not defined in the glossary. The entire document would be so much more professional and credible if the terms "urban forest" and "forest" were not used at all. San Francisco has a number of indigenous habitat types that should be defined and described, but forest is not one of them. A forest is a complex ecosystem, not merely a stand of trees. Calling a plantation a forest perpetuates eco-illiteracy and calls into question the scientific orientation of the DEIR. [Gravanis-1-03]

- Missing from the Glossary – There's a puzzling omission of habitat types. The only one listed in the glossary is "wetland." "Scrub" is in the glossary, but as a vegetative form, not as a kind of habitat or biotic community. "Riparian" is in there, but not as a type of wetland. It would be helpful to see the habitat types listed in Table 10 defined in the Glossary. Also puzzling is that throughout the document, "grassland" is preceded by "native" but the other habitat types are not. Please explain. [Gravanis-1-04]

- Number one, what is recreation? Well, recreation in the draft EIR is predominantly traditional recreation: Bicycle riding, hiking, dog walking, et cetera. But for a lot of us who are naturalists, we do a lot of vigorous habitat restoration, which is real hard, physical labor, controlling the weeds from over-running the native plant communities, and that is very invigorating recreation. And also you get to meet other -- you get to work with other city workers, and you work with your community. [PH-Gaar-01]

Response BI-27

These comments suggest that a series of terms are better defined in the Glossary of the Draft EIR.

In response to the above comments, definitions of "forest," "invasive species," "recreation," "riparian," and "scrub" have been added to the glossary, or the definition has been expanded. The definitions of "basal area," "passive recreation," and "urban forest" were included in the Draft EIR glossary, but those definitions are also provided in this response for the reader's convenience. The definitions for "invasive species" and "scrub" were taken from the SNRAMP Section G, Glossary, and the definition for "riparian" has been expanded to also include the definition from SNRAMP Section G, Glossary. The definitions for "forest" and "recreation" were taken from the Merriam-Webster dictionary. The text on Draft EIR pp. ix to xiii has been changed, as follows:

> **Forest** – A dense growth of trees and underbrush covering a large tract.
>
> …
>
> **Invasive species** –A species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

…

Recreation – Activity done for enjoyment when one is not working. Within the Natural Areas, typical recreational activities include, but are not necessarily limited to, walking, hiking, running, nature watching, dog walking, picnicking, other passive recreational activities, and volunteering.

Riparian – ~~l~~Land next to a natural watercourse, such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank. The SNRAMP goes on to define riparian as "relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater."

…

Scrub – Low ~~trees or shrubs collectively.~~ growing or stunted vegetation on poor soil or in semiarid regions, which sometimes form impenetrable masses.

The terms "basal area," "urban forest," and "passive recreation" are defined in the Glossary on Draft EIR pp. ix, xi, and xii, and with the definitions for "basal area" and "urban forest" revised as follows:

Basal Area – A measure, typically in square feet per acre, of the area covered by trees at breast height, or 4 ½ feet above the ground ~~urban forest~~. Basal area is a standard form of measurement that is used as an index of tree production.

Passive Recreation – Recreational activities that occur in a natural setting and that require minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

Urban forest – A significant stand of mostly nonindigenous trees.

As stated on SNRAMP p. 5-18, basal area measurements are a standard method used in the California Forest Practice Rules by the California Department of Forestry and Fire Protection for determining postharvest standstocking levels after timber harvest operations (California Department of Forestry and Fire Protection 2005). Postharvest stocking levels refers to the density of trees in an area after tree removal activities have occurred.

Basal area is usually expressed in square feet. To visualize basal area, imagine that all the trees in a stand were cut off at 4.5 feet above the ground. The area of the top surface of the stump is measured to determine the basal area of that tree. If the basal areas of all trees on an acre are added together, the result is square feet of basal area per acre. It takes several small trees to equal the basal area of a large tree. For example, the basal area of four 6-inch diameter-at-breast-height (DBH) trees equals the basal area of one 12-inch DBH tree. Having a target basal area per acre ensures that the stand is not too dense, irrespective of the number of trees, allowing light to reach the forest floor. A stand may need to be thinned if it is comprised of a greater number of trees with a narrower DBH or a fewer number of trees with a wider DBH. One of the commenter's was concerned that only larger trees will be felled; however, there are many other factors that would be considered when determining when to thin a stand, including the number of trees, the basal area per acre, and the goals of the management area.

One of the commenters questioned why habitat types were missing from the glossary. The glossary is intended to present a definition of terms that are commonly used in the Draft EIR. It is not meant to provide either a jurisdictional definition of habitats (as in the case of wetlands, which are defined differently by the USACE and CCC) or commonly accepted definitions of habitat types (as in the case of riparian or scrub, which are terms used as part of a broader habitat classification system). SNRAMP pp. 3-5 and 3-6 states that in order to assess percent cover and distribution characteristics of each species, vegetation was sampled using a quadrat system. Sampled vegetation was then classified into formations, subformations, and series. Formations are based on the life form of the dominant species: herbaceous is dominated by herbs; scrub is dominated by shrubs; mosaic is a mix of herbs and shrubs; and forest is dominated by trees. Series are based on the identity of the dominant species, and subformations are groups of series that share similar ecological requirements and/or land management histories. Subformation as used in the SNRAMP corresponds roughly to the series level used by Sawyer and Keeler-Wolf (1995) and the natural community level of Holland (1986). Series as used in this document are similar to, but more finely divided than, the associations of Sawyer and Keeler-Wolf (1995). Vegetation series are more finely defined here because it was considered important to capture and document the remnant variation in vegetation communities. Surveys identified five formations, 12 subformations, and 101 series (Table 3-2 of the SNRAMP). Acreage was calculated by subformation for each site (Table 3-3 of the SNRAMP). A total of 1,107 acres were surveyed and mapped within the Natural Areas. Each of the formations and subformations are described on SNRAMP pp. 3-7 to 3-12, and the acreages for each (within the Natural Areas) is presented on Table 3-3 (on SNRAMP pp. 3-30 and 3-31).

A commenter also questioned why the term "native" often precedes the "grassland" in the Draft EIR. The term "native grassland" is used 48 times in the document, and in each instance, the term is accurately used to describe the type of habitat that either exists or is proposed under the SNRAMP activities. The term "nonnative grassland" is also used in the document in reference to habitat that would be replaced with native grassland habitat.

Comment BI-28 SNRAMP does not address monitoring of native species

The response to Comment BI-28 addresses all or part of the following individual comment:

Bowman-1-14

- NAP does not address monitoring of native species and maintaining the balance of these species. Any species whether it be native (e.g., sea gulls, ravens, shorebirds, scrub, etc.) or non-native can become a problem for other species survival. I cannot find where the plan addresses monitoring and addressing native species, other than non-natives, that over-populate and threaten other species. This over-focus on "native" could be damaging to our current ecosystems and species. [Bowman-1-14]

Response BI-28

This comment asserts that the SNRAMP does not address monitoring of native species.

Refer to Response PD-25, RTC p. 4-201, for a discussion of the SNRAMP's proposed monitoring activities, including the use of an adaptive management processes. Refer also to Response PD-11, RTC p. 4-159, for a discussion of the need for biodiversity. In summary, the proposed project, as described on Draft EIR pp. 90 and 94, includes both monitoring and adaptive management, which would allow the SFRPD to modify its activities based on the identification through monitoring of project successes and failures. Monitoring is also anticipated to identify any unintended consequences of the proposed project's activities.

Comment BI-29	**Effects of previous natural areas program projects on the Mission blue butterfly**

The response to Comment BI-29 addresses all or part of the following individual comment:

SFFA-3-13

- **2. The Natural Areas Program is violating the Endangered Species Act by using pesticides known to be harmful to butterflies on Twin Peaks**

  The Mission Blue butterfly is a federal endangered species which existed historically on Twin Peaks in San Francisco. San Francisco's Natural Areas Program has been trying to reintroduce the Mission Blue to Twin Peaks for several years, so far with limited success. This reintroduction effort is reported by the DEIR. (DEIR, page 285)

  Herbicides are being sprayed on Twin Peaks to control non-native vegetation. **Twin Peaks was sprayed with herbicides 16 times in 2010 and 19 times in 2011.**

  A recently published study reports; that the reproductive success of the Behr's metalmark butterfly was significantly reduced (24-36%) by herbicides used to control non-native vegetation. Two of those pesticides are used on Twin Peaks, imazapyr and triclopyr. Triclopyr was used most often on Twin Peaks in 2010 and imazapyr in 2011.

  The study does not explain how this harm occurs. It observes that the three herbicides that were studied work in different ways. It therefore speculates that the harm to the butterfly larva may be from the inactive ingredients of the pesticides which they have in common, or that the harm comes to the larva from its host plant which is altered in some way by the herbicide application. Either theory is potentially applicable to the herbicides used on Twin Peaks and consequently harmful to the endangered Mission Blue.

  The Endangered Species Act requires that the Natural Areas Program stop spraying these herbicides on Twin Peaks because they are known to be harmful to the reproductive success of butterflies. Unless further scientific study exonerates these herbicides, the law obligates us to prohibit their use where the endangered Mission Blue butterfly is known to exist, i.e., on Twin Peaks.

The final EIR must prohibit the use of pesticides known to be harmful to butterflies on Twin Peaks where the endangered Mission Blue butterfly has been reintroduced by the Natural Areas Program. [SFFA-3-13]

Response BI-29

This comment expresses concern about the past use of pesticides on Twin Peaks, particularly in terms of how it may have affected the Mission blue butterfly. These activities, and any resulting effects (if there were any), do not address impacts of the proposed project. Nonetheless, a summary of recommendations provided in the Recovery Action Plan for the Mission Blue Butterfly (*Icaricia icarioides missionensis*) at Twin Peaks Natural Area,[136] the SNRAMP's proposed management actions in this area, and the analysis and conclusions provided in the Draft EIR related to the Mission blue butterfly is provided below.

With respect to habitat enhancement and vegetation management, the Recovery Plan seeks to increase or introduce silver lupine, varied lupine, and summer lupine and remove or thin discrete patches of coyote brush (to allow more lupine habitat) in the Twin Peak Natural Area. The Recovery Plan goes on to say that native nectar species, including coast buckwheat, California phacelia, checker mallow, and desert parsley should be seeded and propagated to improve habitat conditions around lupine colonies and to create more robust corridors between host plant colonies. Lastly, the Recovery Plan states that while the invasive Italian thistle is currently serving as a widespread nectar source on Twin Peaks, it does have the potential to compete with native host plants and nectar sources, decrease bare ground, and hamper butterfly navigation around host and nectar sources. While native nectar sources are also widespread, and SFRPD vegetation management policy includes treating invasive plants, the Recovery Plan does not recommend intensive treatments to remove the Italian thistle until native nectar sources are enhanced, with the caveat that the species should be watched to make sure that it does not form dense monocultures.

Issue TP-2, provided on page 6.8-8 of the SNRAMP, states that "Priority shall be given to maintaining the habitat necessary for mission blue butterflies, especially the host plant (silver bush lupine)." Recommendations TP-2a and TP-2b (also provided on page 6.8-8 of the SNRAMP) state that the SFRPD shall continue to monitor the mission blue butterfly population at Twin Peaks in accordance with monitoring guidelines (as outlined in Section 7 of the SNRAMP), and augmentation of host plant populations shall occur whenever possible as part of any grassland revegetation work conducted on Twin Peaks.

The Mission blue butterfly is addressed on Draft EIR p. 285, which concludes that impacts from the proposed project would be reduced to a less-than-significant level with the implementation of Draft EIR Mitigation Measure M-BI-5, Protection of Special Status Species during Routine Maintenance,

[136] https://creeksidescience.files.wordpress.com/2012/01/twin_peaks_mission_blue_recovery_9apr091.pdf, accessed on October 8, 2015.

Draft EIR p. 315. The text on Draft EIR p. 319 (first bullet) has been changed for clarification, as follows:

> ■ **Mission Blue Butterfly:** This species occurs at Twin Peaks and Sharp Park. The following measures shall apply to these Natural Areas:
>
> > To avoid impacts to this species, SFRPD shall adhere to the long-term management and monitoring guidelines as described in the Recovery Action Plan for the Mission ~~B~~blue ~~B~~butterfly at Twin Peaks Natural Area and the corresponding Biological Opinion ~~and as~~ that has been issued by ~~agreed to with~~ the US Fish and Wildlife Service. These guidelines include conducting vegetation removal by manual, mechanical, and chemical treatments that would be applied consistent with the SFRPD Integrated Pest Management program, such as hand pulling, cutting and grubbing. To avoid impacts from trampling of host plants by recreational users, the SFRPD shall continue to conduct regular maintenance on the existing trail network including trimming trailside vegetation and replacing trail base materials.

In summary, the SNRAMP would conduct management activities in accordance with the Recovery Action Plan for the Mission blue butterfly and corresponding Biological Opinion issued by the USFWS, which states the Recovery Plan would not jeopardize the continued existence of the Mission blue butterfly and, in fact, would result in significant long-term benefits, recognizing that there could be short-term adverse effects during restoration and enhancement activities.[137] Further, the EIR concluded impacts to the Mission Blue would be reduced to a less-than-significant level with implementation of Mitigation Measure M-BI-5, Protection of Special Status Species During Routine Maintenance, which has been excerpted, in relevant part, in the preceding paragraph.

Further, refer to Response HZ-1, RTC p. 4-531, for a detailed discussion of the City's IPM program, Reduced Risk Pesticide List, use of the Precautionary Principle, the SFRPD's least-toxic decision-making model process for the treatment of invasive species, and the amount of herbicides/pesticides that were used by SFRPD throughout all of the Natural Areas in a given year.

Comment BI-30	**Impacts related to the removal of nonnative trees and invasive vegetation**

The response to Comment BI-30 addresses all or part of the following individual comments:

Bowman-2-05 Garber-1-01 Wade-1-01

- These long term plans for eliminating forest acres should also be incorporated into the significance analysis of aesthetics, hydraulics, air quality, biological resources, wind and shadow, and recreation environmental impacts. [Bowman-2-05]

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137 United States Department of Interior, Fish and Wildlife Service. *Internal Biological Opinion on the Proposed Recovery Actions for the Endangered Mission Blue Butterfly at the Twin Peaks Natural Area, San Francisco County, California,* March 20, 2009.

- I recently became aware of the San Francisco Recreation and Park Department Natural Areas Program Environmental Impact Report. I live in Pacifica and the proposal to cut at least 15,000 trees in Pacifica on the Sharp Park property as one alternative in the NAP EIR is an abomination. The EIR contains no scientific studies on the potential benefits of removing trees. It likewise does not adequately acknowledge the problems of removing the trees; i.e. loss of habitat for adapted wildlife in Sharp Park, loss of a carbon sink as trees remove CO2 from air, erosion, run off of soils, run off of pesticides used to kill non-native species, pollutinion Red Eared Frog habitat on Sharp Park Property by pesticide and soil run off, infill of Laguna Salada on Sharp Park by soil run off, etc. In some instances the negative effects are referred to as "Non-significant".

  No healthy trees should be removed from public lands. Recreation areas for people and people with dogs should be increased. [Garber-1-01]

- The essential environmental issue related to the proposed Natural Areas Program Management Plan is still the same one that many of us have spoken about at public hearings for the last decade: the planned destruction of thousands of mature trees. The plan is based on nativenaive species preference related to habitat values (always ignoring the scientific studies on habitat value of non-native trees), with seemingly no acknowledgement of the vital role that mature trees play in many other aspects of the environment from air quality, storm water reduction, and carbon sequestration, wind and dust/particulate reduction. [Wade-1-01]

Response BI-30

The comments indicate opposition to the removal of nonnative trees (particularly healthy trees) and vegetation within the Natural Areas (and specifically Sharp Park) and replacing them with native species and also questions the preference for native species over nonnative species. These comments question whether the Draft EIR analyzed the effects of tree removal on aesthetics, hydraulics, storm water reduction/runoff, carbon sequestration, air quality, dust/particulate reduction, biological resources (including impacts to the California red-legged frog), wind and shadow, and recreation.

Reason for and Scope of Removal of Nonnative Trees

Across the Natural Areas, over 84 percent of the existing nonnative trees would remain, and the trees proposed for removal would be replaced at a roughly one-to-one ratio with native trees, although not necessarily in the same Natural Area. Draft EIR Table 5 (provided on p. 114) indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain. Of the 18,448 trees that would be removed, 15,000 trees would be removed in Sharp Park and 3,448 trees would be removed in the San Francisco Natural Areas; therefore, under the SNRAMP, nonnative trees and brush would not be removed in the majority of open spaces in the city. Also, restoration would be accomplished in both unforested areas, as well as areas where nonnative, invasive species have been removed. As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to promote the

functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity, which requires the removal of invasive species.

With respect to the removal of trees in Sharp Park, and as presented in Table 5 on Draft EIR p. 114, approximately 15,000 of the 54,000 existing eucalyptus trees would be removed from select areas during the 20-year lifetime of the SNRAMP to restore native scrub habitats. Thus, trees would be removed in the Natural Areas over a 20-year period of time, and not all at one time.

Approximately 15,000 of an overall 54,000 nonnative trees within the Sharp Park Natural Area would be removed; however, some scattered, large individuals would remain in order to minimize large-scale disturbance and disruption to wildlife and to promote a gradual conversion to native scrub habitats.

Summary of Draft EIR Analysis of Removal of Nonnative Trees

Aesthetics, wind and shadow, recreation /greenhouse gases, biological resources (including impacts to the California red-legged frog), hydrology and stormwater/erosion, and air quality (including dust/particulate reduction) impacts resulting from implementation of the proposed project, including both construction and operational phases, were addressed in the Draft EIR in Sections V.C, V.E, V.F, V.G, V.H, and V.K, respectively. While the Draft EIR did conclude that there would be significant and unavoidable impacts related to air quality on a project-specific basis and recreation, biological resources, and air quality on a cumulative basis, even with the implementation of feasible mitigation measures, there were no significant and unavoidable impacts related to the other topics, including aesthetics, wind and shadow, greenhouse gases, and hydrology and stormwater/erosion; those impacts were determined to be less-than-significant or could be reduced to a less-than-significant level after implementation of the identified mitigation measures.

Refer also to Response BI-13, RTC p. 4-397 for a discussion of biological impacts related to tree removal; Response BI-16, RTC p. 4-405, for a discussion of the California red-legged frog in Laguna Salada (Sharp Park); Response PD-11, RTC p. 4-159, for a discussion on how the SNRAMP project would increase biodiversity; Response BI-24, RTC p. 4-420, for a discussion of how invasive species are capable of spreading rapidly, thereby displacing native plants; Response AE-1, RTC p. 4-219, for a discussion of the aesthetic impacts of tree removal; Response AQ-1, RTC p. 4-283, for a discussion of increased pollution from tree removal vehicles; Response GG-1, RTC p. 4-297, for a discussion of GHG emissions and the associated carbon sequestration impacts; Response WS-1, RTC p. 4-309, and Response WS-2, RTC p. 4-310, for a discussion of wind impacts from tree removal; Response PD-5, RTC p. 4-141, for a discussion of native plant restoration efforts as opposed to the provision of additional recreational areas; Response RE-8, RTC p. 4-324, for a discussion of the impacts resulting from restrictions on recreational access; Response HY-1, RTC p. 4-486, for a discussion of drainage issues and downstream flooding from tree removal activities; and Response HZ-1, RTC p. 4-531, for a discussion of the use of pesticides by the Natural Areas Program.

In summary, the Draft EIR analyzes the effects of tree removal proposed by the SNRAMP on all applicable resource topics, makes a significance conclusion regarding the nature and magnitude of the impact, and includes mitigation measures to reduce or eliminate significant impacts, as required under CEQA. Further, this Responses to Comments document provides a good faith, reasoned response to all environmental issues raised by the commenters, which further clarifies the information and analysis provided in the Draft EIR.

Comment BI-31 Native vegetation planting impacts on ecosystems and landscapes

The response to Comment BI-31 addresses all or part of the following individual comment:

PH-Bowman-01

- San Francisco has already taken extreme position of excluding all people from the San Francisco watershed. The 26,000 acres there is surrounded by a seven foot chain link fence, and this plan ignores that this has been already allocated to natural areas. The San Francisco park sites are only ten percent or tenth of the size of that single refuge, and this extreme plan takes 40 percent of that little space for more native plant projects. For me, the gardening projects will provide little benefit and will destroy the new ecosystems that have been developed over the past 400 years and will destroy this treasured San Francisco landscape that is part of our diverse culture, history, and future. [PH-Bowman-01]

Response BI-31

This comment expresses opposition to the conversion of nonnative species within the Natural Areas to native species because the San Francisco watershed is not accessible to the public. The commenter also indicates that the SFRPD plans to "take 40 percent" of park sites for native plant projects.

The Peninsula Watershed is under the jurisdiction of the SFPUC. With respect to the commenter's concern about the exclusion of people from the San Francisco watershed, as stated on page II-5 of the Peninsula Watershed Management Plan Final EIR,[138] which was prepared with the SFPUC as the Lead Agency, "The 23,000-acre Peninsula Watershed is located in central San Mateo County, south of the City and County of San Francisco (see Figure II-2)." Another clear, visual representation of the Peninsula Watershed vis-à-vis the SNRAMP is provided by Map 1 of the Final General Management Plan for Golden Gate National Recreation Area and Muir Woods National Monument.[139] Therefore, the Peninsula Watershed is not under the SFRPD's jurisdiction and is geographically distinct from

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138 San Francisco Planning Department, *Peninsula Watershed Management Plan Final EIR*, January 11, 2001. This document is available online at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwj964q615bNAhVB72MKHfOVBwAQFggjMAE&url=http%3A%2F%2Fwww.sfwater.org%2FModules%2FShowDocument.aspx%3FdocumentID%3D4343&usg=AFQjCNHXNWE1njd8lVA_Aco2aVe0H0E3MA&sig2=GnYLIWj15NBdVoT3udm66Q&bvm=bv.124088155,d.cGc, accessed on June 7, 2016.

139 http://parkplanning.nps.gov/document.cfm?parkID=303&projectID=15075&documentID=58777, accessed on November 2, 2015.

the SFRPD's Natural Areas. Further, any decisions regarding the use of exclusionary barriers (such as fencing) within the Peninsula Watershed lands is within the purview of the SFPUC, and not the SFRPD. While the service area for the 23,000-acre Peninsula Watershed (not 26,000 acres, as mentioned by the commenter) includes 2.4 million customers in San Francisco and in portions of San Mateo, Santa Clara, and Alameda Counties, the geographic extent of the watershed (as illustrated by Figure II-3 of the Peninsula Watershed Management Plan Final EIR) does not include any of the Natural Areas that are the subject of this EIR.

The SNRAMP does not propose to "take" 40 percent of the land for Natural Areas, but instead seeks to improve the existing Natural Areas through habitat restoration and management activities and the closure and improvement of the trail systems to allow recreational access that supports habitat restoration; in fact, while the habitats and uses within the Natural Areas will change under the Proposed Project, the total acreage of the Natural Areas will remain approximately the same (refer to Table 5, Draft EIR p. 114), with the exception of Sharp Park due to changes to the park boundaries following the Laguna Salada Restoration project.

Comment BI-32 Effects on nesting birds

The response to Comment BI-32 addresses all or part of the following individual comments:

GGAS-1-07 GGAS-1-12 GGAS-1-17
Bartley-1-03

- Golden Gate Audubon supports the tree removal proposed in this plan when the tree trimmers and tree removal is made after taking precautions defined above to protect native, nesting bird species. (See DEIR, at 92) Where trees must be removed during the bird nesting season (February 1 – August 1 of each year), surveys should be conducted to avoid unnecessarily disturbing nesting birds. Destruction of birds' nests, eggs, or young constitutes a violation of the federal Migratory Bird Treaty Act, for which there are no take permits allowed. [GGAS-1-07]
- Golden Gate Audubon endorses the text included in the Breeding Bird Habitat portion of Section III.H. (DEIR, at 109). However, we recommend that the text be amended to include consideration of nest predators other than the nest-parasite Brown Headed Cowbirds. For example, the number of crows in San Francisco has been increasing in recent years, likely due in part to poor trash management. Therefore, Golden Gate Audubon recommends the following text:
  - > If surveys indicate that predation by crows, European Starlings, English House Sparrows, or other bird species are subsidized by human activities is a significant problem, consult with CDFG and the USFWS to determine the proper course of action, if any, to address population increases of these species and to minimize effects of these species on native, local breeding birds. [GGAS-1-12]
- Golden Gate Audubon endorses the section of the DEIR relating to Urban Forests practices. (DEIR, at 111). We recommend that the section include text that all urban forest practices will

consider impacts to nesting birds during the bird breeding season or where particular trees have been known to be important nesting or roosting sites in prior nesting seasons. [GGAS-1-17]

- With the exception of public safety issues tree removal and maintenance should always occur between nesting seasons. Native birds begin nesting as early as January and extend through July for the many species that breed in San Francisco. A moratorium on significant arborist work should begin by mid-February and extend through mid-July. Through our studies we have found that trained biologist nest monitors will miss bird nests on their surveys. City arborists should work with local avian biologists, many who are already performing nest monitoring, to ensure the highest levels of safety for citizens and wildlife. [Bartley-1-03]

Response BI-32

These comments express concern about nest predators other than the nest-parasite brown-headed cowbirds and, unless public safety is a consideration, that tree removal and maintenance occur between nesting seasons. Another commenter endorsed the section of the Draft EIR relating to urban forest practices, but suggested text stating that all urban forest practices will consider impacts to nesting birds during the bird breeding season or where particular trees have been known to be important nesting or roosting sites in prior nesting seasons.

Urban forest practices and breeding bird concerns are addressed by proposed General Recommendation GR-4b, which applies to all vegetation management, including activities within the urban forests. As stated in GR-4b, vegetation management activities would typically be conducted outside the breeding season of February 1 to August 31. The text on Draft EIR p. 109 (fourth bullet) has been changed, as follows:

> GR-4c – If surveys indicate that parasitism by brown-headed cowbirds or predation by crows, European starlings, English house sparrows, or other bird species subsidized by human activities is a significant problem, consult with the CDFG and the USFWS to determine the proper ~~protocols~~ course of action, if any, to address population increases of these species and to minimize the ~~negative~~ effects of ~~this~~ these species on local breeding birds.

Refer also to Response PD-19, RTC p. 4-189, for a discussion of trash management activities.

Comment BI-33 SNRAMP proposals for tree replacement

The response to Comment BI-33 addresses all or part of the following individual comments:

SFFA-3-01	SF Tree-1-01	SF Tree-1-02
Tank Hill Neighbors-1-01	Tank Hill Neighbors-1-02	Bachmanov-1-01
Bose-1-10	Bowman-2-02	Bowman-2-07
Gomez-1-06	Hecht-1-01	Lapins-1-01
Lapins-1-02	McAllister-2-03	McAllister-3-01
McAllister-3-02	Rotter-E-1-02	Rotter-E-1-03

■ **1. Trees destroyed by implementation of SNRAMP cannot/will not be replaced**

The DEIR claims that all trees removed in San Francisco will be replaced "one-to-one" by trees that are native to San Francisco. The SNRAMP supports this fictional premise by falsely reducing the number of trees that will be removed:

> By not counting trees less than 15 feet tall which it intends to destroy, despite the fact that the US Forest Service survey of San Francisco's urban forest reports that the trunks of most (51.4%) trees in San Francisco are less than 6 inches in diameter at breast height, the functional equivalent of trees less than 15 feet tall. (Nowak 2007)

> By not counting the hundreds of healthy trees that have already been destroyed by the Natural Areas Program in "natural areas" at Tank Hill, Pine Lake, Lake Merced, Bayview Hill, Glen Canyon parks, etc., prior to the approval of SNRAMP. (see pages 5-8 for details)

However, even artificially reducing the number of trees removed by the implementation of SNRAMP does not make "one-to-one" replacement a realistic goal.

The natural history of trees in San Francisco

The primary reason why we know that it will not be possible to grow native trees in the natural areas in San Francisco is that there were few native trees in San Francisco before non-native trees were planted by European settlers in the late 19th century. San Francisco's "Urban Forest Plan" which was officially adopted by the Urban Forestry Council in 2006 and approved by the Board of Supervisors, describes the origins of San Francisco's urban forest as follows:

> "**No forest existed prior to the European settlement of the city** and the photographs and written records from that time illustrate a lack of trees … Towards the Pacific Ocean, one saw vast dunes of sand, moving under the constant wind. While there were oaks and willows along creeks, San Francisco's urban forest had little or nothing in the way of native tree resources. The City's urban forest arose from a brief but intense period of afforestation, which created forests on sand without tree cover."

The horticultural reality of trees native to San Francisco

More importantly, the reality is that even if we want to plant more native trees in San Francisco, they will not grow in most places in San Francisco because they do not tolerate San Francisco's climate and growing conditions: wind, fog, and sandy or rocky soil, etc. We know that for several reasons:

> There are few native trees in San Francisco now. According to the US Forest Service survey of San Francisco's urban forest only two species of tree native to San Francisco were found in sufficient numbers to be counted in the 194 plots they surveyed: Coast live oak was reported as .1% (one-tenth of one percent) and California bay laurel 2.1% of the total tree population of 669,000 trees. (Nowak 2007)

> The City of San Francisco maintains an official list of recommended species of trees for use by the Friends of the Urban Forest and the Department of Public Works. (CCSF Resolution No. 003-11-UFC)
>
> - The most recent list (2011) categorizes 27 species of trees as "Species that perform well in many locations in San Francisco." There is not a single native tree in that category.
> - Thirty-six tree species are categorized as "Species that perform well in certain locations with special considerations as noted." Only one of these 36 species is native to San Francisco, the Coast live oak and its "special considerations" are described as "uneven performer, prefers heat, wind protection, good drainage."
> - The third category is "Species that need further evaluation." Only one (Holly leaf cherry) of the 22 species in that category is native to San Francisco.

> Finally, about 25 native trees were planted on Tank Hill to placate neighbors who objected to the removal of the trees by the Natural Areas Program (NAP). About 10 years later only 5 have survived and only one shows any growth.

SNRAMP documents that there is no intention to plant "replacement" trees

In fact, the SNRAMP documents that the Natural Areas Program (NAP) does not intend to plant replacement trees for the thousands of trees it proposes to destroy.

> The majority of trees over 15 feet tall designated for removal by SNRAMP (15,000 trees) are in Sharp Park. The DEIR acknowledges that these trees will not be replaced because this area will be converted to native coastal scrub.

> The DEIR makes no commitment to replace the trees less than 15 feet tall that will be removed but are not quantified by SNRAMP because they are not defined by SNRAMP as trees. There are probably thousands of trees less than 15 feet tall in the "natural areas" that will be removed and not replaced.

> Because most of the natural areas are rock outcrops and sand hills that were treeless prior to the arrival of Europeans, there is little acreage within the "natural areas" that is capable of supporting trees that are native to San Francisco: "Two native forest series … comprise approximately 17 acres, 2 percent of total vegetation [in the natural areas]" (SNRAMP, Setting, page 3-11). Obviously, it would not be physically possible to plant thousands of native trees in the small areas in which they would be able to survive.

> SNRAMP documents the intention to convert all MA-l and MA-2 areas, comprising 58% of the total acres of "natural areas" to grassland and scrub: "Within MA-l and MA-2, these sites [of tree removals] would then be replanted with native shrub and grassland species." (SNRAMP, Forestry Statement, page F-3)

> Only MA-3 areas, comprising 42% of total acreage will continue to support the urban forest: "Within MA-3, urban forest species would be planted or encouraged (see Section 5, GR-15)" (SNRAMP, Forestry Statement, page F-3). However, the Forestry Statement also documents the intention to thin the urban forest in MA-3 areas to a basal

area of 60-200 trees per acre (our estimate based on the formula for basal area in SNRAMP). That represents a significant thinning of the urban forest when compared to the tree density of the eucalyptus forest on Mount Sutro documented by UCSF as 740 trees per acre.

> The "Urban Forestry Statements" in Appendix F of the management plan contain the long-term plans for the natural areas in which trees will be destroyed. All but one of these specific plans is some variation of "conversion of some areas of forest to scrub and grasslands." The exception is Corona Heights for which the plans are "converted gradually to oak woodland." The Corona Heights natural area is 2.4 acres, making it physically impossible to plant thousands of oaks in that location.

> "Oak woodland" is the only vegetation goal in SNRAMP which foresees the planting of native trees. Yet, the DEIR says nothing about the potential for Sudden Oak Death (SOD) to decimate the oak population in the San Francisco Bay Area. Ironically, the DEIR acknowledges that one of the comments on the Initial Study raised this question. Yet, despite that question, the DEIR remains silent about the potential for oaks to be killed by SOD. Since the publication of the Initial Study, our local expert (Matteo Garbelotto, UC Berkeley) has reported the rampant spread of SOD and its deadly consequences: "… experts predict as many as 90% of California live oaks and black oaks could die from the disease within 25 years."[1]

2. The trees that have been designated for removal are NOT dead, dying, or hazardous

We have many reasons to challenge the truth of the claim in the DEIR that only dead, dying, hazardous or unhealthy trees will be removed by the implementation of SNRAMP:

> SNRAMP documents that young, non-native trees less than 15 feet tall will be removed from the "natural areas." By definition these young trees are not dead or unhealthy because they are young and actively growing.

> SNRAMP did not designate only dead, dying, hazardous trees for removal. Trees have been selected for removal only in so far as they support the goal of expanding and enhancing areas of native plants, especially grasslands and scrub.

> The predominant non-native tree in San Francisco, blue gum eucalyptus lives in Australia from 200-400 years, depending upon the climate. (Jacobs 1955, page 67) In milder climates, such as San Francisco, the blue gum lives toward the longer end of this range. The trees over 15 feet tall that have been designated for removal are almost exclusively blue gum.

> However, there are many natural predators in Australia that were not imported to California. It is possible that the eucalypts will live longer here: "Once established elsewhere, some species of eucalypts are capable of adjusting to a broader range of soil, water, and slope conditions than in Australia … once released from interspecific competitions and from native insect fauna … " (Doughty 2000, page 6)

> The San Francisco Presidio's Vegetation Management Plan reports that eucalypts in the Presidio are about 100 years old and they are expected to live much longer: “blue gum eucalyptus can continue to live much longer …” (Vegetation Management Plan, page 28)

> The Hort Science "Assessment of Urban Forestry Operations" for the Recreation and Park Department states that, "the life-span of the blue gum, the most common eucalyptus species, is unknown." In other words, although they have lived in San Francisco more than 100 years, they have not lived in San Francisco long enough to know how long they will live here.

> The Natural Areas Program has already destroyed hundreds of non-native trees in the past 15 years. We can see with our own eyes that these trees were not unhealthy when they were destroyed.

> The claim that only unhealthy and/or hazardous trees will be destroyed in the natural areas is contradicted by the "Assessment of Urban Forestry Operations" of the Recreation and Park Department, July 2010.

> Neither written plans nor EIRs are required to remove hazardous trees. The City has the right and an obligation to remove hazardous trees when they are identified as such by qualified arborists.

Trees have been designated for destruction solely to benefit native plants

NThe DEIR claims that only dead, dying, hazardous trees will be removed from the natural areas. This claim is contradicted by the SNRAMP that the DEIR is supposedly evaluating. Not a single explanation in the SNRAMP of why trees have been selected for removal is based on the health of the trees.

> Lake Merced: The explanation for removing 134 trees is "To maintain and enhance native habitats, it is necessary to selectively remove some trees."

> Mt. Davidson: The explanation for removing 1,600 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas. Coastal scrub and reed grass communities require additional light to reach the forest floor in order to persist"

> Glen Canyon: The explanations for removing 120 trees are: "to help protect and preserve the native grassland" and "to increase light penetration to the forest floor"

> Bayview Hill: The explanation for removing 505 trees is: “In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas.”

> Mclaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."

> Interior Greenbelt: The explanation for removing 140 trees is: "In order to enhance the seasonal creek and sensitive species habitat that persists in the urban forest understory, invasive blue gum eucalyptus trees will be removed in select areas."

> Dorothy Erskine: The explanation for removing 14 trees is: "In order to enhance the grassland and wildflower community, removal of some eucalyptus trees is necessary."

In not a single case does the management plan for the Natural Areas Program corroborate the claim made in the DEIR that only dead, dying, diseased, or hazardous trees will be removed. In every case, the explanation for the removal of eucalypts is that their removal will benefit native plants, specifically grassland and scrub. In other words, the explanation provided by the DEIR for tree removals in the natural areas is a misrepresentation of the SNRAMP which it is supposedly evaluating.

The trees that have already been destroyed in the "natural areas" were NOT dead. dying. or diseased.

Although it's interesting and instructive to turn to the written word in SNRAMP for the Natural Areas Program to prove that the DEIR is based on fictional premises, the strongest evidence is the track record of tree removals in the past 15 years. The trees that have been destroyed in the "natural areas" in the past 15 years were NOT dead, dying, or diseased.

Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub.

> The first tree destruction by the Natural Areas Program and/or its supporters took the form of girdling about 1,000 healthy trees in the natural areas about 10 to 15 years ago. Girdling a tree prevents water and nutrients from traveling from the roots of the tree to its canopy. The tree dies slowly over time. The larger the tree, the longer it takes to die. None of these trees were dead when they were girdled. There is no point in girdling a dead tree.

> Many trees that were more easily cut down without heavy equipment were simply destroyed, sometimes leaving ugly stumps several feet off the ground.

> About 25 young trees were destroyed on Tank Hill about 10 years ago. We can see from those that remain that the trees-which were planted around the same time-were young. They don't look particularly healthy in the picture because they were severely limbed up to bring more light to the native plant garden for which the neighboring trees were destroyed. All of the trees would have been destroyed if the neighbors had not come to their defense. About 25 oaks were provided to the neighbors by NAP to plant as "replacement" trees. Only 5 are still alive. Only one has grown. The remainder are about 36" tall and their trunks about 1" in diameter, as when they were planted.

> About 25 young trees were destroyed at the west end of Pine Lake to create a native plant garden that is now a barren, weedy mess surrounded by the stumps of the young trees that were destroyed. These trees were destroyed after all the trees in Stern Grove/Pine Lake had been evaluated by Hort Science. The trees that were cut down to create this new native plant garden had not been judged to be hazardous. They were cut solely for the purpose of expanding the native plant garden.

> About 25 trees of medium size were destroyed at the southern end of Islais Creek in Glen Canyon Park about 6 years ago in order to create a native plant garden. They were replaced with shrubs.

> Many young trees were recently destroyed in the "natural area" called the Interior Greenbelt. These trees were destroyed in connection with the development of a trail, which has recently become the means by which the Natural Areas Program has funded tree removals with capital funding.

> In 2008, the Public Utilities Commission completed a seismic upgrade to the water tank on Mt. Davidson. Because the existing pipe to the tank from the reservoir was "located under sensitive habitat areas" according to the PUC announcement of the project, the pipe was relocated at the insistence of the Natural Areas Program and its supporters. The relocation of the pipe through the non-native forest required the destruction of approximately 100 healthy, mature trees and substantially increased the cost of the project. Only five replacement trees were planted.

There was nothing wrong with any of these trees before they were destroyed. Their only crime was that they were not native to San Francisco. There are probably many other trees that were destroyed in the natural areas in the past 15 years. We are reporting only those removals of which we have personal knowledge.

The claim that only unhealthy and/or hazardous trees will be destroyed in the natural areas is contradicted by the "Assessment of Urban Forestry Operations" of the Recreation and Park Department.

The "Assessment of Urban Forestry Operations"[2] of the Recreation and Park Department was conducted by the professional arborists of Hort Science and published in July 2010. It states that:

> No risk assessments of trees in parks, squares, and golf courses for health and safety hazards had been conducted in San Francisco with the exception of Stern Grove and Park Presidio Blvd at the time the report was published. The hazards identified in those two assessments had been only partially mitigated by the time the report was published.

> All tree maintenance conducted in San Francisco's parks is reactive, i.e., done in response to specific requests for tree removals or pruning. There was a backlog of "some 450" such requests at the time the report was written.

> The "Assessment" recommends that trees be evaluated in 18 parks considered "high priority." None of these 18 parks are natural areas. In the few parks that contain natural areas, only the "park perimeter streets" will be evaluated.

> There is no reforestation in San Francisco's parks, squares and golf courses outside of Golden Gate Park. The number of trees removed in parks and squares exceeds the number of trees planted. The ratio of removals to plantings is significantly higher in golf courses, particularly Sharp Park.

These observations by certified arborists and written in consultation with the Recreation and Park Department contradicts these claims in the DEIR for the Natural Areas Program:

> **The trees in the natural areas had not been evaluated for health or safety when they were designated for removal by SNRAMP in 2006. Therefore, the DEIR cannot claim that the trees designated for removal in the natural areas are unhealthy and/or hazardous.**

> **There is no reforestation effort outside of Golden Gate Park. Therefore, the DEIR cannot claim that all trees removed in the natural areas will be replaced.**

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The final EIR cannot claim that all non-native trees that will be destroyed will be replaced with an equal number of native trees because that is neither consistent with the SNRAMP, nor is it physically possible.

> The final EIR cannot claim that all non-native trees that will be destroyed are dead, dying, diseased, or hazardous because they are NOT and the claim contradicts the SNRAMP.

> The final EIR must evaluate the risk of failure of the trees that remain after removal of thousands of trees [SFFA-3-01]

■ The DEIR claims that every non-native tree that will be destroyed by the Natural Areas Program will be replaced "one-for-one" by a native tree somewhere within the natural areas. This is quite simply not true because:

> There were few native trees in San Francisco prior to its settlement because native trees are not adapted to San Francisco's climate and soil conditions.

> Native trees were not grow in most of the natural areas because of the microclimate in those locations.

> The Natural Areas Program has already destroyed hundreds of trees few of which were replaced by native trees. In the few instances in which native trees were planted by the Natural Areas Program, they rarely survived.

> The stated goal of the Natural Areas Program is to return San Francisco to grassland and scrub, which is the native habitat, with the exception of a few small patches of oak woodland in protected areas with sufficient water drainage to keep them alive. [SF Tree-1-01]

- The DEIR claims that only dead, dying, hazardous trees will be removed. This claim is also not true because:
  - > None of the hundreds of trees that have already been destroyed by the Natural Areas Program were dead, dying, hazardous trees.
  - > Most of the trees that will be destroyed by the Natural Areas Program are Blue Gum eucalyptus. The Blue Gum eucalypts of San Francisco are young and healthy. Based on their lifespan in Australia, they should continue to be healthy in San Francisco for about 200 more years. [SF Tree-1-02]
- The DEIR claims that only dead, dying, diseased, trees will be destroyed by the implementation of the management plan (SNRAMP). This claim is not consistent with our experience with the actions of NAP or with the written management plan. [Tank Hill Neighbors-1-01] [Lapins-1-01]
- The DEIR claims that every tree that is destroyed will be replaced with a native tree. We do not believe, based on our experience, that it will be physically possible to replace every tree with a native tree because native trees wilt not grow in most places in San Francisco. Our experience with "replacement trees," makes us question that NAP has the resources to implement such a commitment, even if the native trees would grow. [Tank Hill Neighbors-1-02] [Lapins-1-02]
- The right plan to plant the trees, wait 15-20 years and after you can cut same amount the trees as you planted. [Bachmanov-1-01]
- Pg 92: The DEIR notes that the trees removed would be replaced one-for-one. This is impossible on several counts:
  - (a) The SNRAMP does not have any plan for tree-planting, only for conversion to grass and shrubland.
  - (b) Given that a tree is defined as greater than 15 feet in height, the trees that will be planted would actually be seedlings or saplings by the definitions used in this report. Since the SNRAMP plans to remove an uncounted number of seedlings and saplings in addition to the 18,500 trees over 15 feet in height replacement is clearly not feasible.
  - (c) The majority of the trees would be removed in Sharp Park, where windthrow is acknowledged to be a factor. This implies that the actual trees lost would exceed the 18,500 number, and replacing them is essentially impossible. [Bose-1-10]
- 2. Add a summary of urban forest acres to be converted long term to coastal scrub and grassland

  1.2 Add a summary of urban forest acres to be converted long term to coastal dunes, scrub, and grassland in Table 5: Summary of Natural Areas Management Plan

  Rec & Park and city officials have routinely attempted to marginalize the publics' opposition to the SNRAMP by stating in the media and at public presentations that only 5% of trees will be removed and that trees will be replaced one-for-one. This deceptive information

regarding the SNRAMP undermines the public and official's understanding of the proposed plans and current management practices and their ability to comment fully on this significant issues related to the plan; therefore, the DEIR needs to clarify this controversial issue in the executive summary to ensure reviewers of the DEIR are not mislead by the omission of significant information.

Specially, the revised DEIR needs to provide the public with an additional summarized analysis of the total acres of urban forest that the SNRAMP states will be eliminated long-term and replaced with coastal scrub, dunes, and grassland. The public needs to be aware that the direct cutting of trees will only cause part of the significant environmental impact with equally significant impacts from:

1) Thinning the remaining MA-3 forest,
2) Removing all small trees in MA-1 and MA-2, thus stopping the natural regeneration of self-sustaining trees, until the conversion is complete,
3) Accelerating the windthrow and erosion attrition for the remaining trees, due to removing trees [Bowman-2-02]

- **4. Clarify plans for reforestation and types of trees used for reforestation**

  Any reforestation plans or the lack of a reforestation plans should also be stated with an analysis of the likelihood of success, since the NAP has had limited success with establishing native trees with past projects (e.g., Tank Hill, Mt Davidson). I have observed successful oak plantings at Golden Gate Heights and two Mclaren locations but all three sites have been in areas sheltered from wind by surrounding urban forests and are park areas outside the Natural Areas.

  Difficulties with establishing oaks is likely indicative of the environmental changes relating to global climate change, pollution related to densely populated city, the limited locations in the Natural Areas where native trees thrive in a windy and foggy environment, and that the Westside Natural Areas are naturally sand dunes.

- The public should also be made aware in the summary about the type of trees expected to be planted, since shrubs that may grow into small trees do not have the same aesthetic quality as the majestic, large trees currently in the urban forests nor do shrubs that may grow into small trees have the same environmental impacts (e.g., air pollution absorption, carbon sequestration, etc.) as large trees. Note that per Rec & Park records provided from a Sunshine request, the only trees planted in the Natural Areas during the past three years except for 74 oaks where really shrubs. Below in Table A is a summary of the trees planted by location and Table B is the actual list of NAP Tree Planting 2009 to 2012 that was provided by RPD based on a Sunshine Act Request. [Bowman-2-07]

- Listen to what San Franciscans want. We fight deforestation in Brazil, do we want it to happen right here at home? We don't think so. Limit tree removal to diseased and hazardous trees. [Gomez-1-06]

- For the past decade my business, Second Nature Design, has been dedicated to sustainable landscape design. My emphasis is habitat restoration and rehabilitation, one urban garden at a time. During my longtime work with Friends of the Urban Forest I helped establish the Ongoing Tree Care Program, organizing and participating in the hands-on care of many of our tens of thousands of street trees throughout the San Francisco area. I am a huge proponent of native plants, particularly trees. However, destroying our existing mature Urban Forest whether in our parklands or on the streets under the rubric "restoration ecology" is absurd. [Hecht-1-01]

- > Bayview Hill: The explanation for removing 505 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas."

  > Mclaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."

  > Interior Greenbelt: The explanation for removing 140 trees is: "In order to enhance the seasonal creek and sensitive species habitat that persists in the urban forest understory, invasive blue gum eucalyptus trees will be removed in select areas."

  > Dorothy Erskine: The explanation for removing 14 trees is: "In order to enhance the grassland and wildflower community, removal of some eucalyptus trees is necessary."

  In not a single case does the management plan for the Natural Areas Program corroborate the claim made in the DEIR that only dead, dying, diseased, or hazardous trees will be removed. In every case, the explanation for the removal of eucalypts is that their removal will benefit native plants, specifically grassland and scrub. In other words, the explanation provided by the DEIR for tree removals in the natural areas is a misrepresentation of the SNRAMP which it is supposedly evaluating.

  <u>The trees that have already been destroyed in the "natural areas" were NOT dead, dying, or diseased.</u>

  Although it's interesting and instructive to turn to the written word in SNRAMP for the Natural Areas Program to prove that the DEIR is based on fictional premises, the strongest evidence is the track record of tree removals in the past 15 years. The trees that have been destroyed in the "natural areas" in the past 15 years were NOT dead, dying, or diseased.

  Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub. [McAllister-2-03]

■ **1. Trees destroyed by implementation of SNRAMP cannot/will not be replaced.**

The DEIR claims that all trees removed in San Francisco will be replaced "one-to-one" by trees that are native to San Francisco. The SNRAMP supports this fictional premise by falsely reducing the number of trees that will be removed:

> By not counting trees less than 15 feet tall which it intends to destroy, despite the fact that the US Forest Service survey of San Francisco's urban forest reports that the trunks of most (51.4%) trees in San Francisco are less than 6 inches in diameter at breast height, the functional equivalent of trees less than 15 feet tall. (Nowak 2007)

> By not counting the hundreds of healthy trees that have already been destroyed by the Natural Areas Program in "natural areas" at Tank Hill, Pine Lake, Lake Merced, Bayview Hill, Glen Canyon parks, etc., prior to the approval of SNRAMP. (see pages 5-8 for details)

However, even artificially reducing the number of trees removed by the implementation of SNRAMP does not make "one-to-one" replacement a realistic goal.

The natural history of trees in San Francisco

The primary reason why we know that it will not be possible to grow native trees in the natural areas in San Francisco is that there were few native trees in San Francisco before non-native trees were planted by European settlers in the late 19th century. San Francisco's "Urban Forest Plan" which was officially adopted by the Urban Forestry Council in 2006 and approved by the Board of Supervisors, describes the origins of San Francisco's urban forest as follows:

> "No forest existed prior to the European settlement of the city and the photographs and written records from that time illustrate a lack of trees … Towards the Pacific Ocean, one saw vast dunes of sand, moving under the constant wind. While there were oaks and willows along creeks, San Francisco's urban forest had little or nothing in the way of native tree resources. The City's urban forest arose from a brief but intense period of afforestation, which created forests on sand without tree cover."

The horticultural reality of trees native to San Francisco

More importantly, the reality is that even if we want to plant more native trees in San Francisco, they will not grow in most places in San Francisco because they do not tolerate San Francisco's climate and growing conditions: wind, fog, and sandy or rocky soil, etc. We know that for several reasons:

> There are few native trees in San Francisco now. According to the US Forest Service survey of San Francisco's urban forest only two species of tree native to San Francisco were found in sufficient numbers to be counted in the 194 plots they surveyed: Coast live oak was reported as .1% (one-tenth of one percent) and California bay laurel 2.1% of the total tree population of 669,000 trees. (Nowak 2007)

> The City of San Francisco maintains an official list of recommended species of trees for use by the Friends of the Urban Forest and the Department of Public Works. (CCSF Resolution No. 003-11-UFC)
>
> - The most recent list (2011) categorizes 27 species of trees as "Species that perform well in many locations in San Francisco." There is not a single native tree in that category.
> - Thirty-six tree species are categorized as "Species that perform well in certain locations with special considerations as noted." Only one of these 36 species is native to San Francisco, the Coast live oak and its "special considerations" are described as "uneven performer, prefers heat, wind protection, good drainage."
> - The third category is "Species that need further evaluation." Only one (Holly leaf cherry) of the 22 species in that category is native to San Francisco.

> Finally, where native trees have been planted by the Natural Areas Program (NAP) to placate neighbors who objected to the removal of the trees in their neighborhood parks, the trees did not survive (see page 6 for details)

SNRAMP documents that there is no intention to plant "replacement" trees

In fact, the SNRAMP documents that the Natural Areas Program (NAP) does not intend to plant replacement trees for the thousands of trees it proposes to destroy.

> The majority of trees over 15 feet tall designated for removal by SNRAMP (15,000 trees) are in Sharp Park. The DEIR acknowledges that these trees will not be replaced because this area will be converted to native coastal scrub.

> The DEIR makes no commitment to replace the trees less than 15 feet tall that will be removed but are not quantified by SNRAMP because they are not defined by SNRAMP as trees. There are probably thousands of trees less than 15 feet tall in the "natural areas" that will be removed and not replaced.

> Because most of the natural areas are rock outcrops and sand hills that were treeless prior to the arrival of Europeans, there is little acreage within the "natural areas" that is capable of supporting trees that are native to San Francisco: "Two native forest series … comprise approximately 17 acres, 2 percent of total vegetation [in the natural areas]" (SNRAMP, Setting, page 3-11). Obviously, it would not be physically possible to plant thousands of native trees in the small areas in which they would be able to survive.

> SNRAMP documents the intention to convert all MA-1 and MA-2 areas, comprising 58% of the total acres of "natural areas" to grassland and scrub: "Within MA-1 and MA-2, these sites [of tree removals] would then be replanted with native shrub and grassland species." (SNRAMP, Forestry Statement, page F-3)

> Only MA-3 areas, comprising 42% of total acreage will continue to support the urban forest: "Within MA-3, urban forest species would be planted or encouraged (see Section 5, GR-15)" (SNRAMP, Forestry Statement, page F-3). However, the Forestry Statement also documents the intention to thin the urban forest in MA-3 areas to a basal

area of 60-200 trees per acre (our estimate based on the formula for basal area in SNRAMP). That represents a significant thinning of the urban forest when compared to the tree density of the eucalyptus forest on Mount Sutro documented by UCSF as 740 trees per acre.

> The "Urban Forestry Statements" in Appendix F of the management plan contain the long-term plans for the natural areas in which trees will be destroyed. All but one of these specific plans is some variation of "conversion of some areas of forest to scrub and grasslands." The exception is Corona Heights for which the plans are "converted gradually to oak woodland." The Corona Heights natural area is 2.4 acres, making it physically impossible to plant thousands of oaks in that location.

> "Oak woodland" is the only vegetation goal in SNRAMP which foresees the planting of native trees. Yet, the DEIR says nothing about the potential for Sudden Oak Death (SOD) to decimate the oak population in the San Francisco Bay Area. Ironically, the DEIR acknowledges that one of the comments on the Initial Study raised this question. Yet, despite that question, the DEIR remains silent about the potential for oaks to be killed by SOD. Since the publication of the Initial Study, our local expert (Matteo Garbelotto, UC Berkeley) has reported the rampant spread of SOD and its deadly consequences: "… experts predict as many as 90% of California live oaks and black oaks could die from the disease within 25 years."

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The final EIR cannot claim that all non-native trees that will be destroyed will be replaced with an equal number of native trees because that is neither consistent with the SNRAMP, nor is it physically possible. [McAllister-3-01]

■ **2. The trees that have been designated for removal are NOT dead, dying, or hazardous.**

We have many reasons to challenge the truth of the claim in the DEIR that only dead, dying, hazardous or unhealthy trees will be removed by the implementation of SNRAMP:

> SNRAMP documents that young, non-native trees less than 15 feet tall will be removed from the "natural areas." By definition these young trees are not dead or unhealthy because they are young and actively growing.

> SNRAMP did not designate only dead, dying, hazardous trees for removal. Trees have been selected for removal only in so far as they support the goal of expanding and enhancing areas of native plants, especially grasslands and scrub.

> The predominant non-native tree in San Francisco, blue gum eucalyptus lives in Australia from 200-400 years, depending upon the climate. (Jacobs 1955, page 67) In milder climates, such as San Francisco, the blue gum lives toward the longer end of this range. The trees over 15 feet tall that have been designated for removal are almost exclusively blue gum.

> However, there are many natural predators in Australia that were not imported to California. It is possible that the eucalypts will live longer here: "Once established elsewhere, some species of eucalypts are capable of adjusting to a broader range of soil, water, and slope conditions than in Australia … once released from inter-specific competitions and from native insect fauna …" (Doughty 2000, page 6)

> The San Francisco Presidio's Vegetation Management Plan reports that eucalypts in the Presidio are about 100 years old and they are expected to live much longer: "blue gum eucalyptus can continue to live much longer …" (Vegetation Management Plan, page 28)

> The Natural Areas Program has already destroyed hundreds of non-native trees in the past 15 years. We can see with our own eyes that these trees were not unhealthy when they were destroyed.

> Neither written plans nor EIRs are required to remove hazardous trees. The City has the right and an obligation to remove hazardous trees when they are identified as such by qualified arborists.

Trees have been designated for destruction solely to benefit native plants

The DEIR claims that only dead, dying, hazardous trees will be removed from the natural areas. This claim is contradicted by the SNRAMP that the DEIR is supposedly evaluating. Not a single explanation in the SNRAMP of why trees have been selected for removal is based on the health of the trees.

> Lake Merced: The explanation for removing 134 trees is "To maintain and enhance native habitats, it is necessary to selectively remove some trees."

> Mt. Davidson: The explanation for removing 1,600 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas. Coastal scrub and reed grass communities require additional light to reach the forest floor in order to persist "

> Glen Canyon: The explanations for removing 120 trees are: "to help protect and preserve the native grassland" and "to increase light penetration to the forest floor"

> Bayview Hill: The explanation for removing 505 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas."

> McLaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."

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In not a single case does the management plan for the Natural Areas Program corroborate the claim made in the DEIR that only dead, dying, diseased, or hazardous trees will be removed. In every case, the explanation for the removal of eucalypts is that their removal will benefit native plants, specifically grassland and scrub. In other words, the explanation provided by the DEIR for tree removals in the natural areas is a misrepresentation of the SNRAMP which it is supposedly evaluating.

The trees that have already been destroyed in the "natural areas" were NOT dead, dying, or diseased.

Although it's interesting and instructive to turn to the written word in SNRAMP for the Natural Areas Program to prove that the DEIR is based on fictional premises, the strongest evidence is the track record of tree removals in the past 15 years. The trees that have been destroyed in the "natural areas" in the past 15 years were NOT dead, dying, or diseased.

Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub.

> The first tree destruction by the Natural Areas Program and/or its supporters took the form of girdling about 1,000 healthy trees in the natural areas about 10 to 15 years ago. Girdling a tree prevents water and nutrients from traveling from the roots of the tree to its canopy. The tree dies slowly over time. The larger the tree, the longer it takes to die. None of these trees were dead when they were girdled. There is no point in girdling a dead tree.

> Many trees that were more easily cut down without heavy equipment were simply destroyed, sometimes leaving ugly stumps several feet off the ground.

> About 25 young trees were destroyed on Tank Hill about 10 years ago. We can see from those that remain that the trees – which were planted around the same time – were young. They don't look particularly healthy in the picture because they were severely limbed up to bring more light to the native plant garden for which the neighboring trees were destroyed. All of the trees would have been destroyed if the neighbors had not come to their defense. About 25 oaks were provided to the neighbors by NAP to plant as "replacement" trees. Only 5 are still alive. Only one has grown. The remainder are about 36" tall and their trunks about 1" in diameter, as when they were planted.

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> Many young trees were recently destroyed in the "natural area" called the Interior Greenbelt. These trees were destroyed in connection with the development of a trail, which has recently become the means by which the Natural Areas Program has funded tree removals with capital funding.

There was nothing wrong with any of these trees before they were destroyed. Their only crime was that they were not native to San Francisco. There are probably many other trees that were destroyed in the natural areas in the past 15 years. We are reporting only those removals of which we have personal knowledge.

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The final EIR cannot claim that all non-native trees that will be destroyed are dead, dying, diseased, or hazardous because they are NOT and the claim contradicts the SNRAMP. [McAllister-3-02]

- In the Interior Greenbelt many healthy, young trees were destroyed to develop a trail under the auspices of the Natural Areas Program. So claims that only dead, dying, diseased trees would be destroyed for implementation of the management plan are totally untrue. [Rotter-E-1-02]
- And we know that the claim that every destroyed tree will be replaced by a native tree is not possible because we've seen what happened on Tank Hill. [Rotter-E-1-03]

Response BI-33

These comments question the amount of trees that would be replaced when nonnative trees are removed; issues related to sudden oak death; whether the restoration and replacement efforts are likely to be successful; the size and location of trees to be replaced; whether all of the trees proposed for removal are dead, dying, or diseased, insect-infested, storm-damaged, or hazardous, or whose growth is suppressed by overcrowding; and aesthetic impacts related to the removal of trees. A summary of urban forest acres to be converted to other habitats is also requested, as well as a clarification of the plans for reforestation, including the types of trees proposed.

Removal of Trees (Including Aesthetic Impacts)

With respect to trees that would be removed, would remain, and/or would be replaced, Draft EIR Table 5 (provided on p. 114) indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain, which consists of 15,000 trees that would be removed in Sharp Park and 3,448 trees that would be removed in the other San Francisco Natural Areas. As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to identify and prioritize restoration and management

actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity.

One of the commenters indicates that "the SNRAMP documents that the NAP does not intend to plant replacement trees for the thousands of trees it proposes to destroy." On the contrary, as stated in Draft EIR Chapter III, Project Description, p. 92, invasive trees that are removed in San Francisco would be replaced with native tree species at a ratio of roughly one-to-one, although not necessarily at the same location or within the same Natural Area. The provision of replacement trees is a component of the SNRAMP project, rather than a mitigation measure. Further, in a memorandum from Lisa Wayne, Open Space Manager, SFRPD, to Jessica Range, Environmental Planner, San Francisco Planning Department,[140] the SFRPD indicated that, each year, the NAP propagates and plants over 10,000 plants in restoration sites throughout the city, with at least 200 of those plants being trees. Therefore, SFRPD has demonstrated that planting replacement trees in Natural Areas at a one-to-one ratio, as proposed, is entirely feasible.

As also stated in SNRAMP Appendix F, p. F-7, at no one location will all the trees, or, for that matter, more than 15 percent of the existing trees be removed from Natural Areas within the city. The goal of the SNRAMP is to remove trees (whether larger or smaller) in a selective manner, limited to a prescribed number of acres or trees in compliance with the forestry statements (SNRAMP Appendix F), such that native species and sensitive habitats would flourish and diversity would increase.

In general, and as stated on SNRAMP p. 5-19, tree removal would be focused on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding. Nowhere does the SNRAMP or the DEIR state that tree removal would only remove dead, dying, or diseased trees, as indicated by commenters. Further, trees would typically be thinned over large areas or in small groups, which would result in the removal of smaller trees and saplings. Tree removal is discussed in detail in SNRAMP Appendix F and in Draft EIR pp. 92 and 93. Typically, trees would be removed limb-by-limb, rather than felling an entire tree; limb-by-limb removal techniques would always be applied in areas adjacent to other trees or sensitive habitat unless this technique is not feasible or practical from a safety perspective. Minimal-impact tree removal techniques would be employed and would involve removing the individual limbs of a tree, then cutting the trunk into individual sections. Tree removal would be conducted manually by someone climbing the tree or someone on a mechanical cherry picker next to the tree. If tree removal occurs in an area that is roadway accessible, the limbs and trunk sections typically would be transported from the area by a flatbed truck; in other areas, the limbs and trunk sections would be left in place on the ground. Tree removal would leave the tree stump and root ball

[140] Lisa Wayne, Open Space Manger, "Tree Removal and Replacement," memorandum to Jessica Range, Environmental Planner, San Francisco Planning Department, November 27, 2012.

intact to hold the soil and minimize subsurface disturbance; stumps may be ground to below grade where necessary to avoid tripping hazards. The SFRPD would spread tree removal across targeted portions of Natural Areas and would not concentrate it in a particular location. Larger-scale tree removal (that exceeds half an acre or, on average, more than 20 trees), identified and analyzed as long-term programmatic projects in this EIR, would remove trees within urban forests (MA-2 and MA-3) over time and not simultaneously in one portion of a Natural Area. The SFRPD's Tree Removal Procedures require that all trees designated for removal be posted at least 30 days before removal. While individuals and neighborhood organizations are not notified directly of the proposed removals, the posting includes a contact number for questions or concerns, which allows the public an opportunity to provide additional comment. Further, no trees are to be removed during this 30-day period. In addition, the Urban Forestry Ordinance has noticing requirements for the removal of street trees, significant trees, and landmark trees, which also prohibits the removal of trees during the noticing period unless the tree(s) could cause manifest danger, in which case the tree(s) could be removed immediately, with noticing occurring after the removal. As stated on Draft EIR p. 157, no landmark trees are proposed for removal under the SNRAMP.

Also, as stated in Draft EIR Chapter III, Project Description, p. 112, General Recommendation GR-15c, tree removal would focus on dead or dying trees, trees with disease or insect infestations, storm-damaged or hazardous trees, and trees that are suppressed because of overcrowding; however, there may be instances where other trees are removed in order to achieve broader restoration goals.

In terms of the size of trees, the diameter at breast height (dbh) is measured as the diameter of a tree at 4.5 feet above ground level on the uphill side of a tree. While a larger dbh is generally associated with taller trees, there is no specific, mathematical correlation between dbh and the height of a tree in general. For documentation purposes, the SNRAMP defines a tree as any plant having a dominant vertical trunk that is over 15 feet tall, while trees less than 15 feet tall are considered seedlings or saplings. The commenter is correct in that seedlings and saplings are not included in the calculation of the number of trees within the Natural Areas, trees to be removed, or basal area because they are not considered trees. SFRPD staff could remove trees that have a dbh of six inches or less (or a height of 15 feet or less); however, the SFRPD arborist would be consulted in the evaluation of the removal of larger trees. Further, the removal of saplings is addressed throughout the EIR as invasive vegetation removal or vegetation removal, which includes shrubs, saplings, and other species of less than 15 feet in height. Refer to Response PD-34, RTC p. 4-210, for a discussion of the methodology used for estimating trees in urban forests.

The commenter is also correct in citing Nowak 2007, which indicates that trees with diameters less than 6 inches account for 51.4 percent of the San Francisco tree population. According to this report, the three most common species in the urban forest are blue gum eucalyptus (15.9 percent), Monterey pine (8.4 percent), and Monterey cypress (3.8 percent), with the predominant species (eucalyptus) being nonnative, and the other two being native to California, but not San Francisco. The goal of the

SNRAMP is to remove trees (whether larger or smaller) in a selective manner, limited to a prescribed number of acres or trees in compliance with the forestry statements (SNRAMP Appendix F), such that native species and sensitive habitats would flourish and diversity would increase.

Draft EIR Chapter III, Project Description, p. 92, also states that the SFRPD would take into consideration the views from Natural Areas when locations are being selected for new trees; locations of replacement trees in San Francisco Natural Areas would be selected to preserve views from important points. Draft EIR p. 93 indicates that implementing the SNRAMP would involve thinning both individual trees and small clusters of trees. In most cases, some trees within the area would be left, and the surrounding forest would remain intact, as the commenter mentioned.

In terms of one of the commenter's concerns about "ugly stumps," as stated on Draft EIR p. 93 (in the Project Description chapter), tree removal would leave the tree stump and root ball intact to hold the soil and minimize subsurface disturbance. Impact AE-4, provided on Draft EIR pp. 191 through 195, address the potential aesthetic impacts caused by the removal of trees, concluding that impacts would be less than significant.

Sudden Oak Death

The SNRAMP envisions a plant palette that is diverse. It would not include planting a monoculture of any species, such as oak trees, that could be susceptible to sudden oak death. However, where oak trees are planted, SNRAMP Page 5-22 specifically addresses sudden oak death, stating that:

> "One of the more recent diseases of concern has been sudden oak death, now found in most coastal California counties from Humboldt to Monterey, including San Francisco County. Precaution should be taken when work is being conducted in a known site for sudden oak death. According to the California Oak Mortality Task Force, as a precaution, tools should be cleaned and disinfected after use on confirmed or suspected infested trees. Additionally, tools should be sanitized before being used on healthy trees. Vehicles should be cleaned of mud, dirt, leaves and other woody debris before leaving an infected area. Tools and clothing should be disinfected with either Lysol® spray, 70 percent or greater alcohol, or chlorine bleach (1 part bleach to 9 parts water) (COMTF 2004). In addition to helping to prevent the spread of sudden oak death, these standard measures will help prevent the spread of other pathogens that may affect plants or amphibians."

Draft EIR p. 94 restates some of the information provided in the SNRAMP, focusing on cleaning and disinfecting tools after use on infected trees. In addition to the specific measures outlined above for sudden oak death, the SNRAMP's adaptive management strategy will allow for monitoring and management activities that are responsive to the specific conditions presented by individual species and/or habitats.

Removal of Invasive Species

The SNRAMP proposes the removal of invasive species throughout the Natural Areas as one strategy to ensure that native species grow and prosper. There are extensive stands of invasive species found within the Natural Areas, and the control and reduction of this vegetation is necessary before restoration and reintroduction of sensitive species of native habitat can successfully occur, as outlined in SNRAMP strategies GR-1, GR-2, and GR-3. As stated on Draft EIR p. 87, in general, MA-1 areas are the most biologically rich and represent the priority areas for conservation and management activities. MA-2 areas are the next most important conservation areas and offer the greatest opportunity for habitat restoration. MA-3 areas are the least biologically sensitive areas, yet offer unique opportunities for conservation and enhancement. MA-3 areas are largely urban forests that primarily consist of eucalyptus trees. Accordingly, the majority of the tree and/or vegetation removal activities would occur in the least-sensitive MA-3 areas. As an example, in certain MA-3 areas, where the understory of the forest is densely populated with invasive species, it becomes difficult for young oak trees to successfully germinate, become established, and reach maturity; therefore, those invasive species would be candidates for removal. Appendix F of the SNRAMP describes the species to be removed, removal methodology, snag retention and debris removal, target basal area, impacts on aesthetics, potential windthrow hazards, sightlines, and other tree removal impacts.

Natural History of Trees in San Francisco

One of the commenters indicated that it would not be possible to grow native trees in the Natural Areas because there were few native trees in San Francisco before the European settlement. Regardless of what was present in San Francisco prior to European settlement, the EIR assesses the environmental impacts of the proposed action as compared to existing conditions, which are the conditions that exist when the NOP was issued (in this case, in April 2009). However, the following information is voluntarily provided in response to the comment raised.

Prior to European colonization, processes that influenced community formation included storm events (e.g. windthrow and heavy salt deposition), fires, grazing, browsing, predation, nutrient cycling, disease outbreaks, insect infestations, and moderate physical disturbance by Native Americans. Pre-European vegetation patterns were a reflection of this physical context and these processes. In terms of native habitats, pre-European vegetation included coast-side plant assemblages that were dominated by coastal scrub, coastal grasslands, and an array of freshwater wetlands. Stands of maritime chaparral occurred on rocky uplands and stable dunes around the southern margin of Lake Merced. Dune scrub and dune wildflower assemblages were prominent. Bayside plant assemblages included more extensive perennial grasslands, wildflower fields, coastal scrub, riparian forest and scrub, freshwater and salt marsh, maritime chaparral, and stands of broad-leaved evergreen forest in protected canyons and coves around the bayshore. As stated on SNRAMP p. 3-4, trees were not a conspicuous component of the landscape.

SNRAMP pp. 7-2 and 7-3 go on to say that during the last 200 years, all of these Natural Areas have been impacted by factors associated with European colonization. Intense grazing and cultivation, water diversions, urban habitat destruction and fragmentation, disruption of processes such as the fire regime, and the introduction of numerous new plants, animals, fungi, and microbes have dramatically altered the landscape. Today, less than 5 percent of the land area of San Francisco can be recognized as containing these original native communities. These biotic remnants are still shaped by their physical context (e.g., local climate, substrate, and topographic relief) and historic processes (e.g., storm events, grazing, and fire); however, a new suite of factors is now impinging on this system. These factors include species loss, loss of predators, reduced native populations, habitat fragmentation, suppression of natural processes, competition with invasive species, and continuing urbanization.

Importantly, SNRAMP p. 7-3 concludes that human-generated disruption of historic natural patterns and processes has placed most if not all of these remnant communities and native populations at high risk of progressive degradation and eventual extirpation. If long-term preservation of San Francisco's indigenous biota is to be achieved, conservation management of these Natural Areas must track the status of natural populations and evaluate the impacts of human activities, and adjust and adapt management activities based upon on-going experience in meeting conservation goals. The SNRAMP is specifically designed to protect and enhance native diversity within Natural Areas that would, to the extent possible and feasible, offset the impacts of these stressors.

Also, regardless of what types of vegetation may have been present in San Francisco pre-European settlement, the EIR assesses the environmental impacts of the proposed action, and the EIR is not required to substantiate the need for the action.

Monitoring Activities

Ecological monitoring, which is outlined in SNRAMP Section 7, allows for the focusing of management activities on the areas of greatest need, and provides a method for evaluating the success of restoration and conservation projects. As stated on SNRAMP p. 7-1, the NAP is focused on the conservation and restoration of a diversity of Natural Areas that host populations of native species and natural communities. The general management goal for these areas is to protect and enhance native species, and to contain and control invasive species.

This program includes both quantitative and qualitative methods for measuring changes in the populations of species at risk and the general health of ecological communities. Many of the monitoring procedures outlined in this chapter are currently ongoing. Results from these and future monitoring efforts would be available through the NAP website at http://www.sfrecpark.org.

In terms of past restoration and revegetation projects, according to SFRPD staff, as a result of ongoing monitoring efforts, some have been successful and some have not, which is an anticipated

outcome for most, if not all, restoration projects. To respond to restoration and revegetation efforts that are not as successful as desired, an adaptive management approach is proposed to guide the ongoing management of the Natural Areas, as described on Draft EIR p. 90. As stated on SNRAMP p. 2-4, "This approach recognizes that some uncertainty exists about the nature of ecosystems and the organisms and processes that define them. Adaptive management, as applied to natural systems, involves a continuous cycle of systematically monitoring biodiversity and other ecosystem goals, and reassessing the plans, strategies/goals, methods, and questions that underlie the management approach. Land managers then use this information to evaluate success and failures, and to refine techniques and approaches." Adaptive Management is a flexible learning-based approach to managing complex ecosystems, executed in three general phases: (1) issues are identified and recommendations are developed, (2) a plan is implemented to address those issues and recommendations, and (3) a monitoring program is developed and implemented. An adaptive management approach is designed to respond to a variety of environmental and human conditions in a manner that will increase the chance of success. Among the successful revegetation projects are various sites along Islais Creek in Glen Canyon, the entryway plantings at Billy Goat Hill and Grandview Hill, scrub restoration at Corona Heights, Lake Merced, and McLaren Park, and various scrub and oak woodland restoration projects in Golden Gate Park.[141]

In a memorandum from Lisa Wayne, Open Space Manager, SFRPD, to Jessica Range, Environmental Planner, San Francisco Planning Department,[142] the SFRPD indicated that each year, the NAP propagates and plants over 10,000 plants in restoration sites throughout the Natural Area restoration sites, with at least 200 of those plants being trees, which correlates to roughly 4,000 trees over the 20 year life of the SNRAMP and is greater than the approximately 3,448 trees anticipated for removal over this same time frame.

Urban Forests

The commenter's requests a summary of urban forest acres to be converted to other habitats, as well as a clarification of the plans for reforestation, including the type of trees proposed. While the SNRAMP doesn't provide specific data regarding the conversion of urban forest acres to other habitats, SNRAMP pp. 5-17 and 5-18 state that approximately 199 acres are classified as MA-3 urban forests within the Natural Areas. These urban forests are located in Bayview Park, Glen Canyon Park, Edgehill Mountain, Lake Merced, McLaren Park, Mount Davidson, Pine Lake, Interior Greenbelt, Dorothy Erskine Park, Corona Heights, Fairmount Park, and Sharp Park. It is estimated that about 35,000 trees occur in the MA-3 urban forests within San Francisco (see Appendix F and Response PD-34, RTC p. 4-210, for details on tree estimation methodology). The MA-3 areas are, by definition, the lowest-priority areas within Natural Areas (see Section 1 of the SNRAMP).

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141 Memorandum from Lisa Wayne to ESA (Terri Avila) regarding revegetation success, September 12, 2014.

142 Lisa Wayne, Open Space Manger, "Tree Removal and Replacement," memorandum to Jessica Range, Environmental Planner, San Francisco Planning Department, November 27, 2012.

As reflected in Appendix F, pp. F-5 and F-6, estimates of trees in urban forests were calculated in two ways (saplings and seedlings are not included in tree estimates). For large urban forests, an estimate of 353 trees per acre was used. For smaller urban forests, such as Fairmount Park, Dorothy Erskine Park, and Corona Heights, tree estimates were adjusted based on rough visual estimates conducted by Natural Areas Program staff. Acreage of all non-native forest series were used in the calculation of tree numbers. The total acreage was multiplied by the appropriate estimate of trees per acre to generate the total number of trees per Natural Area. The resulting estimates were then rounded. For example, the 30.06 acres of invasive forest at Mount Davidson generated an estimate of 10,612 trees which was rounded to 11,000 trees. Acreages that resulted in tree numbers less than 1,000 were rounded to the nearest hundred and numbers less than 100 were rounded to the nearest 10 trees. These estimates were further divided into trees within each MA-1 and MA-2 area for a given Natural Area (Table F-1 in Appendix F of the SNRAMP).

The commenter also states that according to the US Forest Service, San Francisco's urban forest contained only two species of native trees that were found in sufficient numbers to be counted in the 194 plots they surveyed: coast live oak (*Quercus agrifolia*) and California laurels (*Umbellularia californica*). This information informed the SNRAMP, and, accordingly, native trees that would be planted include, but are not necessarily limited to, coast live oak (*Quercus agrifolia*), California wax myrtle (*Myrica californica*), dwarf California buckeye (*Aesculus californica*), and California laurels (*Umbellularia californica*). Section 6 of the SNRAMP provides the species that are anticipated to be planted in each Natural Area based on the SNRAMP's goals and the desired outcomes for each Natural Area.

The SNRAMP provides a framework for future restoration activities rather than detailed reforestation or restoration plans. As stated on SNRAMP p. 1-4, the SNRAMP:

> "defines and delineates "Management Areas", which represent differing levels of sensitivity, species presence, and habitat complexity within the 31 Natural Areas. Three levels of MAs have been defined as MA-1, MA-2 and MA-3, and all Natural Areas are categorized into one of these three categories."

In terms of the preparation of reforestation plans (or more detailed restoration plans), SNRAMP pp. 1-10 and 1-11 provides the following description of how future management activities would be implemented:

> "Each year management activities will be identified from the broader prescriptions of the management plan for implementation. NAP Work Plans will be developed annually to reflect site-specific objectives and resources, such as staffing, volunteer groups, grants, capital funds, or other resources, available for that year. In general, NAP Annual Work Plans will prioritize activities (Appendix J) in MA-1 areas above actions in MA-2 or MA-3 areas. Each year Natural Areas Work Plans will be presented to the public at SFRPD's Annual Capital Planning Fair. This yearly event will be an opportunity for the public to understand and comment on SFRPD's priorities for Natural Areas improvements for the

> coming year, as well as its activities in the past year. In addition, NAP Work Plans and the results of monitoring activities will be available for posting on the internet. Periodic tours of restored areas will be conducted for the general public's education as resources are available."

Lastly, in terms of promoting successful restoration efforts, monitoring and adaptive management activities, as described under the "Monitoring" section above, provide a valid method for enhancing the likelihood of success of restoration and conservation projects. To further put the planning efforts (as reflected in this SNRAMP) and implementation efforts (as reflected by future activities) in context, SNRAMP pp.2-4 and 2-5 says:

> "Restoration projects have two components: planning and implementation. It is important to have good planning, including a clear reason that justifies the restoration project, a discussion of the project in relation to the reference site and the surrounding ecosystem, and clearly articulated goals, objectives, and performance criteria (SER 2004). Implementation requires detailed plans, schedules, and procedures for dealing with potential problems, explicit performance criteria, and a long-term monitoring strategy (SER 2004). Ecosystem goals, objectives and supporting policies are described in Sections 1 and 2 of this Final Draft. Sections 3 and 6 provide the regional and site-specific information necessary to discuss how the proposed restoration project fits into the overall landscape. Site-specific plans are not included within this document, but are developed in the form of annual work plans by NAP. This Final Draft includes a detailed monitoring protocol that will allow for evaluation of restoration performance (Section 7)."

Windthrow

In terms of windthrow, in general, tree removal in the Natural Areas is planned to remove individual trees or very small groups of trees in forest and scrub habitats, which would also avoid altering the wind conditions and increasing ground-level wind hazards. Windthrow effects are addressed in detail on Draft EIR pp. 243 through 250, with the analysis concluding that no impact or less-than-significant impacts would occur.

Draft EIR p. 248 states that windthrow rates at Sharp Park may be relatively higher following tree removal. This Natural Area is exposed to strong westerly winds that funnel up off the beach and through the canyon. However, the trees would not be removed all at once, and gradual removal would not substantially elevate windthrow rates. Even if windthrow were to increase substantially in this portion of the Natural Area, the risk to people is minimal because there are no residences or sidewalks, and the canyon east of the archery range is inaccessible. Therefore, the Draft EIR p. 248 concluded that an increase in wind levels at Sharp Park resulting from the programmatic projects would be less than significant.

Comment BI-34 Provide square footage and percentages of trees to be removed

The response to Comment BI-34 addresses all or part of the following individual comments:

MPIC-1-07 Bose-2-02 Bowman-2-06

- Also, the DEIR is does not clearly define the planned scope and specific impact of the 1,000-tree removal planned for the MA-1c area: what percentage are these 1,000 trees to be removed of the existing forest in that area: 100%, 75%, 50%, or 25%? If 50% or more, this would more than just thin the historic forest – it would decimate it, a significant negative impact to this historic resource. The EIR should detail the square footage of the MA-1c, MA-2c, and MA-2e areas where trees would be removed and provide the estimated percentage of trees to be removed from each one. These numbers would help to ascertain the environmental impact with respect to what recreational users will experience within the park. [MPIC-1-07]
- The final EIR should explicitly discuss the impact of tree felling in each specific area. Thank you for the opportunity to comment. [Bose-2-02]
- 3. Correct the "existing" trees and clarify impact of trees removed since initiation of SNRAMP

  1.3 Correct the "existing" trees and clarify impact of trees removed since initiation of SNRAMP

  The DEIR existing trees must be reevaluated to correctly state the actual trees existing at each site. Rec & Park presentations to the public, media, and decision makers about the DEIR almost always refer to the percentage of trees to be removed, which indicates the importance of correctly stating the existing number of trees so that this percentage is fairly stated.

  As an example, Pine Lake indicates systemic problems with the tree numbers presented in the DEIR. HORT Science conducted a tree survey at Pine Lake in March 2011 for Rec & Park and identified only 229 trees at Pine Lake, which includes the 82% of Pine Lake acres that is not in the Natural Areas. This indicates that it is impossible for 1000 trees, as stated in Table 5, to exist on the 8.4 NAP acres, which is largely open water and Riparian vegetation with small shrubs and a highly thinned MA-3 and MA-2 forest. It also indicates that the methodology for determining existing trees is flawed and needs to be corrected to more accurately reflect the number of existing trees summarized in Table 5 and also contained in the Forestry Appendix F. Otherwise, the percentage of tree removal will be significantly misstated for those reviewing the final EIR and in presentations to the public. Also, existing tree counts represented for Glen Canyon and Mt Davidson are of particular concern because the numbers do not seem reasonable based on the actual density of trees and the existing open spaces with few trees in the zones included in the tree acreage. Because the number and percentage of trees is such a significant measure used in all presentations regarding the DEIR, the DEIR should reflect the actual trees at the sites not some highly inaccurate estimate which overstates the existing trees and thus significantly understates the percentage of trees to be removed.

It is also not stated in the DEIR as to whether trees removed since the creation of SNRAMP are included in the "existing" or "to remove" trees or neither, which is important information for decision making and for understanding the impact of the proposed plan. As examples of trees that have already been removed since the creation of NAP, according to the SNRAMP Forestry Appendix F, Pine Lake had 132 trees removed in 2006 and the DEIR Table 5 shows no additional trees to be cut. Note that extensive numbers of trees have also already been removed by various trail projects (e.g., Corona Heights, Interior Greenbelt, Grand View), by vandals (e.g., Glen Canyon), by construction projects (e.g., Mt Davidson), by tree assessment projects (e.g., Pine Lake, Interior Greenbelt), etc.

The on-going deforestation at Grand View and Pine Lake in the MA-3 forests is also a concern since even in areas that SNRAMP proposes to maintain forests; the areas are being converted to native plants instead of retaining the forest. See *Attachment C* for pictures of trees removed and the new native plant gardens in areas zoned as MA-3 forests at Pine Lake. Also, below is the Google Map street picture from April 2011 for Grand View that shows young cypress trees that are not at Grand View after the 2008 Bond Trail Restoration. Note these young trees are in a zone designated as MA-3 where SNRAMP proposes to retain the Cypress trees. As shown in the picture the MA-3 zone has numerous tree stumps instead of Cypress trees. This illustrates how the "no project" status is also significantly detrimental to the aesthetic and scenic value of the Natural Areas and pictures showing these changes in the DEIR should be shown in the DEIR.

Picture 1: *Screenshot from Google Maps street view of Grand View. Google Maps shows that the picture was taken in April 2011. I added the circle to show several young cypress trees that are no longer at Grand View. One of the young cypresses is still there but it appears to be outside the RPD park boundary.*

Picture 2: *A large section of trees were remove at the Stanyan entrance of the Interior Greenbelt, which is also a MA-3 zone.* [Bowman-2-06]

Response BI-34

These comments request more definition regarding the scope and specific impact of the tree removal planned for the MA-1c area at Mount Davidson; the impact of tree felling in each area; a clarification of existing trees (as opposed to those removed since inception of the SNRAMP process); and the ongoing deforestation at Grand View and Pine Lake in the MA-3 forests.

Table 5 on Draft EIR p. 114 provides management acreage (i.e., MA-1, MA-2, and MA-3) for each of the Natural Areas and also provides the number of invasive trees that are existing, would be removed, and would remain based on the SNRAMP. Draft EIR Table 5 indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain. Of the 18,448 trees that would be removed, 15,000 trees would be removed in Sharp Park and 3,448 trees would be removed in the San Francisco Natural Areas. No trees would be removed at Pine Lake. Since the commenter who requested specific information about tree removal appears to be addressing Mount Davidson

(Comment MPIC-1-07), specific information about Mount Davidson in terms of trees removed and the basal area per acre of trees that will remain is provided in this response. As described on SNRAMP pp. 6.2-8 and 6.2-9, 1,600 of 11,000 trees would be removed (or 14.5 percent, with 85.5 percent remaining). SNRAMP pp. 6.2-8 and 6.2-9 goes on to say the following:

> "***Recommendation MD-1b:*** In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas. Coastal scrub and reed grass communities require additional light to reach the forest floor in order to persist. Approximately 1,600 of an overall 11,000 trees on Mount Davidson would be removed from MA-1 and MA-2 areas (Appendix F). Approximately 9,400 trees would remain in the urban forest at Mount Davidson. Not all trees in MA-1 and MA-2 areas will be removed. Some scattered large individuals will remain in order to minimize large scale disturbance and disruption to wildlife and to promote a gradual conversion to reed grass prairie. However, eucalyptus seedlings and saplings will not be allowed to establish in these areas. An average of 50-100 or 100-200 square feet of basal area per acre will be retained in MA-1 and MA-2 areas respectively. The short- and long-term impacts of tree removal are discussed in Appendix F. Below is a description of where tree removal would occur (see also Figure 6.2-5):
>
> - Remove approximately 1,000 small and medium sized eucalyptus trees, leaving large cypress and eucalyptus trees in MA–1c.
> - Remove approximately 200 eucalyptus, leaving some large trees for structural diversity (MA-2c).
> - Remove approximately 300 small to medium sized and 100 large eucalyptus trees, some large trees will remain (MA-2e).
> - All MA-3 areas will be managed as urban forests (GR-14)."

However, Draft EIR pp. 286 through to 362, which comprise the Biological Resources section, discusses tree removal throughout. As with the entirety of the EIR, impacts are addressed on a project-level and programmatic basis, rather than by Natural Area, since the specific activities that could occur within each Natural Area may vary in response to the conditions that are presented and the restoration goals that are most desired within the overall framework provided by the SNRAMP. All biological impacts, including those related to tree removal, are either less than significant or could be reduced to a less-than-significant level with the implementation of all identified mitigation measures.

One commenter is also concerned about the tree removal at Grandview Park. As indicated in Draft EIR Table 5, five trees of 25 trees would be removed.

Another commenter indicated that the HORT Science Tree Survey at Pine Lake in March 2011 identified 229 trees, whereas Table 5 of the Draft EIR identifies 1,000 existing trees in this same area. If tree surveys use different assessment methodologies or are conducted at different times, it can

lead to different results between the surveys (such as the case of the HORT Science Tree Survey and the SNRAMP Tree Survey). Appendix F of the SNRAMP describes how the tree survey was performed for the SNRAMP, and this survey methodology was applied consistently to all of the Natural Areas. Refer to Response PD-34, RTC p. 4-210, for a more detailed discussion of the methodology used for estimating trees in urban forests.

Refer to Response G-3, RTC p. 4-19, for a discussion of previous NAP actions and the environmental clearance that was achieved to support those activities. Further, the cumulative analysis for this project considers past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; therefore, past projects are also considered in the cumulative analysis for this project.

Comment BI-35 Discuss brush pile creation where tree trimming or removal is planned

The response to Comment BI-35 addresses all or part of the following individual comment:

GGAS-1-29

- Overall, the DEIR would be improved by including a discussion of the value and creation of brush piles in areas where tree trimming or tree removal is planned. Brush piles can provide immense value for wildlife and suppress invasive plant growth. [GGAS-1-29]

Response BI-35

This comment suggests that the Draft EIR discuss the value of brush piles in areas where tree trimming or tree removal is planned.

The proposed project includes recommendations related to the creation of brush piles; specifically, Draft EIR Chapter III, Project Description, p. 109, references SNRAMP General Recommendation GR-4d, which states that SFRPD would "[u]se material from brush and tree trimming to increase nesting or escape habitat for ground-dwelling birds and to mitigate any loss of habitat from other vegetation clearing." Further, General Recommendation GR-4d also indicates that "Brush piles shall be located out of public sight wherever possible and without creating public safety hazards (e.g., fire hazards). Hedgerows created from cut material shall be placed so that they connect scrub habitats and provide movement corridors for ground-dwelling birds."

As stated in PRC Section 21002.1, the purpose of an EIR is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided; therefore, CEQA focuses on identifying the potentially significant adverse impacts of a project, rather than project benefits. While project benefits can be identified in an EIR, it is more likely that such benefits are described in the Statement of Overriding Considerations prepared by a Lead Agency, which states in writing the specific reasons to support its action based on the final EIR and/or other information in the record when significant impacts are not avoided or substantially lessened. If the specific economic, legal, social,

technological, or other benefits, including region-wide or state-wide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

Comment BI-36	**Replacing nonnative vegetation with more appropriate native vegetation is self-contradicting**

The response to Comment BI-36 addresses all or part of the following individual comments:

Bartley-1-12 Bose-1-11

- Wasting time and money on certain invasives that can't be overcome: A popular trend amongst evolutionary biology scientists and ecologists is that we need to accept that many of the species that have been human introduced are impossible to remove so we might as well get used to it. European grasses and some shrubs (i.e. Broom) are a prime example of that locally. The fertile SF Bay itself may be the most dramatic regional example of introduced species gone wild. Still, some particularly disadvantageous species can be controlled relatively easily or wiped out altogether. [Bartley-1-12]
- Pg 195: … all removed vegetation would be replaced with native vegetation that is more appropriate for the area's precipitation pattern, water availability, animal populations, and local ecosystems, thereby allowing the new vegetation to thrive more successfully than the invasive vegetation.

  This statement is self-contradictory. If the invasive vegetation is not thriving more successfully than other vegetation, it is not invasive. Moreover, there is practical evidence that native vegetation does not in fact thrive more successfully but instead requires irrigation to get established, followed by continuing maintenance in the form of herbicides and replanting. The rising use of herbicides by the NAP attests to this, as do the thousands of volunteer-hours it uses for maintenance. [Bose-1-11]

Response BI-36

These comments express an opinion that it may not be possible to remove invasive species and, further, that native vegetation does not thrive more successfully than invasive species.

As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity, which requires the removal of invasive species. Response BI-24, RTC p. 4-420, indicates that invasive species are capable of spreading rapidly and displacing native plants because they are adapted to similar climatic conditions, lack predators or pests, and have other auto-ecological characteristics that allow them to thrive. SNRAMP p. 4-2 expands on this concept, stating that:

> "Foreign species may become established in this country with little or no competition from native species, and eventually displace some native species (APHIS 2000). There are several organizations devoted entirely or in part to the monitoring, control, and removal of invasive exotics (e.g., the California Exotic Pest Plant Council [CalEPPC] and

> the Center for Invasive Plant Management). The Nature Conservancy has an entire team devoted to this issue. In a policy memo, the Nature Conservancy discussed the impacts of invasive species. The memo stated that: (1) three-quarters of the operating units of the Nature Conservancy believe that invasive species are a threat to their conservation planning and that all their lands are at risk; (2) as many as 46 percent of the plants and animals in the United States that are Federally listed as endangered are adversely affected by invasive plants; and (3) invasive plants represent an annual cost to the people of the United States of about $137 billion (Bartuska 2002). The California Native Plant Society (CNPS) has established a policy on its approach to the issue of invasive species. Although lengthy, the essence of this policy is that the CNPS urges coordination of planting and management, education, control measures that do not affect the native habitats, and expansion of volunteer restoration efforts (CNPS 1996). Some native plant species can coexist with exotics, and it is not uncommon for introduced species to become naturalized in native plant communities without altering natural ecosystem functions. However, a handful of invasive plant species have the potential to overwhelm and displace native ecosystem biodiversity, reducing native plant populations and seriously changing the fundamental ecosystem processes (Mullin et al. 2000; USDA 1999). As the number of indigenous plants decreases, so too do the insects, birds, and other animal species that depend on the diversity of these plants for food, shelter, and reproduction."

Eliminating nonnative invasive species and replacing them with native species requires intervention and maintenance. First, the nonnative species must be eradicated (applying the principals of the City's least-toxic decision-making model), and native species must become established, which requires planting, irrigation, and ongoing monitoring for a period of time. The goal is to encourage biodiversity, which would allow the return of those sensitive plants, animals, and habitats that had previously thrived within San Francisco.

The native species that would be reintroduced are conceptually identified in the SNRAMP under the discussion for each Natural Area. Also, refer to Response PD-11, RTC p. 4-159, for a discussion about the importance of biodiversity for the San Francisco area, as well as the policy framework that supports biodiversity through implementation of the SNRAMP. Refer also to Response PD-31, RTC p. 4-206, and Response BI-33, RTC p. 4-457, for a discussion of the successful restoration efforts completed under the supervision of the SFRPD.

4.D.11 Geology and Soils [GE]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter VI, Section VI.F.5, Geology and Soils.

Comment GE-1	**Erosion control measures should be site-appropriate, certified weed free, and composed of natural fiber**

The response to Comment GE-1 addresses all or part of the following individual comments:

NPS-1-03 GGAS-1-10

- Erosion Control – Mitigation measures should include a requirement that erosion control materials be certified weed free, and when possible, certified wheat free. We also suggest that any erosion and sedimentation control materials, such as wattles, not be made of anything but natural fiber. We suggest that plastic mono-filament or biodegradable plastics not be used for erosion control where frogs or snakes may become entangled or trapped in it. [NPS-1-03]
- Golden Gate Audubon encourages the use of site-appropriate erosion control measures. (See DEIR, at 93) For example, in the past, the RPD has dumped piles of redwood chips along Lake Merced, which has resulted in (likely illegal) discharges of the chips and their chemical components into the Lake, changing its chemical composition and adding pollutants. [GGAS-1-10]

Response GE-1

These comments request that the SNRAMP uses site-appropriate erosion control measures, and several suggestions are made regarding the potential erosion control measures. Another comment suggests that SFRPD had dumped piles of redwood chips along Merced, likely illegally.

SNRAMP p. F-4 states that "Unless it can be used to create wildlife habitat (see Section 5, GR-9) all large woody debris will be chipped on site, stockpiled in visually hidden places or removed manually off-site. Some of the chips may be used to deter understory invasive vegetation in the stand, or could be used as beneficial mulch on other revegetation projects in Natural Areas."

In response to the above comments addressing erosion control measures and the materials used, the SFRPD has amended the SNRAMP project. When alternative materials are available, a preference would be given to the use of biodegradable, certified weed-free, and wheat-free erosion control materials to minimize inadvertent impacts to wildlife and habitat. In addition, to ensure that appropriate materials that are compatible with the materials and features present at the sites are used, a qualified SFRPD biologist would be consulted during design of erosion control measures. The text on Draft EIR p. 94 (after the second bullet) has been changed, as follows:

> Where alternative materials are available to achieve the intended erosion control objectives while also minimizing inadvertent impacts to wildlife and habitat, a preference would be given to the use of biodegradable, certified weed-free, and wheat-free erosion control materials. To help ensure that

appropriate materials are used that are compatible with the materials and features present at the sites in which they are used, a qualified SFRPD biologist would be consulted during design of erosion control measures.

Refer also to Response HY-6, p. 4-503, for a discussion of practices contributing to algal blooms, which could be caused by a change in the chemical composition of a waterbody.

Comment GE-2 Drifting sand impacts and mitigation measures

The response to Comment GE-2 addresses all or part of the following individual comments:

GGHNA-1-01 GGHNA-1-02 Campbell-N-1-01

- GGHNA has repeatedly expressed our concerns about damage to neighboring homes and property from drifting sand from the parks in our neighborhood, about plans to remove trees from the natural areas, and about poor maintenance in natural areas. We worry that our concerns have been ignored. Indeed, there is little in the NAP EIR to indicate they have been heard.

  The Golden Gate Heights Neighborhood Association appreciates the opportunity for us to give, yet again, our comments about the NAP and the NAP EIR. We feel that the NAP EIR is not adequate in the above areas, and that it must be revised to consider the impacts we outlined above. Thank you. [GGHNA-1-01]

- The analysis of impacts from drifting sand is inadequate.

  Years ago, drifting sand was a BIG problem in our neighborhood, especially around Grandview Park and the Rock Outcrop. The parks in Golden Gate Heights are located on the westernmost hills in San Francisco. There is literally nothing that stands between Asia and us and the wind frequently screams through our neighborhood. The wind picks up any open sand in the parks and essentially "sand blasts" our homes, our property, and ourselves. Over the years, neighbors at Grandview and the Rock Outcrop experimented with plants to stabilize the sand in the parks and found that iceplant was the only thing that really worked. While there was still some drifting sand, it was minimized.

  Then about ten years ago, NAP staff began tearing up the iceplant and replacing it with native plants. Drifting sand is once again a problem in our neighborhood. The sand blows into people's backyards, damaging their property, fills the streets, and clogs the sewers. This is especially concerning on 14th Avenue below the Rock Outcrop, where a very narrow street becomes even narrower when sand drifts into the street. In 2006, a house on 14th Avenue was red-tagged after a major landslide in the backyard smashed into it. The house is immediately adjacent to the Rock Outcrop, where NAP staff had removed large amounts of iceplant. While we cannot say definitively that the iceplant removal caused the landslide, we are concerned that it might have had at least some impact.

  At a GGHNA meeting several years ago about the NAP, homeowners who live adjacent to Grandview complained about damage to their backyards from sand that had drifted into them after iceplant in Grandview that had held the sand in place was removed by RPD. NAP

staff at the meeting responded that RPD has no "legal" responsibility for damage to property outside of a park caused by sand that drifted into their backyards from the park because of the actions by NAP staff (removing iceplant).

When the NAP Management Plan was released in 2006, it called for "scattered, open sand" in all the natural areas in our neighborhood. Given the NAP staff's arrogant response to our members' concerns about damage, the plan to have scattered, open sand in the parks in our neighborhood has been of great concern to us.

The NAP EIR does not adequately address concerns, especially at the four parks in our neighborhood, about impacts of drifting sand on people's land and property that is immediately adjacent to the parks. This must be considered, and mitigations proposed (such as no scattered, open sand) to address the impacts. We know there are impacts. We see them daily. The NAP EIR must consider these impacts as well. [GGHNA-1-02]

- I no longer live in San Francisco but I was born there as was my Mother and Grandparents. My Grandparents used to tell me of the wind and the blowing sand when the dunes were planted with only the small natural dune plants. They were always so grateful when other types of planting even though non-native were planted. Those plantings saved the dunes from tragic sand erosion, sand blowing that matched the dust bowl.

  Do you really want to be responsible for a repeat of that.

  Leave the plantings as they are, some of the planting may not be native species but they are mature, hold down the soil, feed the bees which are having a very hard time and on which a great majority of our food pollination depends, provide nectar for the Monarchs and Hummingbirds not to mention the vast numbers of songbirds and migratory avian species.

  We do not need to be part of the hysteria over native vs non-native. The plantings as they are serve our area well in many many ways. [Campbell-N-1-01]

Response GE-2

These comments express concern regarding drifting sand from SFRPD parks and suggest that the Draft EIR analysis of this issue is inadequate.

In response to these comments, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 460 (last paragraph) has been changed to further clarify the proposed project and potential erosion that could arise from removal of plants on sandy soils, as follows:

> In addition to these BMPs, ~~additional~~ practices outlined in the SNRAMP specifically designed to minimize erosion include removing only small areas of vegetation at any one time (GR-1c), and, to the extent possible, performing work that involves exposure of large areas of soil during the dry season (GR-12b). As further described in the SNRAMP, the Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill belong to a remnant ridge-top sand dune system in the western portion of San Francisco. Areas of exposed sand in these parks are subject to erosion due to wind, runoff, and foot traffic on social trails established on steep slopes. The proposed management actions in these Natural Areas, including removal of iceplant and other nonnative vegetation, would be undertaken in a manner to reduce and control erosion. For

example, Recommendation GGRH-1f specifies that: "[i]n areas where large-scale removal of invasive vegetation could lead to increased soil erosion (removal of iceplant at Hawk Hill, for example), the vegetation removal shall only occur in small, non-adjacent patches. Currently, herbicides are being applied in this manner to small patches of iceplant at Hawk Hill. Once the iceplant dies it shall be left in place to retain the sandy soils while native species recolonize the area." Removal of nonnative trees would be limited in these natural areas to approximately five trees from the upper slope at Grandview Park. Implementation of Recommendation GGRH-1e would help to stabilize sandy soils and prevent and control erosion due to wind and runoff by maintaining and enhancing native dune scrub vegetation at each of these four Natural Areas. Revegetation following removal of invasive plant species along with the installation of erosion control measures in the BMPs described above would help control erosion.

The SNRAMP also includes proposed management actions to reduce erosion in these natural areas due to foot traffic on social trails. The proposed actions include the use of signage and fencing to discourage use of social trails on steep erodible slopes at each of these Natural Areas, installation of timber steps (similar to the "sand ladder" at Baker Beach) at Hawk Hill, and installation of soil retaining boxes on the downhill side of the landings to minimize erosion at Grandview Park. None of the geology and soils effects were found to be significant.

With the implementation of the SNRAMP management actions, the proposed project would not result in substantial soil erosion or result in on- or off-site landslides in areas with remnant sand dunes. Refer also to Response BI-15, RTC p. 4-402, for a discussion of the impacts of retaining nonnative trees and vegetation.

Comment GE-3 Erosion impacts from habitat restoration and/or tree removal

The response to Comment GE-3 addresses all or part of the following individual comments:

MPIC-2-16	SFFA-3-04	Gomez-1-02
Johns-1-05	Thomas-1-02	Valente-1-05

- **IV. Erosion**

  As acknowledged in the SNRAMP, the urban forest on the western portion of Mt. Davidson Park has steep slopes, with groundwater seep at the base of the outcrop. There is also substantial groundwater seep or underground stream/aquifer runoff during heavy rain storms on the southern slope, which drains onto adjoining properties. Many homes have had to build channels for the run-off in their basements and garages to prevent flooding of their homes. The SNRAMP further acknowledges that the heavy vegetation cover in many areas aids in preventing trail and slope erosion. The SNRAMP is incorrect in stating that all erosion and soil issues relate to the trail system and public use. This may be the case now, but the proposed concentrated tree removals will likely result in much more significant erosion and soil issues, potentially creating conditions for landslides onto abutting properties.

  In 1998, native plant activists removed stands of French Broom from the bottom of the eastern slope of the Mt Davidson. As 1998 was an el Niño year, subsequent rains carried the upper layer of dirt and rock, no longer anchored by roots, into the back patios and homes of those living adjacent to the park, endangering life, damaging property, and resulting many

thousands of dollars in costs for some home owners. A USGS assessment stated that, although the area is seismically sound, the bedrock and shale of the steep mountainside has a 4 to 7 foot deep layer of loose matter, which is liable to slide under some conditions – as when the topsoil is not anchored. The current vegetation has proved sufficient to prevent this. Grass and brush will not provide the same safeguard. Were the mountain whole and uninhabited, this would be of no great concern, but the construction of the forties and the fifties terraced the hills, cutting into the bedrock and leaving the top strata unsupported, creating conditions favorable to a minor landslide like the deadly and destructive 1942 Foerster slide, which occurred below an area of native grasses.

The DEIR should include a requirement for detailed soils and geologic surveys and analyses of the MA-1 and MA-2 zones by a qualified engineer with respect to the SNRAMP project plan before any tree removal would be allowed. The DEIR's conclusion that the substantial erosion and siltation that could occur from the tree removal could be mitigated is based on insufficient analysis of the actual geology and hydrology of Mt. Davidson Park. This proposed removal of the heavy vegetation there now would substantially increase storm water and groundwater runoff from the steep slopes of the park and cause a significant adverse impact on adjoining properties. Limiting the mitigation to revegetation with grasses in lieu of the tree roots and thick shrubs there now would likely not be sufficient to prevent such adverse effects. More expensive and extensive mitigation may be required, such as retaining walls and other structures, unless the proposed level of tree elimination is substantially reduced.

The DEIR claims that increased run-off and erosion will be prevented by revegetating areas in which non-native plants and trees are eradicated. **This claim is based on these erroneous assumptions:**

> **That native plants will quickly occupy the bare ground on which they are planted**.

In the 15 years in which the NAP has been engaged in its enterprise, it has not successfully vegetated the bare ground created by eradicating non-native plants and trees. Denuded areas are quickly occupied by annual grasses that die back to leave bare ground during the dry season.

> **That grassland and dune scrub and non-native trees are equally capable of absorbing run-off and stabilizing soil.**

This assumption is contradicted by the following scientific studies:

- "Results indicate that **smoothing of precipitation intensities may translate into overall greater stability of hill slopes under forest canopies.** In general, peak intensities of through-fall were damped in intensity and lagged in time relative to peak intensities of rainfall. Damping and lagging of rainfall intensity at both study sites generally increased modeled slope stability relative to openings (areas with no canopy)." (Keim & Skaugset 2003)
- "The **reinforcement of the main body of a dike by a grove of trees is much higher** and effective in comparison to the reinforcement of the top soil layer by a grass

sward. The increase in stability against landslides was found to be least ten times higher." (Lammeranner & Meixner 2009)

Leaving tree stumps in the ground will not prevent erosion.

The DEIR claims that the removal of trees will not result in erosion because: "…tree removal would be selective, would be implemented gradually over several years, would involve limb-by-limb removals, and would leave tree stumps and root balls intact." (DEIR, page 364) These claims are inconsistent with SNRAMP, incredible, and/or contradicted by scientific studies:

> As we have already discussed, trees have been selected for removal by SNRAMP in large groups wherever they shade native plants. Some of these groups are as large as 1,000 trees on 3.5 acres of Mt. Davidson. Such removals cannot be accurately described as "selective."

> It is simply not believable that 18,500 large trees will be removed "limb-by-limb." What public entity would ever be in a position to pay for such a laborious removal? Nor is it believable that 18,500 trees will be taken down piecemeal over a long period of time. This would be both physically difficult and prohibitively expensive.

> **Leaving "tree stumps and root balls intact" does not prevent erosion. There is considerable scientific evidence that erosion results when the roots die:**

  - "The immediate effect of deforestation is, therefore, favorable, but adverse effects become evident when root systems decay and when a drop in evapo-transpiration causes a rise in the ground water table." (Brown & Sheu, 1975)
  - "Measurement of the decline in tensile strength of small roots in coastal British Columbia after death of the parent tree indicates that over half the strength is lost within 3 to 5 years after cutting." (O'Loughlin, 1974)
  - "Soil strength increased linearly as root biomass increased. Forests clear-felled 3 years earlier contained about one-third of the root biomass of old growth forests." (Zeimer, 1981)
  - "Decay of tree roots subsequent to logging was found to cause a reduction in the shear strength of the soil-root system." (Wu, McKinnell & Swanston, 1979)

The DEIR's assumption that increased run-off and erosion will not result from the implementation of SNRAMP does not take into account that **the potential for both run-off and erosion are significantly increased by the steepness of slope.** Some of the planned tree removals will occur in very steep terrain:

Tree Removal As Related to MA Area and Terrain

Natural Area	*MA*	*Tree Removals*	*% Trees Removed*	*% Slope**
Interior Greenbelt	MA-2a	100	28%	67%
Mt. Davidson	MA-1c	1,000	82%	40% - 67.5%
	MA-2c	200	31%	33% - 90%
	MA-2e	400	23%	20% - 70%
Bayview Hill	MA-2a	70	32%	55.6%
* Determined by using topographical maps in SNRAMP for each natural area				

These are only examples of the steepness of slopes in many of the natural areas. The EIR should be morally and legally obligated to evaluate the steepness of all of the natural areas in the context of the potential for increased run-off and erosion resulting from the removal of non-native trees.

The potential for increased run-off and erosion is greatly increased by steep slopes. The DEIR has not considered that many of the planned tree removals will occur in very steep locations. Some of these locations are directly uphill from densely populated residential neighborhoods, which would be in the direct path of both run-off and landslides caused by erosion. Yet, the risks to these residential neighborhoods have not been considered by the DEIR. The residential neighborhoods surrounding Mt. Davidson are particularly vulnerable to increased run-off, erosion and landslides.

On 5/23/2012, the State of California sued the US Army Corps of Engineers to challenge a national policy "requiring the removal of virtually all trees and shrubs on federal levees." (http://cdfgnews.wordpress.com/2012/05/23/dfg-sues-army-corps-to-protect-fish-and-wildlife-around-levees) Donald H. Gray, Professor of Civil and Environmental Engineering at the University of Michigan, provides the following explanation for why California is fighting this federal requirement:

> "In the long run, cutting of trees on slopes leads to a gradual decrease in mass stability as a result of the decay of roots which previously acted as tensile reinforcements on the slope. Root decay can also lead to the formation of pipes in slopes, which promote internal or seepage erosion. The removal of tree canopy results in the loss of interception and evapo-transpiration, which tends to promote wetter and less secure slopes. Canopy removal also results in less attenuation in the delivery rate of rainfall to the ground surface."
> (ftp://136.200.241.91/outgoing/FMO/Veg_on_Levees/Literature%20Reviews/Effects%20of%20Tree%20Removal.pdf)

The City and County of San Francisco should consider the implications of this suit. If the State of California is willing to sue to keep trees on its levees in order to prevent erosion and flooding, what are the prospects that the City and County of San Francisco can successfully defend itself against a legal challenge to its plans to remove 18,500 mature trees from the parks managed by the City of San Francisco?

The final EIR must evaluate the risk of increased run-off, erosion and landslides. It must substantiate, using scientific studies, the DEIR's baseless claims that the removal of thousands of trees will not increase this risk. If the final EIR cannot provide scientific evidence that these tree removals will not increase these risks, it must mitigate these risks by decreasing plans for tree removal in natural areas where these risks are great because of steepness and/or the proximity of residential properties potentially endangered by the tree removals. [MPIC-2-16]

- **5. Tree removals will increase run-off, resulting in erosion and landslides**

The DEIR concludes that the implementation of SNRAMP will not cause increased sedimentation, reduced water quality, erosion, or increased run-off, for example:

> "The potential for erosion would be less than significant through implementation of the GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion}, erosion control measures and the erosion and sediment control BMPs described in M-HY-1." (DEIR, page 374)

We will examine each of these assumptions in the light of scientific studies and our actual experience with the Natural Areas Program.

Revegetating steep slopes will not prevent erosion and increased run-off

The DEIR claims that increased run-off and erosion will be prevented by revegetating areas in which non-native plants and trees are eradicated. **This claim is based on these erroneous assumptions:**

> That native plants will quickly occupy the bare ground on which they are planted.

- In the 15 years in which the Natural Areas Program has been engaged in its enterprise, it has not successfully vegetated the bare ground created by eradicating non-native plants and trees. Denuded areas are quickly occupied by annual grasses that die back to leave bare ground during the dry season.

> That grassland and dune scrub and non-native trees are equally capable of absorbing run-off and stabilizing soil.

- **This assumption is contradicted by the following scientific studies:**

> "Results indicate that **smoothing of precipitation intensities may translate into overall greater stability of hillslopes under forest canopies.** In general, peak intensities of through-fall were damped in intensity and lagged in time relative to peak intensities of rainfall. Damping and lagging of rainfall intensity at both study sites generally increased modeled slope stability relative to openings (areas with no canopy)." (Keirn & Skaugset 2003)

> "The **reinforcement of the main body of a dike by a grove of trees is much higher** and effective in comparison to the reinforcement of the top soil layer by a grass sward. The increase in stability against landslides was found to be at least ten times higher." (Lammeranner & Meixner 2009)

Leaving tree stumps in the ground will not prevent erosion.

The DEIR also claims that the removal of trees will not result in erosion because: "… tree removal would be selective, would be implemented gradually over several years, would involve limb-by-limb removals, and would leave tree stumps and root balls intact." (DEIR, page 364) These claims are inconsistent with SNRAMP, incredible, and/or contradicted by scientific studies:

> As we have already discussed, trees have been selected for removal by SNRAMP in large groups wherever they shade native plants. Some of these groups are as large as 1,000 trees on 3.5 acres (Mt. Davidson). Such removals cannot be accurately described as "selective."

> It is simply not believable that 18,500 large trees will be removed "limb-by-limb." What public entity would ever be in a position to pay for such a laborious removal? How is it even physically possible to remove 15,000 trees in Sharp Park "limb-by-limb?"

> Nor is it believable that 18,500 trees will be taken down piecemeal over a long period of time. This would be both physically difficult and prohibitively expensive.

> **Leaving "tree stumps and root balls intact" does not prevent erosion. There is considerable scientific evidence that erosion results when the roots die:**

- "The immediate effect of deforestation is, therefore, favorable, but **adverse effects become evident when root systems decay** and when a drop in evapo-transpiration causes a rise in the ground water table." (Brown & Sheu 1975)
- "Measurement of the decline in tensile strength of small roots in coastal British Columbia after death of the parent tree indicates that **over half the strength is lost within 3 to 5 years after cutting."** (O'Loughlin 1974)
- **"Soil strength increased linearly as root biomass increased. Forests clear-felled 3 years earlier contained about one-third of the root biomass of old growth forests."** (Ziemer 1981)
- **"Decay of tree roots subsequent to logging was found to cause a reduction in the shear strength of the soil-root system."** (Wu, McKinnell & Swanston 1979)

The DEIR's assumption that increased run-off and erosion will not result from the implementation of SNRAMP does not take into account that **the potential for both run-off and erosion are significantly increased by the steepness of slope.** Some of the planned tree removals will occur in very steep terrain:

Natural Area	*MA*	*Tree Removals*	*% Trees Removed*	*%Slope**
Interior Greenbelt	MA-2a	100	28%	67%
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	MA-2e	400	23%	20%-70%
Bayview Hill	MA-2a	70	32%	55.6%
* Determined by using topographical maps in SNRAMP for each natural area				

These are only examples of the steepness of slopes in many of the natural areas. The DEIR should be morally and legally obligated to evaluate the steepness of all of the natural areas in the context of the potential for increased run-off and erosion resulting from the removal of non-native trees.

The potential for increased run-off and erosion is greatly increased by steep slopes. The DEIR has not considered that many of the planned tree removals will occur in very steep locations. Some of these locations are directly uphill of densely populated residential neighborhoods which are in the direct path of both run-off and landslides caused by erosion. Yet, the risks to these residential neighborhoods have not been considered by the DEIR. The residential neighborhoods surrounding Mt. Davidson are particularly vulnerable to increased run-off, erosion and landslides.

On May 23, 2012, the State of California sued the US Army Corp of Engineers to challenge a national policy "requiring the removal of virtually all trees and shrubs on federal levees."[4] Donald H. Gray, Professor of Civil and Environmental Engineering at the University of Michigan, explains why California is fighting this federal requirement in this summary of his literature search about the role trees play in stabilizing soil:

> "In the long run, cutting of trees on slopes leads to a gradual decrease in mass stability as a result of the decay of roots which previously acted as tensile reinforcements on the slope. Root decay can also lead to the formation of pipes in slopes which promote internal or seepage erosion. The removal of tree canopy results in the loss of interception and evapo-transpiration which tends to promote wetter and less secure slopes. Canopy removal also results in less attenuation in the delivery rate of rainfall to the ground surface."[5]

The City and County of San Francisco should consider the implications of this suit. If the State of California is willing to sue to keep trees on its levees in order to prevent erosion and flooding, what are the prospects that the City and County of San Francisco can successfully defend itself against a legal challenge to its plans to remove 18,500 mature trees from the parks managed by the City of San Francisco?

The City and County of San Francisco is particularly vulnerable to legal challenges from the City of Pacifica regarding its plans for Sharp Park. SNRAMP plans the removal of over 15,000 trees over 15 feet tall in Sharp Park. In many management areas 75% of the trees will be removed. These trees will be replaced by dune scrub. The majority of these trees will be removed from the steep watershed at the eastern end of the park. The park slopes from 750 feet above sea level at its eastern end to sea level at its western end. The golf course, archery course, Laguna Salada, and horse pond are downstream from this steep watershed.

> Tree removals will violate Pacifica's logging ordinance. The DEIR claims that the City of San Francisco is exempt from this law, but provides no explanation for or evidence to support this claim. The final EIR must explain why San Francisco is not subject to Pacifica's laws.

> The final EIR must provide evidence that it is physically possible to remove tens of thousands of trees from a steep watershed without causing sedimentation, erosion, and landslides.

> The final EIR must provide evidence that the endangered species that exist in Sharp Park will not be harmed by increased sedimentation, erosion, and landslides resulting from the removal of 75% of the trees in the watershed.

The final EIR must evaluate the risk of increased run-off, erosion and landslides. It must substantiate its baseless claims that the removal of thousands of trees will not increase this risk, using scientific studies. If the final EIR cannot provide scientific evidence that these tree removals will not increase these risks, it must mitigate these risks by decreasing plans for removal in natural areas where the risks are great because of steepness and/or the proximity of residential properties endangered by the tree removals.

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

> The final EIR must evaluate the risk of increased run-off, erosion and landslides [SFFA-3-04]

■ **1. Potential for erosion/ flooding**

During winter months, it is common for water to flow like small creeks down the mountain. Everyone we've talked to on our side of the street has had problems with water coming into homes or garages. We are very concerned about the potential for damage to our homes from erosion caused by the proposed removal of so many trees near our property. Who will be responsible for this damage?

Page 459 of the DEIR notes comments to the report regarding "Geology and Soils". Erosion effects are mentioned several times - and for good reason. Some smart person suggests "The need for a forester to evaluate the erosion impacts from cutting trees down." But the thoughtful comments are deemed "to have either no impact or less than a significant impact". Perhaps less than significant to the report writer, but in fact quite significant to residents like us in close proximity to Mt. Davidson.

Page 465 of the DEIR offers "a summary of the 1995 management plan's general policies and management actions (SFRPD 1995)." Below header "Geotechnical/Soils" on page 466 is this bullet point:

> "Cooperate with adjacent property owners to minimize erosion and runoff issues." This leads to our second issue. [Gomez-1-02]

- 3. And what about the risk of land/mud/rockslide after the trees are removed? [Johns-1-05]
- Although there is Franciscan formation bedrock on Mt. Davidson, it is overlaid with many feet of topsoil which is held by eucalyptus tree root systems. Removing wide swaths of these trees could destroy that stability and cause landslides, imperiling houses downhill. [Thomas-1-02]
- The NAP proposal acknowledges that erosion in the park properties endangers the public safety. Yet repeatedly, the NAP plans to remove non-native plants and trees that are proven superior to resist erosion and replace them with native plants. Native plants are inferior in resisting erosion. NAP planners are not deterred. Even worse, in Sharp Park, SFRPD intends to create a "Natural Area" in over 200 of the 400 acres there. Despite acknowledgement that there is a serious erosion problem within this park, the NAP states specifically it does not intend to address the erosion unless "capital funds are made available". SFRPD intends to utilize capital funds to remove over 200 acres of healthy, non-native plants, remove 15,000 trees in Sharp Park and plant native plants throughout those 200 plus acres. However, SFRPD has no capital funds allocated to resolve a serious erosion problem which poses a significant public safety risk! [Valente-1-05]

Response GE-3

These comments indicate that run-off and erosion will not be prevented by revegetating areas with native species. These comments state leaving tree stumps in the ground will not prevent erosion; native plants will not revegetate quickly; and tree removals will increase runoff, particularly when they occur on steep slopes, and could result in erosion and landslides.

As stated on Draft EIR p. 459, Geology and Soils, existing conditions and impacts of the project were evaluated in the Initial Study, and the project was found to have either no impact or less than a significant impact for all of the significance criteria; this includes the criteria related to landslides. Further, the secondary impacts of erosion on water quality were evaluated in the Draft EIR in Impact HY-1 (on Draft pp. 364 and 365), and impacts were determined to be less-than-significant with implementation of Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366.

Erosion impacts are generally related to the removal of invasive species and the replacement with native species, are evaluated throughout Draft EIR in Section V.H, Hydrology and Water Quality. Erosion impacts are generally evaluated in Impacts HY-1, HY-2, HY-3, and HY-4 on Draft EIR pp. 366 to 373, and specifically evaluated on a programmatic and project basis in Impacts HY-7, HY-8, and HY-9. These sections conclude that impacts would be less than significant, largely because the

scope of the proposed activities is relatively small in scale and would be implemented over a 20-year timeframe. The SNRAMP identifies erosion control measures as part of the management actions within the Plan itself. Therefore, erosion control measures both are part of the Plan and are identified as a mitigation measure in the EIR.

Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, which includes a series of erosion and sediment controls and other best management practices, mitigates potential water quality impacts that were identified in Impacts HY-7 and HY-9, which relate to restoration activities GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion). Therefore, the DEIR concludes that large-scale programmatic tree removals could result in significant impacts to water quality and includes M-HY-1 to reduce these impacts to less than significant with mitigation.

BMPs identified in the SNRAMP include standard and proven methods taken from published BMP manuals such as the Caltrans Guidance for Temporary Soil Stabilization, the California Stormwater Quality Association Stormwater Best Management Practice Handbook, Construction, and the California Department of Fish and Wildlife Salmonid Stream Restoration Manual. The SNRAMP includes examples of relevant BMPs from these sources such as application of straw mulch, rolled erosion control products, wood mulch, silt fences, and fiber rolls. The capital expenditure to gradually increase and restore native vegetation in Sharp Park would include the cost of implementing erosion control measures. As discussed under Impact HY-15 on Draft EIR p. 379, restoration of Sharp Park would be undertaken in accordance with Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, which requires extensive erosion and sediment control BMPs. In addition, Laguna Salada Restoration project would be undertaken in compliance with required permits from San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), the CCC, and the USACE, which would include requirements to protect water quality, special-status species and sensitive habitats from impacts due to erosion and sedimentation; however, any forestry work (such as the removal of trees) may not be subject to the same permitting requirements. Also, the commenter cites the steepness of slopes as a factor in erosion, which is an existing condition and not something proposed as part of the project. The SNRAMP does not propose any grading activities. However, the BMPs employed for any given project undertaken pursuant to the SNRAMP would differ based on characteristics of the site, such as the steepness of the slopes, which may require implementation of numerous BMPs, whereas flatter areas may not require as many BMPs. As stated on Draft EIR p. 364, the specific erosion control measures to be implemented for each programmatic project would be in accordance with General Recommendations GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion).

Refer to Response PD-25, RTC p. 4-201, for a discussion of the monitoring program designed to ensure the success of future restoration projects, which includes an adaptive management approach, as well as Response PD-31, RTC p. 4-206, and Response BI-33, RTC p. 4-457, for a discussion of the

success of past restoration projects. Lastly, refer to Response LU-1, RTC p. 4-213, for a discussion of the applicability of the Pacific Logging Ordinance and the San Mateo County Tree Ordinance with respect to the Sharp Park portion of the SNRAMP project.

4.D.12 Hydrology and Water Quality [HY]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.H, Hydrology and Water Quality.

Comment HY-1 Drainage issues and downstream flooding from tree removal activities

The response to Comment HY-1 addresses all or part of the following individual comments:

SFPGA-3-01 Thomas-1-03

- Potential significant effect on the Sharp Park Golf Course of logging of approximately 15,000 eucalyptus trees at Sharp Park in the canyons to the east of the Coast Highway. We are concerned with potential significant adverse effects on drainage and downstream flooding, specifically flooding at the Sharp Park Golf Course and its surrounding residential neighborhoods - the Fairway Park and West Sharp Park neighborhoods of Pacifica -- arising out of the removal of significant numbers of mature eucalyptus trees (we understand that the SNRAMP goal is removal of 15,000 trees), and their replacement by native vegetation. The trees are on slopes within the Sanchez Creek watershed, which drains through the Sharp Park Golf Course. The golf course and its ponds and surrounding neighborhoods are already subject to winter flooding. Storm-relief pumping, to move excess storm water from Laguna Salada and Horse Stable Pond and their wetlands, is already constrained by concern for the effects of pumping on winter seasonal egg-laying by the California red-legged frog (CRLF). Therefore, there should be no logging if there is a possibility that erosion or any other effects of logging would result in any additional runoff to the golf course beyond current levels from the areas of Sharp Park to the east of the Coast Highway.

  At page 376, the Draft EIR states – unconvincingly – that flooding will be "less than significant":

  > "In Sharp Park removing eucalyptus trees in the upland area would increase incident rainfall that reaches the ground and could increase the rate of runoff into Sanchez Creek, the main drainage for this watershed. However, the increase is not expected to be substantial in comparison to the size of the drainage area and considering the normal range of runoff volume; additionally, the area would be revegetated following tree removal. Over time, the proposed project would reduce surface runoff by dispersing water more widely over the ground surface and slowing runoff velocities, thereby increasing infiltration. Therefore, the flooding impacts of the programmatic [tree removal] projects would be less than significant." (Emphasis added)

  But this is a non-answer. And it is not comforting. The assertion that "the increase [in rate of runoff into Sanchez Creek] is not expected to be substantial" is not supported by any

analysis. What does "over time" mean? When will the revegetation take place? And what will be the relative water absorption/transpiration ability of the replacement vegetation, as compared to the existing eucalyptus (which are known to have high water absorption capacity)? These questions are not answered. Since it takes only one heavy rainfall year--or week, for that matter--for the seriously damaging effects of flooding to occur, it is inappropriate to call the flooding effects "insubstantial," when the duration and the extent of the acknowledged increased runoff vulnerability is unknown and unanalyzed by the DEIR.

In addition, the logging project will likely result in a substantial increase in erosion of surface soils, which will then be transported by Sanchez Creek downstream where they will settle in Laguna Salada, Horse Stable Pond, and the channel which connects the two. The ecological values and water capacity of these features is already seriously compromised due to siltation, which in fact is a principal reason for the ecological restoration proposed within the golf course. Without a detailed analysis of the erosion and siltation effects of the logging project, and detailed mitigation measures to prevent additional erosion and siltation, the logging project will both compromise the proposed ecological restoration project centered around Laguna Salada, and will increase flooding risk to the golf course and adjacent residential neighborhoods.

Therefore, rather than "insubstantial," it would be more accurate to characterize the erosion, siltation and flooding risks as "substantial," and then to analyze measures that might mitigate or eliminate these risks, such as: (1) helicopter logging to reduce the risk of erosion; (2) erosion-prevention measures; (3) timing of the logging and the native plant replanting so as to minimize the amount of time in which the ground is unprotected; and (4) interim measures to absorb water from the logging site, pending grow-in of the replacement native plants. Without these and other analyses, it is better to leave the existing eucalyptus groves in place than it would be to log the land and risk uncertain flooding risk to the historic golf course and its surrounding neighborhoods. [SFPGA-3-01]

- Existing underground springs could also be disrupted or re-routed. [Thomas-1-03]

Response HY-1

These comments express disagreement with the conclusions reached in the Draft EIR with respect to the potential for increased flooding to occur from large-scale programmatic tree removal projects at Sharp Park. These comments also suggest that the Draft EIR include mitigation measures to address the potential for downstream erosion and sedimentation of Sanchez Creek and suggest that underground springs or creeks could be disrupted by programmatic tree removal activities.

With respect to comments stating that the Draft EIR should include erosion control and sedimentation measures to protect Sanchez Creek, commenters are directed to Impact HY-1 (beginning on Draft EIR p. 364). As stated there, ground-disturbing activities could result in an increase in erosion and sediment to receiving waterbodies, which could have a significant impact on water quality. Based on this potentially significant impact, the Draft EIR includes Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, to protect

water quality, which requires the SFRPD to implement applicable pollution avoidance measures, erosion and sediment controls, hazardous waste management, and post-construction BMPs, among other protection measures. For programmatic projects on one or more acres, the SFRPD would be required to obtain a NPDES General Permit for Stormwater Discharges Associated with Construction Activity from the SFBRWQCB. Under the General Permit, the SFRPD would be required to develop and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP) that includes BMPs to prevent discharges of nonpoint source pollutants in construction-related stormwater runoff to storm drains and waterbodies. For projects less than one acre, Draft EIR Mitigation Measure M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, identifies a list of requirements to reduce stormwater pollution. The specific requirements are detailed on Draft EIR pp. 366 to 369, and generally include measures to minimize the amount of disturbance; stabilize and revegetate all disturbed soils; install erosion and sediment control BMPs; perform basic housekeeping activities; implement waste management and hazardous materials pollutant controls; conduct routine inspections maintain or repair BMPs; and perform post-construction BMPs. While the proposed project does include erosion control BMPs, as detailed on Draft EIR pp. 93 to 94, the project would also be subject to Mitigation Measure M-HY-1, described above.

With implementation of Mitigation Measure M-HY-1, impacts to water quality were determined to be less than significant. In fact, many of the commenters suggested mitigation measures to reduce erosion and sedimentation described in Comment HY-1 have already been incorporated into the proposed project for large-scale tree removal activities, with the exception of using helicopters to remove trees. As described in the Draft EIR, and further below, SFRPD would employ limb-by-limb tree removal techniques. In areas where access impedes removal of tree trunks and branches by a flat-bed truck, trunks and branches would be left in place. Use of helicopters would not be a feasible mitigation measure due to the expense of such an operation and the additional environmental impacts that such a method could entail. Further, feasible mitigation has already been identified that would reduce the impact to a less-than-significant level.

Regarding the analysis of flooding impacts on Sanchez Creek from tree removal proposed at Sharp Park, large-scale tree removal activities are described on Draft EIR pp. 92 to 93 and 96. Large-scale tree removal activities are defined as exceeding one-half acre or more on average, or including removal of 20 or more trees at a time. Such removal activities would be conducted in accordance with the practices identified in SNRAMP Appendix F, Urban Forestry Statements. Accordingly, tree removal would either be done in groups or by selective thinning of specific trees. Group selection would remove a number of trees within a relatively small area ranging from 0.25 to 0.5 acre in size. Thinning could be conducted over a much larger area (several acres) and would include removal of smaller trees and saplings with some overstory. Group selection is intended to open up the overstory, while thinning would tend to keep most of the overstory intact, opening up the forest understory. As stated on Draft EIR p. 92, trees would be removed limb-by-limb, rather than by

felling whole trees (unless tree removal presents a safety concern which would require felling of the tree). Further, SFRPD would cut the trunk into individual sections, leaving the tree stump and rootball intact to hold the soil and minimize subsurface disturbance. SFRPD would spread tree removal across targeted portions of the Natural Areas and would not concentrate tree removal in any one particular location. The SNRAMP is a 20-year management plan for San Francisco's Natural Areas and, as such, the proposed activities would not occur all at once, but over time and in response to priorities identified by the SFRPD. Refer also to Response PD-20, RTC p. 4-192, for a discussion of future SFRPD activities pursued in furtherance of the SNRAMP.

As indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 376 (the Impact HY-10 discussion) has been changed for clarification regarding trees removal and flooding within Sharp Park, as follows:

> There are no activities included in the project that would significantly alter the drainage pattern of the sites or that would substantially increase runoff such that flooding would occur, with the possible exception of ~~modifying the wetland complex in~~ the proposed restoration activities at Sharp Park, as discussed below.
>
> Approximately 15,000 of the 54,000 existing eucalyptus trees in the Sharp Park MA-1 and MA-2 areas would be removed from select areas over time, during the 20-year lifetime of the SNRAMP, to restore native scrub habitats. The proposed tree removals are located on the east side of Highway 101 and are not located near, or part of, the Sharp Park Wetland Complex. Approximately 39,000 invasive trees, including scattered large individual trees, would remain in order to minimize large-scale disturbance and to promote a gradual conversion to native scrub habitat. No trees would be removed from the MA-3 areas at Sharp Park. Large-scale tree removal activities are described on EIR pages 92 to 93 and 96. As described, large-scale tree removal activities are defined as exceeding 0.5 acre or more on average, or including removal of 20 or more trees at a time. Such removal activities would be conducted in accordance with the practices identified in SNRAMP Appendix F, Urban Forestry Statements. Accordingly, tree removal would either be done in groups or by selective thinning of specific trees. Group selection would remove a number of trees within a relatively small area ranging from 0.25 to 0.5 acre in size. Thinning could be conducted over a much larger area (several acres) and would include removal of smaller trees and saplings with some overstory. Group selection is intended to open up the overstory, while thinning would tend to keep most of the overstory intact, opening up the forest understory. As stated on EIR page 92, trees would be removed limb-by-limb, rather than by felling whole trees (unless tree removal presents a safety concern, which would require felling of the tree). Further, SFRPD would cut the trunk into individual sections, leaving the tree stump and rootball intact to hold the soil and minimize subsurface disturbance. SFRPD would spread tree removal across targeted portions of the Natural Areas and would not concentrate it in any one particular location. The SNRAMP is a 20-year management plan for San Francisco's Natural Areas and, as such, the proposed activities would not occur all at once, but rather over time through the SNRAMP's 20-year management framework.
>
> In addition, as described on EIR page 93, the SNRAMP proposes to use erosion control best management practices (BMPs), which would include use of the following techniques: straw mulch, rolled erosion control products, wood mulch, silt fences, fiber rolls, and straw bales. These erosion control measures would be employed until native vegetation was sufficiently established.

In Sharp Park, removing eucalyptus trees in the upland area would increase incidental rainfall that reaches the ground and could increase the rate of runoff into Sanchez Creek, the main drainage for this watershed. However, the increase is not expected to be substantial in comparison to the size of the drainage area and considering the normal range of runoff volume; additionally, SFRPD would employ low-impact tree removal techniques, remove trees gradually over the 20-year lifetime of the SNRAMP, employ erosion control BMPs and ~~the area would be revegetated~~ revegetate the area following tree removal. Over time, the proposed project would reduce surface runoff by dispersing water more widely over the ground surface and slowing runoff velocities, thereby increasing infiltration.

The rate of runoff from the watershed into Sanchez Creek involves several variables, including the capacity of soils to retain moisture, which is in turn a function of antecedent conditions, the permeability and thickness of the soils, the capacity of the bedrock aquifer to retain water, the slope of the area, the duration and intensity of the storm, the location of the rainfall within the watershed, and other geologic factors. The longer that the rainfall is retained in the upper portions of the watershed, and the more slowly it reaches the creek, the longer the creek can remain at a lower level without flooding. Vegetation cover can slow the rate of runoff, by capturing and retaining some of the rainfall on leaves and in the canopy, and by obstructing overland flow. Vegetation also helps to reduce erosion and retain soils, which in turn retain moisture. Slowing the rate of overland flow allows more time for infiltration of the rainfall into the soil and underlying aquifer. Groundwater flow is many times slower than overland flow.

In a large or intense storm event, however, the ability of water to percolate through soils and fractures in the underlying bedrock is quickly overcome and overland flow becomes the dominant mode of transport of the incident precipitation. The frequency of flooding events can be reduced through improved management of vegetation cover, but in a small, steep watershed such as that of Sanchez Creek, there is limited capacity for retention and large storm events will inevitably lead to downstream flooding despite improvements in vegetation management upstream. The proposed vegetation replacement and management program would be implemented gradually and is designed to retain ground cover with minimal impact on soil erosion, as described above. Unlike a commercial logging operation, which is designed to remove trees quickly at minimum cost, the vegetation replacement program would establish new vegetation cover to minimize the impact of tree removal.

Much of the flooding that occurs at the Sharp Park Golf Course is not the result of overland flow directly from upland areas, but is caused by waters rising in Laguna Salada because of limits on the pumping rate from Horse Stable Pond. Only larger, longer duration storms cause flooding in Laguna Salada, and because the watershed that drains into Sanchez Creek is much larger than the area affected by the project, the project is not expected to have any significant effect, either beneficial or adverse, on the frequency of flooding in Laguna Salada.

It should be noted that one of the functions of a stream is to transport sediment, and the gradient of a stream adjusts naturally to perform this function. Coastal streams in San Mateo County drain watersheds underlain by weathered and relatively soft and erodible deposits. The coastal hills are steep, and geologically recent, and normal erosion rates are high. The sediments that are carried from these watersheds supply a percentage of the sand that forms the many beaches that are found along the San Mateo County coast. This sediment transport is a natural process that has been impeded by the seawall at Sanchez Creek. Sediment that enters Horse Stable Pond has an opportunity to precipitate rather than be carried out to the ocean by the force of the stream. If an excessive amount of sediment were to be carried into Horse Stable Pond, it would reduce the capacity of the pond, but would not greatly impact the capacity of Laguna Salada.

In addition, to further address the potential reduction of capacity of the pond, the sediment basins would be regularly maintained, which would involve the periodic removal of accumulated sediment. Surveys would be coordinated with the USFWS and CDFG to ensure compliance with endangered species laws and regulations, and wetland functionality would be assessed using ecologically based criteria to determine success of the project objectives.

The SNRAMP includes erosion and sediment control BMPs to be implemented as part of the proposed tree removal and vegetation management activities, and the Sharp Park Restoration Project would be undertaken in compliance with required permits from SFBRWQCB, the CCC, and USACE, which would include additional requirements to protect water quality, special-status species and sensitive habitats from impacts due to erosion and sedimentation. As part of the Sharp Park restoration plan, SFRPD would remove accumulated sediment from Laguna Salada. SFRPD would also construct sediment basins to reduce sediment transport into Laguna Salada and Horse Stable Pond. Therefore, the flooding impacts of the programmatic projects would be ***less than significant***. Accordingly, in compliance with CEQA Guidelines Section 15126.4, no mitigation measures are required to address flooding.

One of the commenters expressed concern that existing underground springs could be disrupted or re-routed. The proposed restoration activities would primarily include near-surface ground disturbance, with ground disturbance for trail maintenance and routine maintenance (e.g., weeding) six inches or less. While other activities could result in greater ground disturbance, such as planting, the disturbance of soils down to the groundwater is not anticipated. However, in some areas, ground disturbance to this level is intended. For example, at McLaren Park, Draft EIR p. 138 identifies Management Action MP-4a specifically intends to "Install spring boxes or small artificial pool habitats associated with springs and seeps to enhance amphibian habitat." These activities, which could result in greater ground disturbance, have been analyzed in the Draft EIR, and impacts were found to be less than significant.

Comment HY-2 Sea level rise at Laguna Salada

The response to Comment HY-2 addresses all or part of the following individual comments:

Sierra Club-1-13 Baye-1-08 Baye-1-09
Blum-1-04

- **7. Climate Change and Sea-Level Rise need to be taken into consideration.**

  Especially as the project is proposing major alternations to the hydrology of Laguna Salada, we believe more analysis is required to take into account the cumulative effects of global warming and sea-level rise. The proposed project seems to presume indefinite perpetuation of existing and past conditions. More precisely, the project seeks to maintain, through stabilization of the pumping regime, an artificial and below sea-level elevation of the Laguna Salada, corresponding approximately to what was the sea-level at the time of the original golf course construction in 1932. Further analysis of such an approach is needed in light of recent data on climate change and projected sea-level rise. At the very least, the Report should study the probable effects of overtopping in 10, 20, and 50 year storm events. Our main concern, in light of the reality of climate change, is that the current restoration plan will

lack any resiliency in the face of increased climate stress and inevitable sea-level rise. As indicated in the ESA report, a restoration plan which would allow the Laguna Salada wetland complex a buffer zone to retreat upland in the face of sea level rise has a better chance of succeeding in the long term than the current proposal, which will render the site extremely vulnerable to salt-water intrusion and overtopping, with potentially catastrophic consequences for the species. [Sierra Club-1-13]

- **1. Artificial pumping of Laguna Salada to achieve low water levels is highly likely to cause salinity intrusion and adverse wetland habitat conversion under a regime of accelerated sea level rise in the foreseeable future. Long-term enhancements options proposed by the report would likely fail in the long term because they ignore foreseeable long-term shifts in hydrologic baseline conditions.**

  The report fails to identify the significant long-term constraints of "enhancing" non-tidal seepage lagoon wetlands that are artificially pumped to low water levels relative to sea level behind a permeable sand barrier. The inevitable physical consequences of pumping the lagoon levels near or below sea level are ignored in the report, despite the, clear, explicit, and professionally responsible warnings in its own hydrology report that salinity intrusion due to pumping may be occurring in summer even now, and may increase as sea level rises (Appendix A, pp. 22-23). The report's discussion of salinity intrusion (p. 23) does not represent the full scope of the hydrology report's findings, and is misleading.

  The fundamental long-term problem of lagoon pumping reversing groundwater gradients behind the sand barrier, inducing seawater intrusion (Appendix A, p. 23), cannot be overestimated. The alternative report, however, essentially disregards it. None of the intended "enhancement" benefits to wildlife species are physically possible if the long-term effects of pumping, sea level rise, and evaporative concentration of lagoon water interact to convert the wetlands from fresh-brackish to brackish-saline or even hypersaline marsh. Following this first, fundamental misstep, the report's other long-tenn conclusions and recommendations about wetland enhancement are utterly unrealistic. The target species for "habitat enhancement" proposed are intolerant of persistendy high salinity wetland conditions that would inevitably result from continued pumping of the lagoon to low levels as sea level rises.

  The lagoon's long-term dynamic stability will require that freshwater lagoon levels rise and equilibrate with rising sea level, to maintain positive, seaward groundwater seepage gradients that maintain freshwater marsh. This fundamental physical constraint is nowhere considered in the main text of the conceptual enhancement plan.

  It is distressing that the lead authors of the report either ignored or failed to comprehend fundamental wetland hydrology in "conceptual" habitat enhancement alternatives. [Baye-1-08]

- **2. Reliance on maintenance and upgrading the "sea wall" is incompatible with long-term wetland management.**

  All habitat enhancement alternatives assume perpetual maintenance and upgrading of the "sea wall" (rip-rap armored earthen berm capping the sand barrier beach), yet exclude highly significant environmental and economic impacts of this assumption. The report fails to address the inherently unstable long-term condition of the beach and "seawall", and the extreme coastal erosion hazard identified for Sharp Park by the U.S. Geological Survey (http://walrus.wr.usgs.gov/elnino/SMCO-coast-erosion/04mori_e.html) and described with emphasis by Prof. Gary Griggs of U.C. Santa Cruz in his book, Living with the Changing California Coast (2003). The report fails to assess the long-term significance of the 1983 storm damage to the golf course and lagoon impacts as a constraint on long-term wetland management.

  Again, basic coastal processes controlling lagoon wetland ecology are ignored in the conceptual alternatives report, which treats Laguna Salada as though it were a golf course pond at an inland location. As sea level rises, the beach shoreline necessarily retreats landward. If the beach is armored with boulders, shoreline retreat will steepen the shore profile and cause passive beach erosion, and eventual failure of the beach and collapse of the seawall, causing catastrophic flooding and sedimentation of the wetlands. Beach stabilization is infeasible and futile in the long term. Thus, the golf course that depends on artificial stabilization of the beach is also infeasible in the long-term. The report ignores enhancement alternatives that realign more efficient and cost-effective flood protection designs along borders of residential development, and eliminate costly and futile investment in the "emergency"-constructed (post-1983) seawall. Opportunities to utilize lagoon and riparian wetlands as beneficial flood and coastal storm buffers were ignored.

  All coastal lagoons originate and are maintained by landward migration during sea level rise. The Laguna Salada wetland complex's long-term survival depends on planning for gradual landward migration of the barrier beach and its wetlands with rising sea level, which requires geomorphic accommodation space. That space is currently displaced by the golf course, built on filled riparian wetlands of the past - the historic freshwater end of the Laguna Salada wetland complex. Rising level and a static golf course together will inevitably squeeze the existing (reduced area of) fresh-brackish wetlands out of existence, regardless of ephemeral "habitat enhancement" plan actions.

  It is not feasible to stabilize the lagoon wetlands in the reduced "footprint" of the 20th century lagoon as sea level rises over three to four feet in coming decades of the 21st century. Oceanic overwash processes during extreme storms must drive the beach and its lagoon wetland complex landward as sea level rises. Any long-term wetland management plan for a backbarrier lagoon must presume upward and landward displacement of existing lagoon wetlands over multiple decades. This lagoon accommodation space (location of historic freshwater riparian wetlands) is occupied by golf links that will be subject to adverse increases in flooding and coastal storm risks. [Baye-1-09]

- Some of the unresolved conflicts surrounding Sharp Park include failure to deal adequately with the science of climate change and sea rise, how such events will continue to further negatively affect the Sharp Park property, and what those costs will be [Blum-1-04]

Response HY-2

These comments express concern that the proposed Sharp Park Restoration Project may be affected by future sea level rise not addressed in the Draft EIR. The purpose of an EIR is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment (PRC Section 21061). CEQA defines "environment" as the "physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historical or aesthetic significance" (PRC Section 21060.5). Furthermore, "… [an] EIR shall also analyze any significant environmental effects the project might cause by bringing development and people to the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impact of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas)" (CEQA Guidelines Section 151262). The above CEQA requirements are valid only to the extent that the project exacerbates the hazardous condition (*California Building Industry Association v. BAAQMD*, Alameda Superior Court Case No. RGI0548693).

The proposed Sharp Park Restoration Project is intended to restore the marsh complex and associated uplands to protect and enhance the California red-legged frog and San Francisco garter snake habitat; the project would not bring development to the wetland complex, or otherwise attract people to the restoration site. Therefore, the proposed project would not have the potential of attracting people to any existing or future hazardous conditions related to sea level rise.

Cumulative Sea Level Rise Effects

The Draft EIR does address the potential effects of climate change, including sea level rise, on the proposed project. Because global climate change is a cumulative impact (it is the result of impacts of past, present, and reasonably foreseeable projects on the environment), the secondary impacts of global climate change, including sea level rise are addressed in the cumulative impact discussion (Impact HY-16, Draft EIR pp. 380 to 382). Figure 7, Potential Sea Level Rise near Sharp Park, Draft EIR p. 359, illustrates the potential effects of sea level rise at Sharp Park. Draft EIR pp. 381 to 382 also analyze cumulative effects due to sea level rise; as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 382 (beginning with the first full paragraph) has been changed to reflect the most current guidance relative to sea level rise analysis, as follows (the preceding paragraph, which starts on Draft EIR p. 381, is included for context):

> During the 20-year project planning period for the project, the sea level is expected to rise less than one foot. Although sea level rise may continue over time, a sea level rise at India Basin Shoreline Park of less than one foot during the project's 20-year planning period is unlikely to result in significant flooding or salt water intrusion impacts. Similarly, a small rise in sea level is not expected to impact Balboa, which lies inland of the Ocean Beach seawall. An increase in sea level may lead to a rise in regional groundwater levels in the coastal aquifer. The elevation of Lake Merced would need to rise proportionally to maintain the existing hydraulic balance and barrier to salt water intrusion into the aquifer. There is adequate freeboard above the current lake elevation of Lake Merced to accommodate the anticipated rise in sea level without inducing flooding or increasing potential for salt water intrusion. At Sharp Park, sea level rise would increase the base level elevations of Laguna Salada and Horse Stable Pond. Fresh water must continue to discharge to the ocean underground, and in order for this to happen, the elevation of the water table would rise in proportion to the rise in sea level. The freshwater/saltwater interface, which is a zone of mixing, would move inland somewhat. Salinity in Laguna Salada may increase, especially during dry periods when outflow of fresh groundwater from the watershed above Sharp Park is lowest. The magnitude of sea level rise during the project planning period would probably be too small to result in significant erosion of the sea wall, but the effects are difficult to predict. Higher sea levels will result in faster erosion of the rocky headlands and would probably change the beach profile in front of the sea wall, which in turn may lead to erosion of the foot of the seawall, especially during the winter, when wave runup is greatest and beach sand is normally depleted.
>
> Over a longer term, sea level rise is expected to continue, and could rise to levels that would cause significant impacts. The State of California Sea-Level Rise Guidance Document (most recently updated in March 2013)[143] provides the most current scientific data and guidance for agencies to consider and use during planning and decision making for projects in California. The document was prepared with the understanding that agencies will use the information in a flexible manner,

[143] Coastal and Ocean Working Group of the California Action Team with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust, State of California Sea-Level Rise Guidance Document, March 2013 Update. This document is available online at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwiN7JLh15bNAhVJ02MKHdcID_IQFggfMAA&url=http%3A%2F%2Fwww.opc.ca.gov%2Fwebmaster%2Fftp%2Fpdf%2Fdocs%2F2013_SLR_Guidance_Update_FINAL1.pdf&usg=AFQjCNEf_tyvfPAk598V6HaLMAkH0WC0MA&sig2=-MzpJagnGF89COfkEvk1xQ&bvm=bv.124088155,d.cGc, accessed on June 7, 2016.

> taking into consideration risk tolerances, timeframes, economic considerations, adaptive capacities, legal requirements, and other relevant efforts. For projects in the City and County of San Francisco, sea level rise (or future flood risk) is evaluated on a project-by-project basis considering many of the factors affirmed in the Sea-Level Rise Guidance Document, such as the location of the project, the type of project being proposed, the potential risks to life or property, and adaptive design opportunities or constraints. ~~Because these impacts would be experienced on a regional scale, the efforts to mitigate these impacts would be addressed through future projects on the regional scale.~~
>
> Among the cumulative effects on water resources of sea level rise are increased frequency of flooding of low-lying areas, increased salt water intrusion in coastal wetlands, increased coastal erosion, and increased potential for contamination of receiving waters because of inundation of areas containing hazardous substances. One approach to mitigating these and similar long-term cumulative effects is to move vulnerable development and activities out of low-lying coastal areas and to encourage coastal and shoreline uses, such as open space, that can accommodate sea level rise. In general, Natural Areas are expected to have ~~low~~ ***less-than-significant*** impacts on water resources and therefore are not expected to contribute to the cumulative impacts on water quality that may result from sea level rise, resulting in a less than cumulatively considerable (less than significant) contribution to sea level rise impacts.

The CCC released a *Sea-Level Rise Policy Guidance, adopted on August 12, 2015*,[144] identifying principles to guide sea level rise adaptation efforts, many of which were derived directly from the requirements of the Coastal Act. These principles include (1) using science to guide decisions; (2) minimizing coastal hazards through planning and development standards; (3) maximizing protection of public access, recreation, and sensitive coastal resources; and (4) maximizing agency coordination and public participation. As these policies are finalized and/or other City, state, and/or federal guidelines become available, the SFRPD would incorporate any relevant measures into the SNRAMP.

Salinity Conditions with Sea Level Rise

As discussed on Draft EIR p. 382, it is expected that the stable fresh water elevation in Laguna Salada would rise in response to a rising sea level, since this is necessary to maintain a positive flow of groundwater to the ocean. This may lead to a number of changes over time, including increased salinity in Laguna Salada. Impact HY-16 (on Draft EIR pp. 381 and 382) addresses the cumulative impacts on salinity conditions with sea level rise and concludes that the proposed project is not expected to contribute in a cumulatively considerable way to any significant cumulative impacts on water resources and sea level rise.

While the specific effects of sea level rise on the Sharp Park Restoration Project are uncertain, because the effects of sea level rise are expected to occur gradually over time and because the SNRAMP proposes to employ an adaptive management approach, SFRPD would continue to evaluate the environmental conditions at Sharp Park and make management decisions in the future

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144 California Coastal Commission, *Sea-Level Rise Policy Guidance,* August 12, 2015. This document is available online at: http://www.coastal.ca.gov/climate/slrguidance.html, accessed on June 7, 2016.

based on those conditions. Although the Draft EIR concludes there could be significant impacts from sea level rise on the project, the proposed project would not result in a considerable contribution to the cumulative effects of climate change. The Draft EIR concludes that the proposed project would result in a less than cumulatively considerable contribution to sea level rise impacts. Further, the comments do not present substantial evidence that the proposed project would result in a cumulatively considerable impact with respect to sea level rise and, in the absence of any such substantial evidence, the Draft EIR is accurate in its conclusion.

Sea Level Rise and the Sea Wall

With respect to sea level rise, the seawall is part of the existing setting at the Sharp Park project site and is not proposed to be modified by the project. Thus, these comments do not address the adequacy or accuracy of the Draft EIR's analysis of the project or its impacts on the environment. For informational purposes, potential impacts to the seawall, which protects the area from the ocean, are described on Draft EIR p. 382, which states that "[t]he magnitude of sea level rise during the project planning period would probably be too small to result in significant erosion of the seawall, but the effects are difficult to predict." Draft EIR pp. 357 to 361 further address sea level rise with respect to the seawall. Draft EIR p. 361 specifically states that:

> "Sea level rise will put additional stress on the seawall at Sharp Park and could result in more frequent overtopping (SFRPD 2009a). Rising sea levels will also result in higher groundwater levels near the coast, as the water table rises to maintain net groundwater outflow to the ocean. Higher groundwater levels will reduce storage capacity of Laguna Salada somewhat and will require more frequent or increased rates of pumping to maintain the water level in Laguna Salada below the elevation at which flooding impacts could occur.
>
> The Sharp Park Seawall Evaluation (Arup 2009) summarizes the results of efforts to assess and rank the current condition of the seawall, evaluates performance in five years and under projected sea-level rise in years 2040, 2060, and 2100, and assesses salt water intrusion into the wetlands. During the site assessment, no signs of seawater penetration through the seawall were observed. However, elevated salinity levels and a seep have been reported near the western edge of Horse Stable Pond, at the southern end of the seawall. This is the location of an abandoned drainage pipe, and it is possible that seawater is seeping along the drainage pipe during high tides (Arup 2009).
>
> While portions of the seawall are in fair to good condition, mainly in armored areas, there are other portions of the seawall that are in poor condition. Significant erosion rills, near-vertical slope faces, and beach sand within two feet of the seawall are all issues that negatively affect the condition of the wall. If improvements are not performed to alleviate these conditions, it is very likely that the seawall would be overtopped and breached during a 100-year storm or as a result of future sea level rise (Arup 2009)."

In December 2009, San Francisco Public Works commissioned a study, titled *Sharp Park Sea Wall Evaluation*,[145] which concluded that in the future, and not until year 2040, the seawall would be overtopped and breached as a result of sea level rise. The study also presented several recommendations for effective protection against overtopping and breaching. With respect to project-related sea level rise impacts, if the magnitude of sea level rise during the cumulative project planning period would not affect the seawall, it is similarly unlikely that sea level rise would affect the proposed project itself during the project horizon year.

With respect to alternatives to the seawall, as noted, the seawall is part of the existing conditions at the Sharp Park project site and the project does not propose any alteration to it. Draft EIR p. 363 states that "[w]hile the SFRPD has considered management options for the Sharp Park seawall, including a naturally managed seawall and shoreline, those options are not proposed as part of the SNRAMP and would require additional CEQA review before they could be implemented. As such, they are not addressed in this EIR."

Refer to Response AL-11, RTC p. 4-600, for a discussion of lagoon water level management strategies and conditions.

Comment HY-3	**Analysis of wetland hydrology, sediment and water quality, and dewatering activities**

The response to Comment HY-3 addresses all or part of the following individual comment:

CCC-1-03

- The City's environmental impact review should include data and analyses of coastal resource impacts associated with: a) sediment and water quality; b) wetland hydrology; and c) de-watering activities. Impacts should be evaluated for all phases of the proposed project, i.e., during construction and after construction. This information, additionally, will be needed for evaluation of the City's CDP application. [CCC-1-03]

Response HY-3

This comment is specific to the project-level analysis of the Sharp Park Restoration Project.

The project-level analysis of the Sharp Park Restoration Project is included in the Draft EIR. As shown in Table 3 on Draft EIR p. 81, a coastal development permit would be required for the proposed Sharp Park Restoration Project. The CCC may require additional information as part of their review of the coastal development permit. The construction activities from this proposed project are described in detail in Draft EIR Chapter III, Project Description, pp. 97 to 104. As described and presented on Draft EIR pp. 356 to 357, existing hydrologic conditions and salinity levels were evaluated in the *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility*

[145] Arup, *Sharp Park Sea Wall Evaluation,* December 2009.

Study: Laguna Salada Wetland System[146] and are presented in Draft EIR Section V.H.2, Environmental Setting, Hydrology and Water Quality. The Draft EIR evaluates both construction and post-construction impacts resulting from the Sharp Park Restoration Project. Impact HY-3 (Draft EIR pp. 370 to 372) addresses potential impacts to water quality (including the effects of dredging and dewatering activities) and determines that with implementation of Draft EIR Mitigation Measures M-HZ-13, Emergency Response Plan for Accidental Releases of Hazardous Materials, p. 395, and M-HY-1, Implementation of Stormwater Pollution Prevention Measures, p. 366, water quality impacts would be mitigated to less-than-significant levels. Impact HY-9, on Draft EIR pp. 375 to 376, addresses potential erosion and siltation impacts and determines that, with implementation of Mitigation Measure M-HY-1, impacts would be reduced to less-than-significant levels. Finally, the potential for the proposed project to result in significant impacts with respect to stormwater runoff quantity or quality is addressed in Impact HY-15 on Draft EIR pp. 379 to 380. This impact was also determined to be less than significant with mitigation.

Comment HY-4 Effects of Sharp Park Tree Removal Activities within the Coastal zone

The response to Comment HY-4 addresses all or part of the following individual comment:

SFPGA-3-03

- But rather than cavil over the applicability of the local governmental ordinances, the issue is a substantive one of preventing activity (logging) on land outside the Coastal Zone from having potentially damaging results (flooding) on properties (historic golf course and residential neighborhoods) and natural resources (habitat of frogs and snakes) lying within the Coastal Zone. [SFPGA-3-03]

Response HY-4

This comment relates to the proposed tree removal activities at Sharp Park and the potential for those activities to result in downstream flooding of the golf course, nearby residences, and natural resources. As acknowledged on Draft EIR p. 377, under existing conditions, flooding of the Sharp Park Golf Course has been a recurring problem since the 1940s.

Horse Stable Pond is located south of Laguna Salada and consists of an open water pond and a fresh-to-brackish-water wetland. It is connected to Laguna Salada via an approximately 1,000-foot-long channel that was constructed to drain water from the lagoon to Horse Stable Pond, and together, these three features form a wetland complex. In addition to water from Laguna Salada, Horse Stable Pond receives water from Sanchez Creek from the east. Horse Stable Pond is shallower and smaller than Laguna Salada, and typical water depths range from one to three feet. Flood waters in the wetland complex are drained and removed by pumps located at the southwest corner

[146] Kamman Hydrology & Engineering, Inc., *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California,* March 30, 2009.

of Horse Stable Pond, which pump water into the Pacific Ocean during the winter, when water levels in the pond become too high.

The Laguna Salada wetland system is naturally maintained by groundwater during periods of low surface water inflow, such as during the summer. At these times, the water elevation in Horse Stable Pond and Laguna Salada represents the groundwater table. Groundwater and stormwater flow from the 845-acre watershed to the ocean maintain Horse Stable Pond elevations above sea level. Over the course of the year, however, surface inflows to Laguna Salada exceeds groundwater inflows to Laguna Salada by 600 percent. Some of the excess surface water inflow is lost to evaporation and uptake by plants, some flows as groundwater to the sea, and some is pumped to the ocean during periods of high inflow.

Draft EIR p. 376 addresses the potential for programmatic tree removal activities to increase the rate of runoff of Sanchez Creek and determines that the potential for increased downstream flooding as a result of tree removal activities would not be substantial and found this impact to be less than significant. The commenter is directed to Response HY-1, RTC p. 4-486, which provides additional details as to how this determination was made. Because the increase in runoff from proposed tree removal activities would not be substantial, it would not result in potential secondary impacts to San Francisco garter snake and California red-legged frog habitats. Further, as stated on Draft EIR p. 146, the SFRPD would continue to use pumps to manage water levels in Horse Stable Pond to conserve the California red-legged frog by conducting post-rainfall inspections of the pond for California red-legged frog egg masses and making any pumping changes necessary to prevent stranding and other impacts to egg masses, if found to be present. The comments above are general in nature and do not present substantial evidence that the proposed project would result in significant impacts with respect to downstream flooding.

Comment HY-5	**Dredging Impacts on Water Quality (Salinity Assessment, Water Budget Model, and Storm Response Modeling)**

The response to Comment HY-5 addresses all or part of the following individual comment:

Baye-1-03

- The DEIR also misinterprets its own hydrologic analysis report (Appendix A) in arguing that the project will not cause a change in salinity or salinity stratification within the lagoon after dredging. The DEIR correctly reports that the existing condition of the lagoon's continuous open-water area is relatively well-mixed salinity, with little stratification. The scope of the KHE hydrology report did not include any analysis or discussion of the effects of either localized dredging (dredge-deepened pockets, heterogeneous bed depths) or widespread dredging (deeper homogeneous depths) on salinity stratification or salinity intrusion cumulative impacts with sea level rise, and do not support the arguments of "no significant cumulative impact" (p. 380) in the DEIR. The hydrology report explicitly states that the purpose of the salinity assessment was limited to assess salinity and groundwater

interactions, specifically for the potential for salinity intrusion under existing conditions, using a mass balance approach:

> … developed to test the hypothesis that the seasonal change in salinity was affected by shallow groundwater conditions. Given its location along the coastline, there is the potential for seawater intrusion to increase salinity and alter the habitat conditions of the system.(Appendix A, p. 18)

The hydrology report's scope did not include analysis of did not analyze interactions or cumulative impacts of dredge-modified lagoon bathymetry and sea level rise, but it did advise – contrary to the DEIR's conclusion of "no significant cumulative impact" of the project water quality (p. 381-382) – that rising sea level may increase long-term salinity intrusion into the lagoon under its existing regime of artificially low water surface levels maintained by pumping:

> Sea level rise and climate change may also alter seasonal and long-term ocean levels and wave energy, potentially reversing shallow groundwater gradients between the lagoon and ocean and allowing more salts to migrate into the Laguna. The existing salinity and water budget models will prove to be useful tools in evaluating and quantifying potential benefits and impacts to wetlands under proposed enhancement plan alternatives. (Appendix A, p. 23; emphasis added in underline)

Unfortunately, The DEIR subsequently failed to apply the useful salinity and water budget model tools in subsequent analysis of benefits and impacts of the project on water quality. It provided absolutely no analysis or assessment of how dredging up to 60,000 cubic yards of sediment from the lagoon, deepening it up to several feet, would affect the stratification and trapping of high salinity pulses during salinity intrusion or storm overwash events. Salinity stratification should be predicted to increase with increased bottom relief and depth in the lagoon, since higher salinity water is denser than fresh or slightly brackish water, and local depressions would be less subject to mixing due to wind-stress current circulation in the lagoon than the existing nearly flat bed. Local dredge-deepened depressions in the lagoon would also be expected to trap fine organic sediments and have elevated water temperature due to the higher specific heat of more saline stratified water. Elevated temperatures, salinity, and organic matter in deeper depressions would be expected to increase anoxia (and hydrogen sulfide and methane gas production). The DEIR cannot cite Appendix A to address these issues because they were not within the scope of the report. These are potentially significant cumulative water quality impacts and impacts on wetland-dependent endangered species that are not assessed in the DEIR.

The DEIR also cannot rely on the findings of the original Laguna Salada conceptual restoration plan (Tetra Tech 2009) for analysis of sediment and water quality impacts of lagoon dredging because that report also failed to provide sediment testing data or impact analysis of dredging anoxic sulfidic sediments in the closed lagoon. In fact, it failed even to identify the potentially huge biogeochemical and water quality impacts of dredging and draining the lagoon. This study considered sediment quality impacts and suitability only from the perspective of re-using dredge spoils for placement on the golf course greens (Tetra

Tech 2009, p. 39). Moreover, the City failed to provide sediment or water quality monitoring data from recent "maintenance" dredging episodes of small-scale Horse Stable Pond to elucidate these potential dredging-induced water quality impacts at a larger scale, commensurate with the proposed 60,000 cubic yard dredging proposal.

These omissions of sediment quality assessment for primary restoration methods that rely exclusively on dredging are unreasonable, because:

> the aquatic habitat impacts of disturbing sulfidic anoxic coastal wetland sediments (including acid sulfate soil development) have been studied worldwide for decades, and are well-known in wetland ecology (e.g., Portnoy 1991, and references within)

> Pre-dredging sediment testing is routinely required by state and federal regulatory agencies, particularly in aquatic habitats that support endangered species, so it should have been presumed to be necessary for a meaningful CEQA analysis of impacts and alternatives in an EIR;

> The San Francisco Recreation and Parks Department was notified in 2009 of this deficiency in analysis of anoxic sulfidic sediments proposed for dredging (see attached comment letter on the Sharp Park Conceptual Restoration Alternatives Report (Tetra Tech et al. 2009).

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

> fails to address significant potential cumulative impacts between dredging, salinity stratification, seawater intrusion, and sea level rise within the 20 year planning period. [Baye-1-03]

Response HY-5

This comment relates to dredging impacts on sediment and water quality, stating that salinity and water budget modeling tools were not applied, nor was there an assessment of cumulative impacts related to dredging, salinity stratification, seawater intrusion, and sea level rise.

Dredging Impacts on Water Quality (Salinity Assessment, Water Budget Model, and Storm Response Modeling)

Impact HY-3 specifically addresses the potential impacts of the Sharp Park restoration component of the SNRAMP, including dredging 60,000 cubic yards of sediment, on water quality. Also, as reflected in the *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California*,[147] a salinity assessment was completed to characterize existing conditions and to assess potential impacts associated with saltwater encroachment. Given its location along the coastline, there is the potential for seawater intrusion to

[147] Kamman Hydrology & Engineering, Inc., *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California,* March 30, 2009.

increase salinity and alter the habitat conditions of the system. Salinity is expected to increase during the summer when evapotranspiration decreases the volume of water in storage and thus increases the concentration of dissolved salts. If the seasonal variability of salinity is controlled by evapotranspiration, then the overall mass of dissolved salts should remain stable throughout the year even though the concentration may fluctuate. If, however, relatively saline water is being added to the pond during a portion of the year, the mass of dissolved salts in the system could increase over time.

Observations from April 2008 to February 2009, as contained in the *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California,* suggest that groundwater contributions led to small increases in the total mass of dissolved salts in the pond/wetland system. Overall, salinity observations from the open water ponds were not significantly higher than the observations from 1990 to 1991. It is likely that a high turnover rate associated with high inflows of surface runoff and shallow groundwater from the east continue to flush the system and maintain the slightly brackish condition. The impact of shallow groundwater contributions to the salinity budget does not appear to be producing any long-term trends. Further, water and salt budget analyses indicate that the maximum salinity of groundwater inflow to Laguna Salada did not exceed a salinity concentration of 2.5 parts per trillion (ppt) during the 2008–2009 monitoring period (and was probably much lower), indicating seawater intrusion was not a significant factor to the lagoon's salinity during the monitoring period. Also, refer to Response AL-11, RTC p. 4-600, for further evidence that increasing the system's storage capacity through extensive dredging would not result in diminished water levels or compromised water quality (including salinity levels).

An analytical water budget model (also provided in the *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California*) was developed to evaluate the seasonal and inter-annual variability of hydrologic conditions. The primary inflow components that were modeled include direct precipitation, surface water inflow, and groundwater inflow, and the primary outflow components that were modeled include surface water outflow (discharge from the pump station) and evapotranspiration. Results from the water balance simulations show that the variation of water year types does not affect the annual change in the volume of water stored in the wetlands, and that adequate water is supplied to the system to maintain the open-water ponds during the dry years. Inter-annual variability of water levels in the wetlands is low due to the operation of the pumping station.

A storm response modeling system was developed (and described in the *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System, Pacifica, California*) to simulate the water level response to winter storm runoff entering the Laguna Salada wetland complex, integrating the rainfall-runoff, flood routing, and pond storage characteristics of the system. Findings from the modeling investigation present the water level responses to a range of designed storm events based on existing conditions at the site to improve the understanding of the

hydrologic processes that affect the distribution of ecological habitats in the Laguna Salada wetland system and flooding of the adjacent golf course.

The salinity assessment, water budget model, and storm response modeling efforts that were completed for this project provide highly-detailed analytical tools that can also be utilized in future design work relative to potential flood hazard impacts. However, in terms of the EIR analysis, sufficient detail was provided, through all of the data referenced in the Draft EIR (in Section VIII), to address the commenter's concern that the Draft EIR "fails to address significant potential cumulative impacts between dredging, salinity stratification, seawater intrusion, and sea level rise within the 20 year planning period." In fact, Draft EIR pp. 380 to 382 presents a cumulative analysis of these issues, ultimately concluding that:

> "Among the cumulative effects on water resources of sea level rise are increased frequency of flooding of low-lying areas, increased salt water intrusion in coastal wetlands, increased coastal erosion, and increased potential for contamination of receiving waters because of inundation of areas containing hazardous substances. One approach to mitigating these and similar long-term cumulative effects is to move vulnerable development and activities out of low-lying coastal areas and to encourage coastal and shoreline uses, such as open space, that can accommodate sea level rise. In general, Natural Areas are expected to have low impacts on water resources and therefore are not expected to contribute to the cumulative impacts on water quality that may result from sea level rise, resulting in a less than cumulatively considerable (***less than significant***) contribution to sea level rise impacts."

Refer to Response BI-7, RTC p. 4-365, for a discussion of the proposed dredging activities on sediment and water quality, including the degree to which acid sulfate soil conditions (or anoxic sulfidic sediments) could impact aquatic habitats, and to Response HY-2, RTC p. 4-493, for a discussion of cumulative salinity and sea level rise impacts.

Comment HY-6 Practices contributing to algal blooms

The response to Comment HY-6 addresses all or part of the following individual comment:

Bartley-1-10

- Dumping green waste along the sides of the lake causes algal blooms due to the increased nitrogen. Same goes for fertilizers on the golf courses – both practices should end. [Bartley-1-10]

Response HY-6

This comment requests that depositing green waste along the sides of the lake and the use of fertilizers on the golf course should end.

As a matter of practice, the SFRPD does not deposit green waste along the side of any waterbodies or watercourses under its control. In one instance, mulch was placed by SFRPD operations in a gully

around Lake Merced in an effort to control erosion; however, as previously mentioned, the use of mulch in this way is not a standard practice and is not included as part of the proposed project. Also, ongoing golf course operations, such as the use of fertilizers, are part of ongoing golf course operations and are not related to the proposed project. The Draft EIR evaluates the impacts of the proposed project; therefore, neither past incidences nor current golf course operations are evaluated as part of the Draft EIR, except, where appropriate, in the cumulative impacts context.

However, the SNRAMP acknowledges that the use of pesticides, herbicides, and fertilizers at the golf course could have an impact on water quality within Laguna Salada and a corresponding effect on sensitive species that use this area. While SNRAMP Recommendation SP-5a indicates that the Integrated Pest Management and NAP staff shall work with the golf course operations staff to reduce the use of chemicals to the bare minimum, recognizing that alternative management methods may be more environmentally appropriate for this location (refer specifically to MA-1d to MA-1f of the SNRAMP), the Biological Opinion for the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project (on p. 8) states that "only organic fertilizers are used at Sharp Park and only on the greens, tees and surrounds." Consistent with the Biological Opinion, and as indicated in Response BI-10, RTC p. 4-384, nitrogen- and phosphorous-based fertilizers are not currently used at Sharp Park, and have not been used there for at least five years.

4.D.13 Hazards and Hazardous Materials [HZ]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter V, Section V.I, Hazards and Hazardous Materials.

Comment HZ-1 Use of herbicides/pesticides by the Natural Areas Program

The response to Comment HZ-1 addresses all or part of the following individual comments:

CFDG-1-09	DogPACSF-1-02	DogPACSF-1-12
MPIC-2-23	MPIC-2-24	MPIC-2-25
MPIC-2-26	SFDOG-2-13	SFFA-3-07
SFFA-3-08	SFFA-3-09	SFFA-3-10
SFFA-3-11	WTPCC-1-04	WTPCC-1-05
WTPCC-1-06	Bartolotta-1-11	Bose-1-03
Bose-1-12	Bose-1-13	Bowman-1-03
Bowman-1-11	Bowman-2-10	Brown-1-09
Butler-1-03	Hess-1-06	Hull-1-02
Johns-1-03	Johns-1-07	Kessler-1-04
Kessler-1-05	Kessler-1-06	Kessler-1-07
Kessler-1-08	Kessler-2-04	Kessler-2-05
Kessler-2-06	Kessler-2-07	Kessler-2-08
Mattingly-1-02	McAllister-3-04	McAllister-3-05
McAllister-3-06	McAllister-3-07	Milstein-1-01

Otto-1-01	Otto-1-02	Otto-1-03
Pittin-1-02	Reichardt-1-03	Risk-1-05
Schlund-1-02	Thomas-1-01	Thomas-1-05
Valente-1-02	Valente-1-03	Vitulano-1-05
PH-Rotter-P-03		

- This EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether dogs are on- or off-leash). Dogs are particularly susceptible to problems from Garlon. This distinction is not made and the analysis of impacts from herbicides must be redone to reflect this. [CFDG-1-09]
- Additionally, recent reports of Monsanto's Round Up herbicides and other chemicals that are not only harmful to dogs but the general animal population in the park is untenable. [DogPACSF-1-02]
- The NAP EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is on- or off-leash). In a paper on the effects of Garlon, the Marin Municipal Water District (http://www.marinwater.org/documents/Chap4_Triclopyr_8_27_08.pdf) notes that Garlon can cause kidney problems in dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this). The NAP's reliance on herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it has been applied. This is especially true in Glen Canyon, where Garlon was applied over 30 separate times last year. This impact was not considered in the Hazards and Hazardous Materials section of the NAP EIR and a discussion of the health impacts on dogs of repeated exposure to Garlon should be included. [DogPACSF-1-12] [Bartolotta-1-11] [Brown-1-09]
- The NAP EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is walked on- or off-leash). In a paper on the effects of Garlon, the Main Municipal Water District (http:/ww.maritiwater.ordocumentsChap4Friclopr82708.pdt) notes that Garlon can cause kidney problems in dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this inability). The NAP's reliance on repeated use of herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it is applied. This is especially true in Glen Canyon, where NAP sprays Garlon in places where children, seniors and dogs walk regularly. In addition, there is concern that the coyotes who make Glen Canyon their home may have similar kidney problems from exposure to Garlon (indeed their exposure would likely be higher than for dogs because they cannot read the signs that tell people to stay out of areas when pesticides are applied and so will walk through these areas soon after applications). The health impact on dogs of repeated exposure to Garlon was not considered in the Hazards and Hazardous Materials section and should be included. [SFDOG-2-13]

■ **VII. Pesticides and Herbicides**

The DEIR for the SNRAMP claims that herbicides/pesticides required to implement SNRAMP will not have a significant impact on the environment. It reaches that conclusion by providing inadequate and inaccurate information about the use of herbicides by the NAP in the present and by providing no information about the requirements for more herbicides in the future to kill the roots of thousands of trees that will be destroyed:

> The DEIR provides no information about the frequency of use of herbicides by the NAP.

> The DEIR claims that herbicide applications by the NAP comply with San Francisco's Integrated Pest Management (IPM) Ordinance. In fact, public record contain considerable evidence that herbicide applications by the NAP frequently violate San Francisco's IPM Ordinance.

> The DEIR misstates the facts about the toxicity of the herbicides being used by the NAP.

> The DEIR provides no information about the increased use of herbicides that will be required to prevent the resprouting of the trees that will be destroyed by the implementation of SNRAMP.

Herbicide use by the NAP

The DEIR provides no information about the volume of herbicides used by the NAP. The sole sentence in the DEIR pertaining to volume of use of herbicides is this: "In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD." (DEIR, page 365) This statement provides inadequate information regarding NAP's pesticide use because it is 8 years out of date. Because we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?

The claim that NAP's pesticide use is only 10% of total RRPD pesticide use – if in fact that is true – is not reassuring. The public has good reason to expect that parks designated as "natural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

Based on public records requests (see Attachment A), we have the following information about the number of pesticide applications by the NAP:

Number of Pesticide Applications by the Natural Areas Program

Active Ingredient	*Year*			*Increase from 2008 to 2010*
	2008	*2009*	*2010*	
Triclopyr (Garlon)	17	16	36	212%
Glyphosate (Roundup)	7	6	31	443%
Aminopyralid/Imazapyr	2	2	2	0%
Total	26	24	69	265%

We learn from these official reports of NAP's pesticide use, which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 265% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is 8 years old and pesticide use by the NAP is increasing significantly from year to year, 265% in the past 3 years alone.

From these official reports of NAP's pesticide use it is evident that several other statements in the DEIR are inaccurate. The DEIR claims that "Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity." (DEIR, page 365) However, according to the official reports of NAP's pesticide use, Garlon (active ingredient Triclopyr) was used more often than any other pesticide in all 3 years, including the most recent year. This FACT is inconsistent with a claim that Garlon is being "phased out."

The statement that Garlon is "only used for invasive plants in…grasslands" is contradicted by this statement in the DEIR: "Treatment of tree stumps with San Francisco-approved herbicides (such as Roundup and Garlon) (DEIR, page 386) The DEIR claims that Glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that Triclypyr was used more often than Glyphosate in all 3 years for which we have data.

The final Environmental Impact Report for the SNRAMP must:

> Provide specific and current data about herbicide use by the NAP

If this information is provided in the final EIR it will be unlikely that the EIR could make a believable claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [MPIC-2-23]

- **Herbicide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance**

  In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use: "Pesticide use…would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant." (DEIR, page 365)

  There are two problems with this claim:

  NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: Imazapyr and Triclopyr.

  > Garlon (Triclypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use

of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)

> Habitat (Imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)

> Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:

> NAP's reports of pesticide use are frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports (see Attachment A).

> We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.

> The NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.

> The NAP used Imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.

> The NAP **sprayed** Garlon (Triclopyr) prior to 2011 when only "dabbing and injection" were approved application methods by the IPM policy.

> The NAP sprayed Garlon (Triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in 2011 (see Attachment B).

> The NAP sprayed herbicides containing glyphosate in the water of Lake Merced, which is officially designated red-legged frog habitat, in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.

> Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

The final Environmental Impact Report for the SNRAMP must:

> Provide accurate information about the toxicity of the herbicides being used by the NAP

If this information is provided in the final EIR it will be unlikely that the EIR could make a believable claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [MPIC-2-24]

- The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program.

  The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate, e.g.: "*Garlon+ degrades quickly in the environment and has low toxicity to aquatic species (Dow, 2009)." (DEIR, page 365)

  Following are accurate statements regarding Garlon's biodegradability and toxicity to aquatic life quoted directly from th`e Material Safety Data Sheet mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency also mandated by federal law (see Attachment C):

  > "Persistence and Degradability: Chemical degradation (hydrolysis) is expected in the environment. **Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability."** (emphasis added)

  > "Ecotoxicity: **Material is highly toxic to aquatic organisms** on an acute basis…" (emphasis added)

  The DEIR's flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the NAP. In the only case in which it provides any information, this information is completely inaccurate.

  The final Environmental Impact Report for the SNRAMP must:

  > Quantify, evaluate, and mitigate the increased herbicide use that will be required as a result of destroying thousands of trees that will re-sprout unless their stumps are treated with pesticides.

  If this information is provided in the final EIR it will be unlikely that the EIR could make a believable claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [MPIC-2-25]

- The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP

  The DEIR's claim that the NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which the DEIR does not share

with the reader) and on an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR says nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP. This is a very important failing, because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees destroyed will re-sprout if their trunks are not sprayed immediately with Garlon. This initial application of Garlon is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

The DEIR acknowledges the need to use Garlon on the stumps of trees that have been destroyed: "Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon)" (DEIR, page 386) However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted a letter with its application to FEMA (obtained using a Freedom of Information Act [FOIA] request) to document the cost of poisoning all of the stumps of the trees with Garlon, which it predicts must be done twice per year for 10 years (see Attachment D). Both UC Berkeley and the East Bay Regional Park District are on record in their "vegetation management plans" as stating that Roundup is not capable of preventing resprouting of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment (see Attachment C). [MPIC-2-26]

- **The Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) claims that the herbicides required to implement SNRAMP will not have a significant impact on the environment. It reaches that conclusion by providing inadequate and inaccurate information about the use of herbicides by the Natural Areas Program (NAP) in the present and by providing no information about the requirements for more herbicides in the future to kill the roots of thousands of trees that will be destroyed. In this public comment we will document these issues as follows:**

  1. **The DEIR provides no information about the frequency of use of herbicides by the Natural Areas Program**
  2. **The DEIR provides no information about imazapyr which is currently the herbicide the Natural Areas Program uses most frequently**

3. **The DEIR claims that herbicide applications by the Natural Areas Program comply with San Francisco's Integrated Pest Management (IPM) Ordinance. In fact, the public record contains considerable evidence that herbicide applications by the Natural Areas Program frequently violate San Francisco's IPM Ordinance.**
4. **The DEIR misstates the facts about the toxicity of the herbicides being used by the Natural Areas Program**
5. **The use of herbicides on Twin Peaks that are known to be harmful to butterflies violates the Endangered Species Act**
6. **The DEIR provides no information about the increased use of herbicides that will be required to prevent the resprouting of the trees that will be destroyed by the implementation of SNRAMP.**

1. Herbicide use by the Natural Areas Program

The Draft Environmental Impact Report (DEIR) provides no information about the volume of herbicides used by the Natural Areas Program (NAP). The sole sentence in the DEIR pertaining to volume of use of herbicides is this:

> "In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD." (DEIR, page 365)

This statement provides inadequate information regarding NAP's pesticide use because:

> It is eight years out of date.

> Since we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?

> We aren't reassured by the claim that NAP's pesticide use is only 10% of total RRPD pesticide use-if in fact that is true. The public has good reason to expect that parks designated as unatural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

Based on public records requests, we have the following information about the number of pesticide applications by the Natural Areas Program (See Attachment II-A):

Number of pesticide applications by the Natural Areas Program

Active Ingredient	*2008*	*2009*	*2010*	*2011*	*Percent Increase*
Triclopyr (Garlon)	17	16	36	3	
Glyphosate (Roundup)	7	6	31	39	
Imazapyr (Habitat)	1	1	1	39	
Aminopyralid (Milestone)	1	1	1	4	
Total	26	24	69	86	330%

We learn from these official reports of NAP's pesticide use which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 330% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is eight years old and pesticide use by the Natural Areas Program is increasing significantly from year to year, 330% in the past four years alone.

We also learn from these official reports of NAP's pesticide use that several other statements in the DEIR are inaccurate:

> The DEIR claims that "Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity." (DEIR, page 365)

According to the official reports of NAP's pesticide use, Garlon (active ingredient triclopyr) was used more often than any other pesticide until 2011. While use of Garlon decreased in 2011, it is still being used according to Pesticide Application Notices posted in the natural areas in 2012.

> The statement that Garlon is "only used for invasive plants in … grasslands" is contradicted by this statement in the DEIR:

"Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon) (DEIR, page 386)

> The DEIR claims that glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that triclypyr was used more often than glyphosate until 2011 when imazapyr was used as frequently as glyphosate. [SFFA-3-07]

■ **2. The DEIR provides no information about imazapyr which is currently the most frequently used herbicide**

For the most part NAP substituted a mixture of glyphosate and imazapyr for Garlon in 2011. Is this an improvement? Maybe not. Although glyphosate and imazapyr are assigned a lower hazard rating of "More Hazardous" by the Department of the Environment, the Natural Areas Program increased their pesticide applications in 2011 at least 20% compared to 2010. But more importantly, little is known about the toxicity of imazapyr and nothing is known about the toxicity of combining glyphosate and imazapyr. lmazapyr was approved for use in California in 2005, so only the minimal tests required by law have been done on it.

<u>The Natural Areas Program is using imazapyr for a purpose different from that for which imazapyr was evaluated.</u>

The "Aquatic Pesticide Application Plan for the San Francisco Estuary Invasive Spartina Project"[1] is cited by San Francisco's IPM program as the evaluation upon which it based its decision to add imazapyr to the list of pesticides approved for use in San Francisco in 2010. Was it appropriate for the city's IPM program to use the evaluation of imazapyr for the Spartina project as the basis of their decision to approve its use by the Natural Areas

Program? We don't think so. The circumstances of the Spartina project are substantially different from those of its use by the Natural Areas Program.

lmazapyr is used to eradicate non-native Spartina in a tidal estuary. For that reason the evaluation of its use assured the public that this herbicide would not accumulate in the environment because it would be flushed away from the ground by the tide twice each day.

The evaluation also said that when imazapyr was used in a pond or stable water source, it persisted in the ground for a longer period of time. In fact, that's exactly how imazapyr is being used by the Natural Areas Program. It has been used at Lake Merced and at Pine Lake, both stable water sources. It is also being used in Glen Canyon Park, which is a watershed.

We don't assume that imazapyr is being used safely to eradicate Spartina. However, even if it is, it does NOT follow that it is safe for use in watersheds that are not tidal, such as those being sprayed by the Natural Areas Program.

The Natural Areas Program is combining imazapyr and glyphosate which is both inappropriate and unnecessary

The manufacturer's labels for imazapyrh and glyphosate suggest that combining them is not an approved use. The manufacturer's label for Aqua master (glyphosate) does not include imazapyr on the list of pesticides with which it can be safely combined. And the Polaris (imazapyr) label says that it should not be combined with another pesticide unless it is expressly recommended by the manufacturer of that pesticide.

The evaluation of imazapyr for the Spartina eradication project explained why imazapyr is being combined with glyphosate by the non-native Spartina eradication project. lmazapyr is apparently slow acting. It can take some months to kill the plant on which it is sprayed. Glyphosate, on the other hand, is fast acting. The plant on which it is sprayed begins to yellow and die within a few weeks. Glyphosate is therefore used by the Spartina eradication project to provide quicker feedback to those spraying the herbicide. They know within a few weeks if they have sprayed in the right place. They don't have to wait for the next season to spray again if necessary.

However, glyphosate should be applied to perennial broadleaf plants during their reproductive stage of growth, when they are budding in the late spring and summer, according to the manufacturer. In Glen Canyon Park, a mixture of glyphosate and imazapyr was sprayed on ivy in December 2011, clearly not the recommended time period for spraying. A month later, there was no indication that the ivy was damaged by this spraying. This suggests that it was unnecessary to combine glyphosate and imazapyr in this application. The public was exposed to the unnecessary risk of combining these herbicides, with no potential benefit of taking that risk.

The Natural Areas Program is spraying imazapyr under trees which is likely to kill the trees

Glyphosate is a non-selective herbicide. That is, it kills any plant it is sprayed on at the right stage of its growth. But imazapyr is far more insidious as a killer of plants because it is known to travel from the roots of the plant that has been sprayed to the roots of other plants.

For that reason, the manufacturer cautions the user NOT to spray near the roots of any plant you don't want to kill. For example, the manufacturer says explicitly that **imazapyr should not be sprayed under trees, because that tree is likely to be killed,whether or not that was the intention.**

Much of the ivy that was sprayed by the Natural Areas Program in Glen Park in December 2011 was sprayed under willow trees. The willow trees are native,so it seems unlikely that they intended to kill them.

Plants that are repeatedly sprayed with imazapyr are likely to develop a resistance to that herbicide.

The Federal Drug Administration recently banned some use of antibiotics in domesticated animals because the bacteria antibiotics are intended to kill are developing resistance to the antibiotics. This resistance is becoming increasingly dangerous to humans who are also the victims of those bacteria. Antibiotics are being rendered useless by overuse on domesticated animals. When humans need them, they won't work because bacteria have developed a resistance to them.

Likewise, plants and animals are also capable of developing resistance to pesticides. Glyphosate is the most heavily used herbicide in agriculture. Recent research indicates that weeds are developing resistance to glyphosate.;

The manufacturer of imazapyr says explicitly that repeated use of this herbicide is likely to result in resistance to it over the long term: "When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same application site, naturally occurring resistant weed biotypes may survive … propagate and become dominant in that site." So, does it make sense to use imazapyr on a plant as persistent as ivy?

The GGNRA reported spending $600,000 over 3 years trying to eradicate ivy from 127 sites. They were successful in only 7 of the sites. Obviously eradicating ivy is not a one-shot deal.

If it is indeed necessary to eradicate ivy-and we doubt that it is--pesticides do not have to be used to do it. The Audubon Canyon Ranch in Bolinas Lagoon reported "qualified" success using hand-pulling methods on 5 acres over 5 years "utilizing 2375 volunteer hours." Biannual monitoring of resprouts will be required for the foreseeable future. It's a big commitment, but at least it is safe.

To conclude this section, we do not believe that imazapyr should be used in non-tidal watersheds. Nor do we believe it should be combined with glyphosate. In any case, the manner in which it has been used by the Natural Areas Program is not consistent with the manufacturer's recommendations regarding its use. [SFFA-3-08]

- **3. Pesticide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance**

In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with

San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use:

> "Pesticide use … would adhere to the /PM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant." (DElR, page 365)

There are two problems with this claim:

> NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: imazapyr and triclopyr.

- Garlon (tricloypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)
- Habitat (imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)

> Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:

- NAP's report of pesticide use is frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports. (See Attachment II-A)
- We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.
- NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.
- NAP used imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.
- NAP sprayed Garlon (triclopyr) prior to 2011when only "dabbing and injection" were approved application methods by the IPM policy.
- NAP sprayed Garlon (triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in
- 2011. (see Attachment 11-B)

- NAP sprayed herbicides containing glyphosate in the water of Lake Merced which is officially designated red-legged frog habitat in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.
- Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Provide specific and current data about pesticide use by the Natural Areas Program**

If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [SFFA-3-09]

■ **4. The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program**

The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate:

> "[Garlon] degrades quickly in the environment and has low toxicity to aquatic species (Dow2009}." (DEIR, page 365)

The following are the accurate statements regarding biodegradability and toxicity to aquatic life quoted directly from the Material Safety Data Sheet which is mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency which are also mandated by federal law (see Attachment II- C):

> "Persistence and Degradability
>
> Chemical degradation (hydrolysis) is expected in the environment. **Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability."**
>
> (emphasis added)
>
> "Ecotoxicity
>
> **Material is highly toxic to aquatic organisms** on an acute basis …" (emphasis added)

This flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the Natural Areas Program. In the only case in which it provides any information, it resorts to egregious lies.

5. The use of herbicides known to be harmful to butterflies on Twin Peaks violates the Endangered Species Act

The Mission Blue butterfly is a federal endangered species which existed historically on Twin Peaks in San Francisco. San Francisco's Natural Areas Program has been trying to reintroduce the Mission Blue to Twin Peaks for several years, so far with limited success. This reintroduction effort is reported by the DEIR.

Herbicides are being sprayed on Twin Peaks to control non-native vegetation. **Twin Peaks was sprayed with herbicides 16 times in 2010 and 19 times in 2011.**

A recently published study reports[i] that the reproductive success of the Behr's metalmark butterfly was significantly reduced (24-36%) by herbicides used to control non-native vegetation. Two of those pesticides are used on Twin Peaks, imazapyr and triclopyr. Triclopyr was used most often on Twin Peaks in 2010 and imazapyr in 2011.

The study does not explain how this harm occurs. It observes that the three herbicides that were studied work in different ways. It therefore speculates that the harm to the butterfly larva may be from the inactive ingredients of the pesticides which they have in common, or that the harm comes to the larva from the plant which is altered in some way by the herbicide application. Either theory is potentially applicable to the herbicides used on Twin Peaks and consequently harmful to the Mission Blue.

The Endangered Species Act requires that the Natural Areas Program stop spraying these herbicides on Twin Peaks because they are known to be harmful to the reproductive success of butterflies. Unless further scientific study exonerates these herbicides, the law obligates us to prohibit their use where the endangered Mission Blue butterfly is known to exist.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Provide specific and current data about pesticide use by the Natural Areas Program** [SFFA-3-10]

- **6. The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP**

The DEIR's claim that NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which it does not share with the reader) and an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR tells us nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP.

This is the most significant failing of the DEIR because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees that will be destroyed will resprout if their trunks are not sprayed immediately with Garlon. This initial application of Garlon is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

The DEIR acknowledges the need to use Garlon on the stumps of trees that have been destroyed: "Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon) (DEIR, page 386)

However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. We turn to the University of California at Berkeley for this information. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted the attached letter with its application to FEMA (obtained with a FOIA request) to document the cost of poisoning all of the stumps of the trees with Garlon. UC predicts Garlon must be applied to resprouts twice per year for 10 years. (See II- D) Both UC Berkeley and East Bay Regional Park District are on record in their "vegetation management plans" that Roundup is not capable of preventing the resprouts of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment. (See Attachment II- D)

Conclusion

The final Environmental Impact Report for the SNRAMP must:

> **Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program**

> **Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.** [SFFA-3-11]

- WTPCC opposes repeated applications of herbicides in natural areas to remove non-native plants. Applications of herbicides in NAP-managed areas have increased by 330% over the last four years (from a total of 26 applications in 2008 to 86 applications in 2011). Applications will continue to rise, since NAP plans to use repeated herbicide applications to kill the roots of the thousands of trees it plans to cut down. The Draft DEIR does not consider impacts from this increase in usage. [WTPCC-1-04]

- We are also concerned about inadequate and incorrect signage by NAP when it applies herbicides in natural areas. For example, a recent sign warned that herbicides would be applied "throughout" McLaren Park, with no more specific information on where other than "throughout." People walking in the park had two options- continue to walk in the park and risk exposure to herbicides (since you can't know from the sign exactly where in the park they were applied) or leave the park. This inadequate signage essentially closed access to large areas of McLaren Park for a period of time as people tried to avoid exposure. [WTPCC-1-05]

- WTPCC is also concerned that NAP applies herbicides incorrectly, causing needless exposure and risk to people, pets, and wildlife from unnecessary spraying. For example, in December 2011, NAP posted a sign that it planned to spray a mixture of glyphosate and imazapyr to eradicate cape ivy in Glen Canyon. However, the California Invasive Plant Council website says spraying to destroy cape ivy must be done in the late spring, when the plant is "photosynthesizing actively but is past flowering, so the active ingredients [in the herbicide] move down with the sugars that are transported to underground storage organs." The spraying should never have been done in December when it would not be effective. NAP essentially put people, pets, and wildlife at risk of exposure to the herbicide for no reason, and ensured they would have to reapply the same herbicides a second time in the late spring if they want to kill the cape ivy.

  It is not enough to say that NAP herbicide applications are approved as part of the SF Integrated Pest Management Ordinance that governs herbicide use by city agencies and are therefore okay, as the Draft DEIR does. The DEIR should study the application records more closely. There are many cases where NAP usage violated IPM rules. For example, NAP applied imazapyr in 2008 and 2009, two years prior to its approval for use by SF IPM in 2011. NAP "sprayed" Garlon in years prior to 2011, even though SF IPM had approved its use only by "dabbing and injection." NAP sprayed herbicides containing glyphosate near the water at Lake Merced, even though US Fish and Wildlife regulations ban the use of that herbicide (and many others) where there is red-legged frog habitat; Lake Merced is red-legged frog habitat. [WTPCC-1-06]

- Pg 365: Garlon degrades quickly in the environment and has low toxicity to aquatic species. This is not true of Garlon 4 Ultra, which is what the NAP has been using in the Natural Areas. What the Dow MSDS actually says is, Material is expected to degrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. It also says it is highly toxic to aquatic organisms. [Bose-1-03]

- Pg 365: Pesticides would be used as infrequently as possible in the Natural Areas to achieve the desired results…

  The DEIR is vague about the amounts of pesticide to be used, and in what situations. Desired results being an undefined object, this statement may be used to justify anything. Given the NAP's record of sharply increasing pesticide use, we think it should specify the expected amounts to be used under each of the options, both the Proposed Project and the Alternatives. (NAP's Garlon application increased from 16 times in 2010.) Quite aside from

any herbicides associated with Native Plant introductions, we would expect a sharp increase in toxic pesticide use owing to tree-felling. It is important to quantify these to assess Environmental Impact. [Bose-1-12]

- P. 365: Pesticide use would be carefully monitored, would involve the use of least toxic methods and materials that are appropriate to the environment in which they are applied, and would adhere to the IPM Program. A large number of violations of the IPM by NAP have been brought to our attention in the last two years: applications of Garlon by spraying instead of daubing; no respirators worn when working with chemicals requiring them; no dates on application notices; use of unauthorized pesticides; pesticides used at unauthorized locations (e.g. glyphosate used near red-legged frog habitat). (Some of these are shown on our website at http://sutroforest.com/2011/10/02/san – francisco – natural – areas – pesticide – violations/) In addition, the NAP has been routinely using pesticides classified by San Francisco's Department of the Environment as Tier I or Tier II, so 'least toxic' is a meaningless descriptor in the context. They are using chemicals that are as toxic as they are permitted to use. In view of this use and these incidents, and these are only the ones we ran across or were shown, the DEIR's assertion of careful monitoring and compliance seems excessively sanguine. Violations seem to be unnoticed, ignored or regularized, post facto. We would like to see concrete measures of oversight from a neutral person or board. [Bose-1-13]
- I am also quite concerned about cutting 25% of park trails and the increased use of toxic pesticides that has an impact on almost every potential user of the parks.[Bowman-1-03]
- The amount of toxic chemicals being used on existing natural area restorations needs to be comprehensively evaluated, and this should be done for as many years as information is available. [Bowman-1-11]
- Equally concerning is the constant pesticide warning signs with little indication of where the spraying is occurring. This certainly impacts my willingness to go to the parks, particularly Mt Davidson, which appears to have spraying right next to the trail to kill the blackberries and ivy. [Bowman-2-10]
- We are also opposed to NAP's plans to cut down perfectly healthy trees and the growing use of pesticides to achieve their "native" environment. [Butler-1-03]
- (6) According to the SF Forest Alliance, the most toxic herbicides would continue to be used. [Hess-1-06]
- I am very dismayed to learn that the city has used Garlon in Glen Park Canyon. Glen Canyon is used by dogs and young children at Glen Ridge Childcare and Silver Tree Day Camp. I have suffered the loss of one dog, at the age of 5 years, from kidney failure. Both my daughters suffered from kidney disease at a young age, although there is no prior history of kidney disease in my family or my husband's family. [Hull-1-02]
- The plan is appalling and absolutely defies reason. I have talked to someone who works in Golden Gate Park and received more details, and have also read a report that concludes the argument in favor of the plan is specious.

But here are my primary concerns: 1. toxic spraying to assure these "non-native" plants and trees don't regrow - really? How does that improve an environment that is already suffering from a shortage of bees and birds because of environmental poisons? [Johns-1-03]

- If toxic spraying is part of the plan, has the city notified the state and federal EPA? [Johns-1-07]
- Strong toxic pesticides are increasingly necessary.

  3. Because Native Plants are no longer suited to this eco-system – and because of the need for NAP to stop Natural Succession, when different plants in turn dominate a particular area – the "Natural" Areas Program requires a great deal more pesticides than would be needed if these areas were truly natural. The Report underplays both the amounts and the toxicity of the pesticides that will be used. In fact, it does not even say how much will be used.

  4. Garlon (triclopyr), Roundup (glyphosate), and Imazapyr are mentioned as the most likely chemicals to be used. Garlon is a Tier I (Most Hazardous) chemical. Roundup and Imazapyr are Tier II. No Tier III herbicides are even mentioned. [Kessler-1-04] [Kessler-2-04]

- On p 365, it says Garlon degrades quickly and has low toxicity to aquatic species. However, the Material Safety Data Sheet (MSDS) (http://www.fs.fed.us/r5/eldorado/documents/freds/WEB%20Only/garlon_4_msds_rev_030909.pdf) says "Material is highly toxic to aquatic organisms" and also that it is "slightly toxic to birds." The MSDS also says the material is "expected to biodegrade only very slowly in the environment" and "Fails to pass OECD/EEC tests" (for ready biodegradability). The report says Garlon is being phased out; but if the NAP's tree-felling program goes through, a lot more will need to be used to prevent resprouting since it is the only herbicide known to prevent the resprouts of eucalypts. [Kessler-1-05] [Kessler-2-05]
- Imazapyr – which was approved for NAP's use in 2011 – is not approved for use in Europe. It moves readily in the soil, and is excreted by some plants through their root systems. It does not biodegrade quickly. Its end-product, quinolic acide, is a neurotoxin. The report does not mention these issues where it mentions using Imazapyr. [Kessler-1-06] [Kessler-2-06]
- Roundup (glyphosate) is the second most commonly used chemical in NAP (used 31 times in 2010 compared to Garlon's having been used 36 times). This has been linked to birth defects (including brain damage and neural tube damage) in humans and in animals. (Glyphosate-Based Herbicides Produce Teratogenic Effects on Vertebrates by Impairing Retinoic Acid Signaling; Carrasco et al. http://pubs.acs.org/doi/abs/10.1021/tx1001749) It is also highly lethal to amphibians, according to a University of Pittsburgh study. This is a concern because many of the areas where it is used have water nearby. Glen Canyon, for instance, has a stream running through it. Roundup is also associated with changes to the soil and fungal root disease. http://www.reuters.com/article/2011/08/12/us-glyphosate-idUSTRE77B58A20110812 [Kessler-1-07] [Kessler-2-07]
- The main argument used by the Draft EIR to justify the use of pesticides in the natural areas is that NAP is following the rules, that therefore by definition there is no environmental impact from its use. (This reminds me of a recent US Supreme Court decision in which

patients harmed by medical devices are now prohibited from suing the manufacturers of those devices if they were approved by the FDA.) There are two reasons why this argument is not an adequate defense: (1) NAP's uses of both Garlon and Imazapyr have been granted by exception by the Department of the Environment and they are not used by other agencies in the city. (2) NAP does not always follow the rules, such as posting a date of the application of the pesticide as required by policy. [Kessler-1-08] [Kessler-2-08]

- was also extremely concerned to read that Rec and Park is using pesticides to kill 'non-native' plants as part of the so-called restoration project. Since I like to use many of the City parks like McClaren and Glen Park with my family and dogs, I am now very worried about exposure to dangerous toxins. This is beyond reprehensible! How dare you risk the health of our citizens in order to maintain poor plant choices - all of which is being done at my (taxpayer) expense! [Mattingly-1-02]
- Herbicide use the by Natural Areas Program. The Draft Environmental Impact Report (DEIR) provides no information about the volume of herbicides used by the Natural Areas Program (NAP). The sole sentence in the DEIR pertaining to volume of use of herbicides is this:

  "In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD." (DEIR, page 365)

  This statement provides inadequate information regarding NAP's pesticide use because:

  > It is eight years out of date.

  > Since we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?

  > We aren't reassured by the claim that NAP's pesticide use is only 10% of total RRPD pesticide use – if in fact that is true. The public has good reason to expect that parks designated as "natural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

  Based on public records requests, we have the following information about the number of pesticide applications by the Natural Areas Program (See Attachment A):

  We learn from these official reports of NAP's pesticide use which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 265% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is eight years old and pesticide use by the Natural Areas Program is increasing significantly from year to year, 265% in the past three years alone.

We also learn from these official reports of NAP's pesticide use that several other statements in the DEIR are inaccurate:

> The DEIR claims that "Garton is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity." (DEIR, page 365)

According to the official reports of NAP's pesticide use, Garlon (active ingredient Triclopyr) was used more often than any other pesticide in all three years, including the most recent year. This FACT is inconsistent with a claim that Garlon is being "phased out."

The statement that Garlon is "only used for invasive plants in … grasslands" is contradicted by this statement in the DEIR:

"Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon) (DEIR, page 386)

> The DEIR claims that Glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that Triclypyr was used more often than Glyphosate in all three years for which we have data. [McAllister-3-04]

■ Pesticide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance. In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use:

"Pesticide use … would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant." (DEIR, page 365)

There are two problems with this claim:

> NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: Imazapyr and Triclopyr.

- Garlon (Triclypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)
- Habitat (Imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)

> Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:
>
> - NAP's report of pesticide use is frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports. (See Attachment A)
> - We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.
> - NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.
> - NAP used Imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.
> - NAP sprayed Garlon (Triclopyr) prior to 2011 when only "dabbing and injection" were approved application methods by the IPM policy.
> - NAP sprayed Garlon (Triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in 2011. (see Attachment B)
> - NAP sprayed herbicides containing Glyphosate in the water of Lake Merced which is officially designated red-legged frog habitat in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including Glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.
> - Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

The final Environmental Impact Report for the SNRAMP must:

> Provide specific and current data about pesticide use by the Natural Areas Program

> Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program

> Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.

If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [McAllister-3-05]

- The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program. The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate:

  "[Garlon] degrades quickly in the environment and has low toxicity to aquatic species (Dow2009)." (DEIR, page 365)

  The following are the accurate statements regarding biodegradability and toxicity to aquatic life quoted directly from the Material Safety Data Sheet which is mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency which are also mandated by federal law (see Attachment C):

  "Persistence and Degradability

  Chemical degradation (hydrolysis) is expected in the environment. **Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability."**

  (emphasis added)

  "Ecotoxicity

  Material is highly toxic to aquatic organisms on an acute basis …" (emphasis added)

  This flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the Natural Areas Program. In the only case in which it provides any information, it resorts to egregious lies.

  The final Environmental Impact Report for the SNRAMP must:

  > Provide specific and current data about pesticide use by the Natural Areas Program

  > Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program

  > Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.

  If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [McAllister-3-06]

- The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP. The DEIR's claim that NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which it does not share with the reader) and an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

  However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR tells us nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP.

  This is the most significant failing of the DEIR because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees that will be destroyed will resprout if their trunks are not sprayed immediately with Garton. This initial application of Garton is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

  The DEIR acknowledges the need to use Garton on the stumps of trees that have been destroyed: "Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon) (DEIR, page 386)

  However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. We turn to the University of California at Berkeley for this information. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted the attached letter with its application to FEMA (obtained with a FOIA request) to document the cost of poisoning all of the stumps of the trees with Garlon which it predicts must be done twice per year for 10 years. (See Attachment D) Both UC Berkeley and East Bay Regional Park District are on record in their "vegetation management plans" that Roundup is not capable of preventing the resprouts of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment. (See Attachment C)

  The final Environmental Impact Report for the SNRAMP must:

  > Provide specific and current data about pesticide use by the Natural Areas Program

  > Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program

  > Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.

If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation. [McAllister-3-07]

- I live on Mt. Davidson in the city. I have been very upset with the constant reapplication of pesticides, as I walk my dogs there. I also am upset at all the trees that have been felled in the last two years. This is one of the very few places left in the city that is still a forest, a little refuge. My husband went out and talked to some of the folks from Parks and Rec while they were spraying pesticides, as well as cutting back thickets. They told him that the SF Forest Alliance was an extremist group. Perhaps it would be helpful if others knew just what the NAP's purpose was, as well as the fact that the city has a budget crisis and this is an enormous waste of taxpayer money. Thank you for your time. [Milstein-1-01]
- I have never given public comment before about anything in San Francisco. I am a consultant and extremely busy. However, I am so bothered by the use of pesticides by the Natural Areas Program of Park and Recreation that I had to get involved. I have been actively trying for the past year to stop the Natural Areas Program from using Tier 1 and Tier 2 pesticides to "kill" non-native plants. In San Francisco, the Board of Supervisors legislated that all San Francisco officers, boards, commissions, and departments of the City and County implement the Precautionary Principle in conducting the City and County's affairs. The Precautionary Principle states, "where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the City to postpone cost effective measures to prevent the degradation of the environment or protect the health of its citizens." And yet, the Department of the Environment and the Natural Areas Program justify using Tier 1 and Tier 2 pesticides even though they lack full scientific certainty about how safe they are to use. For Garlon 4 Ultra, a Tier 1 pesticide, the Department of the Environment has told me directly that while there is a study that has been conducted that raises serious concern, the methods of the study are not strong enough to justify outright banning of Garlon 4 Ultra. [Otto-1-01]
- As citizens, all we can rely on is the information that the San Francisco Department of the Environment and the manufacturer of the pesticides tell us. For Garlon 4 Ultra, the Department of the Environment limits its use "only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injection are not feasible and only with use of a respirator." The Natural Areas Program sprays the whole hillside of Glen Park Canyon with Garlon 4 Ultra to get rid of oxalis, commonly known as clover. The manufacturer of Garlon 4 Ultra publishes in their Material Safety Data Sheet that it degrades slowly in the environment, fails tests for ready biodegradability, is "highly toxic" to aquatic life and "slightly toxic" to birds. In Glen Park Canyon, along the stream, there are signs heralding this riparian community and how it serves as a resting spot for migratory birds. How ironic that the Natural Areas Program then uses pesticides that are "highly toxic" to aquatic life and "slightly toxic" to birds. The Precautionary Principle is supposed to be there to protect all of us. I worry about the wildlife

that live in Glen Canyon Park and rely on the vegetation to survive. I worry about the pre-school children who come and play in the park everyday. I worry about all the dogs who run on the trails and eat the grasses. And I worry about my city that I love so much ignoring the repeated concerns of its citizens and refusing to alter course. [Otto-1-02]

- I am vehemently opposed to the recommendations of the draft Environmental Impact Report for the Natural Areas Program. The Natural Areas Program has not effectively demonstrated its ability to:

  1. kill the non-native invasive species it poisons each year - it grows back each spring
  2. comply with regulations on how to administer the poisons - they are frequently caught applying the poisons without adequate notice or using appropriate respirators
  3. create a sustainable native plant garden without relying on toxic pesticides.

  I cannot understand how we would then turn around and give the Natural Areas Program more authority over more land to continue with these same practices. [Otto-1-03]

- I have another very great concern with the NAP, which is its use of pesticides and herbicides. As a resident of Upper Noe Valley, I often walk in Glen Canyon. So do thousands of others, day after day. And yet, Glen Canyon is one of the areas where the NAP uses herbicides and pesticides, again and again. Rec and Park itself recognizes that "visitors, kids and dogs might come in direct contact with the weed [killer]", but their only solutions are to "limit the areas" where they spray and to seek other solutions, which they state they have not found. (SF Recreation & Parks Department, "Significant Natural Resource Areas Management Plan Overview", n.d., p. 4).

  The NAP applied Garlon, a Tier I (most hazardous!) pesticide, in its "Natural Areas" 36 times in 2010 (up from 16 times in 2009). It used Roundup or Aquamaster, Tier II (hazardous) pesticides, 42 times in 2010, up from 7 times in 2009. Not only are we - adults, seniors, kids and dogs - affected by these chemicals, so are all the critters living in the NAP open spaces. In Glen Canyon, the coyotes, racoons, skunks and other wildlife have no place to go and no place to hide when these poisons are laid down, which then become part of the environment.

  While such applications are legal, they are neither safe nor right. The NAP should be reduced in scope, so that manual methods of weeding and maintenance can be used, not toxic chemicals. The native plants in Sutro Forest are not doused with chemicals; this is the direction that the NAP should go. With a smaller area, the NAP could use environmentally appropriate methods, not spraying and daubing with herbicides and pesticides. [Pittin-1-02]

- The fact that this is an urban city also brings to question the toxic herbicides that are used in the natural areas concerned, as this might cause troubling health risks to park users including seniors and children. [Reichardt-1-03]

- * Each year the Natural Areas Program relies on the use of larger and larger quantities of four toxic herbicides classified by the City as Tier I (Most Hazardous) and Tier II (More Hazardous) to prevent “invasive” plants from re-establishing themselves. All of these chemicals have been associated with serious health problems in animal and human

populations. The DEIR does not specify how much pesticide will be used to maintain Mt. Davidson as a "Natural Area." On our recent walks we saw several signs posted to notify the public that Imazapyr had been applied in the area. This is a new pesticide. What is known about it is that it does not degrade so it travels through the environment. It's a neurotoxin that can cause irreversible eye damage. And it has been banned in the EU since 2002. [Risk-1-05]

- The NAP program makes use of herbicides - this is an unhealthy and unwise decision for land that is designated for park and recreational use [Schlund-1-02]
- I am vehemently opposed to poisoning of the ground to protect newly reintroduced "native species", since the toxins enter animals' food chain and work their way up through many species to top predators. The mountain supports both local birds and flocks of migratory bird species, so the effects of poisoning transcend our city/county boundaries. Also, children and domestic pets can be poisoned. Many dog walkers regularly use this park and need full, safe access. [Thomas-1-01]
- Poisoned ground water could enter our storm drains and S.F. Bay. [Thomas-1-05]
- NAP endangers the public safety by exposing us to vector borne diseases and pesticides. Habitat restorations diminish public safety by encouraging the proliferation of mosquitoes and ticks along with the diseases they carry which affect people, dogs and horses. NAP advocates the construction of water features which become mosquito breeding grounds in San Francisco and Pacifica recreational areas. The artificial habitats created and supported by NAP have resulted in the propagation of stagnant pools of water, standing water in the stumps of trees that have been cut down, abandoned tires, and brush piles. These sites are all ideal breeding grounds for disease-borne mosquitoes. Evidence of such can be seen at such sites as Glen Park (near the children's day care facility). NAP merely states: Staff should be provided education regarding the most effective way to avoid contracting WNV, which is to not get bitten by mosquitoes. Clothing such as long pants, long-sleeved shirts, and application of a mosquito repellent may all be helpful in this regard. What about the public?

  The environmental features the CDC instructs you to remove to protect you, your family and your community from ticks are precisely the environmental features NAP is implementing.

  The CDC recommends landscaping techniques to create a tick-safe zone around homes, parks, and recreational areas:

  > Removal leaf litter, brush piles and woodpiles.

  > Clear tall grasses and brush.

  > Place wood chips or gravel between lawns and wooded areas to restrict migration to recreational areas.

  Recommendation: The natural or biodegradable (branches trees and logs) elements shall be preserved during vegetation management activities or replaced with brush piles." (note-the phrase "vegetation management activities" refers in part to their plan to cut down 15,000 eucalyptus trees merely because they are non-native. They don't intend to remove the

resultant lumber or leaf litter and the remaining stumps will become mosquito-breeding sites as well). [Valente-1-02]

- NAP exposes the public to excessive use of dangerous herbicides

  The San Francisco Department of the Environment issued NAP a variance to allow the spraying of Garlon Ultra 4, a poison that had not been permitted for use in parks in San Francisco except under extreme and limited circumstances, and then only by dabbing. The variance now allows the spraying of this chemical.

  Glen Canyon Park is a case in point. Notices were posted of impending spraying of Garlon 4 Ultra. This park has a constant stream of walkers – adults, children and dogs. A preschool and a summer camp use the park. And there is a natural creek and resident wildlife. Not only is this dangerous to utilize these types of chemicals around the public, posted notices that NAP is applying pesticides or herbicides are frequently missing the required date and time of application. People seeing the notice don't know whether the poisons were used and whether it's safe to re-enter. This is a clear violation of the SF Department of the Environment's rules regarding the use of herbicides.

  Roundup is another of the poisonous pesticides currently used in our parks and being considered as a substitute for the Garlon Ultra 4. The use of Garlon and Roundup by NAP is increasing. In 2009, NAP applied Roundup (or Aquamaster, or glyphosate) only 7 times. One year later, in 2010, they applied it 42 times. In 2009, NAP applied Garlon 16 times. In 2010, NAP applied Garlon 36 times.

  NAP has also applied pesticides that the Dept. of the Environment has not approved. For example, NAP applied Imazapyr at Pine Lake in 2009; it was not approved for use by the Dept. of the Environment until 2011. NAP has applied pesticides incorrectly. In November 2010, NAP posted that they were spraying Aquamaster near the shoreline of Lake Merced to kill ludwigia, an aquatic weed. However, Lake Merced is red-legged frog habitat, and Aquamaster is not supposed to be used within 60 feet of water bodies in red-legged frog habitat. NAP staff have been observed spraying Garlon without a respirator, as required by the Dept. of Environment.

  Garlon Ultra 4 and Roundup are not meant to be used in recreational areas.

  Scientific American published an article addressing the toxic nature of Roundup's formula in "Weed-Whacking Herbicide Proves Deadly to Human Cells". Most cancers have a cumulative variety of causes. The incidence of cancer cases is growing in dogs, and pesticides are included as one of the culprits (www.health-report.co.uk/cancer-pesticides-245T-24D.html). Indeed, Garlon may be more toxic for dogs than people because dogs' kidneys cannot excrete the chemicals of which it is composed. Will the Garlon have a similar negative effect on coyotes who call Glen Canyon and other natural areas home? No one really knows the impact of the herbicides on the wildlife (raccoons, coyotes, possums, etc.) that are currently living in the natural areas, so collateral damage to the environment and its long term effects are as yet unknown. NAP's use of chemical substances is a clear violation of the Precautionary Principle. [Valente-1-03]

- I am also concerned with the use of chemicals, including herbicides like Garlon, which is harmful to dogs. The City should stick with its IPM strategy and emphasize non-chemical methods, or discuss an adaptation strategy for non-natives that considers any ecosystem services they provide. [Vitulano-1-05]
- NAP largely is also a bad policy for the city with their environmental destruction, use of toxic sprays. [PH-Rotter-P-03]

Response HZ-1

These comments focus on the use of pesticides and herbicides by the SFRPD in terms of frequency, application methods, and volumes, toxicity for humans or wildlife, whether SFRPD complies with the requirements of the IPM, and whether use will increase with implementation of the SNRAMP. The comments also express concern for the SNRAMP's proposed use of herbicides within the Glen Canyon Natural Area, and concern that such use could result in impacts to water quality. Some comments point out an error in the Draft EIR regarding the description of Garlon®.

These comments also request information about imazapyr; suggest that the use of imazapyr and glyphosate are inappropriate and unnecessary; question whether the NAP exposes the public to excessive use of dangerous herbicides, such as Garlon Ultra 4® and Roundup®; and questions the measures used to control mosquito and tick populations. These comments express concerns about the safety of pesticide and herbicide use, including potential impacts on canids (i.e., dogs, coyotes, foxes), wildlife, and the public.

The commenters' general concern regarding the proposed use of pesticides and herbicides do not present any evidence that the proposed project would result in significant impacts with respect to the use of pesticides and herbicides.

Use of Pesticides and Herbicides[148]

Use of pesticides in the Natural Areas are applied in accordance with the IPM Program, which is codified as an Ordinance, is discussed in detail in Draft EIR Section III.E.5, Management Practices, pp. 90 and 91, and in SNRAMP Chapter 4, Integrated Pest Management, as well as in this response. The purpose of the City's Integrated Pest Management Ordinance is described in Section 300 of the Ordinance as follows: "The Board of Supervisors hereby finds and declares that it shall be the policy of the City and County of San Francisco for City departments and City contractors who apply pesticides to City property to eliminate or reduce pesticide applications on City property to the maximum extent feasible."

The use of pesticides within the Natural Areas are subject to the City's IPM Program, which provides the optimal integration of management methods to control pests with the least possible

[148] Herbicides are a type of pesticide. Pesticides are substances that kill pests, with "pests" meaning a broad spectrum of problems, such as invasive or non-native plants or mosquito or tick larvae.

hazard to people, property, and the environment. Draft EIR pp. 90 and 91 have been revised as follows to further describe the IPM Program and the decisionmaking process that guides the selection of pest-control methods:

> IPM is a multistep ecologically based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests. Conventional pest control methods attempt to control the symptoms of a pest problem, but IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem. IPM implements effective, long-term management solutions through the use of a broad range of expertise, a combination of treatment methods, and comprehensive monitoring and evaluation.
>
> In accordance with Chapter 3~~9~~ of the San Francisco ~~Administrative~~ Environment Code, the Natural Areas Program employs IPM as its strategy for preventing new and managing existing pest infestations. Four general weed management strategies exist: prevention, containment, reduction, and eradication; each of these results in a different level of weed control and reflects available resources. The Natural Areas Program's policy is to use the least-toxic control methods whenever feasible and practical. In addition, to reduce the need for pesticides, manual pest control efforts are employed by a collaborative effort between SFRPD employees and volunteers. Apart from the 10 full-time staff that conduct management and maintenance actions within the Natural Areas, the Natural Areas Program also has a robust volunteer program, with individual groups that range in size from 10 to 50 people.
>
> Factors that make manual and/or mechanical methods impractical include:
>
> - Direct threats to human health and safety (e.g., steep, inaccessible, unstable slopes, significant poison oak infestations, etc.);
> - Large infestations requiring ongoing repeated strenuous physical labor, such as picking and lifting, that may cause injury to staff, contract field crews, or volunteers; and
> - Areas where access, human trampling, or soil disturbance may directly or indirectly damage native plant communities, affect wildlife, or cause soil erosion.
>
> Management methods to be employed by the Natural Areas Program include:
>
> - Physical control methods employed by Natural Areas Program staff and volunteers, which range from hand-pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
> - ~~Biological~~Pest control,[149] which, in the case of the Natural Areas Program, involves revegetating cleared areas and introducing native plants in an area to encourage competition with weeds; and
> - Chemical control, which involves the use of herbicides to suppress wildland weeds~~; and~~, in compliance with the San Francisco Pest Management Ordinance.
> - ~~Public education and outreach.~~

[149] Pest control generally involves the management of pests (insects, diseases, weeds) by manipulation of the environment or implementation of preventive practices including using plants that are resistant to pests, raising the mowing height of turf to shade out weeds, aerating turf to reduce compaction and plant stress, or dethatching to remove habitat, food sources and impediments to management.

> Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies. The application of herbicides, including Garlon and Roundup, is not allowed within 15 feet of either side of established trails.

As a leader in making choices based on the least environmentally harmful alternatives and challenging traditional assumptions about risk management, numerous City ordinances apply a precautionary approach to specific City purchases and activities, including the Integrated Pest Management Ordinance, the Resource Efficient Building Ordinance, the Healthy Air Ordinance, the Resource Conservation Ordinance, and the Environmentally Preferable Purchasing Ordinance. Internationally, this model is called the "Precautionary Principle."

The Precautionary Principle requires a careful assessment of available alternatives for products, such as pesticides, which are evaluated through the IPM Program that may have health and environmental impacts. The evaluation process takes short-term versus long-term effects or costs into consideration and evaluates and compares the adverse or potentially adverse effects of each option, giving preference to those options with fewer potential hazards. This process allows fundamental questions to be asked, such as: "Is this potentially hazardous activity necessary?" "What less-hazardous options are available?" and "How little damage is possible?" The Precautionary Principle is described in Chapter 1 of the City's Environment Code, which is provided in the City's Municipal Code.[150]

As stated in the SNRAMP, and more fully described in this response, the SFRPD employs a least toxic decision-making model for its vegetation management activities, which means that it first uses the least-toxic pest control methods, combining methods as necessary. If more conventional treatment methods are required, and only if the least-toxic pest control methods are unsuccessful, pesticides may be used in a controlled manner and in small quantities as part of routine maintenance in the Natural Areas to control invasive vegetation and other pests. Under the SNRAMP, only herbicides specifically labeled for aquatic use by the United States Environmental Protection Agency would be applied to wetlands and to areas next to waterbodies. Despite the emphasis on hand, mechanical, and alternative methods of removal, pesticides may be necessary to control invasive weeds and other pests (such as mosquitos or ticks) in Natural Areas when other methods are not feasible.

With specific regard to non-weed pests, the Department of the Environment maintains a Reduced Risk Pesticide List that contains pesticides and vector control products that can be used by City staff or contractors when managing pests on City-owned properties. The 2014 Reduced Risk Pesticide List contains a total of 51 general use pesticides, and of those, there are 10 herbicides. There are also pesticides for specific application on golf courses and 7 vector control products for use treating

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150 The San Francisco Municipal Code is current through Ordinance 33-16, File No. 160115, approved March 11, 2016, effective April 10, 2016. The Environment Code was last amended by Proposition H, which was approved by the voters at the election of November 3, 2015.

mosquitoes, ticks, and rodents. It is maintained and updated annually as part of San Francisco's IPM Program. These pesticide products may be used only as a last resort after other, nonchemical management options have been exhausted, as required by the least-toxic decision-making model described in the SNRAMP. According to the SFRPD website,[151] over the last 12 years, the NAP has tried hand weeding to control a handful of invasive species, but found that hand removal does not always fully and effectively remove aggressive invasive species.

Each of the products on the list has been (1) screened using the San Francisco Pesticide Hazard Screening Protocol; (2) reviewed by the San Francisco IPM Technical Advisory Committee (IPM TAC – the IPM TAC is convened by the Department of the Environment and is composed of City IPM Coordinators, contractors, IPM specialists from non-City agencies, and other interested parties. Each year the TAC considers product hazards, potential for exposure, data gaps, and existence of safer alternatives before placing products on the List.); (3) presented at a public hearing; and (4) approved by the Commission on the Environment. The SFRPD is a member of the Department of Environment's IPM Technical Advisory Committee.

The toxicity of the pesticides is thoroughly evaluated through a hazard assessment conducted by an independent toxicologist prior to being placed on the Reduced Risk Pesticide List.

City departments must request a temporary exemption in order to use a pesticide that is not listed on the Department of the Environment's current Reduced Risk Pesticide List. Prior to granting or denying a temporary exemption, the Department of the Environment reviews a written justification for the exemption and determines if the request would present an unacceptable risk to public health and safety or the environment. Each request for exemption must contain a written justification, which is thoroughly reviewed by the Department of the Environment, with exemptions only granted when there is a well-documented need for the pesticide and all other alternatives have been tried and deemed impractical or for the trial use of new reduced-risk products. If the exemption is approved, any limitations necessary to protect public health and safety and the environment are detailed. Typical limitations include the date range, location, and methods of application that are approved. Pesticide applications covered by an approved exemption are not considered violations of the IPM Ordinance.

Since the publication of the Draft EIR, the Reduced-Risk Pesticide List has been updated and it is expected that this list will continue to be revised as information becomes available and better products are introduced into the market. All pesticides and herbicides currently used by the NAP are listed on the 2014 San Francisco Reduced-Risk Pesticide List and, as the list is updated, the NAP will continue to use pesticides and herbicides listed on the most current San Francisco Reduced-Risk Pesticide List, unless they request and receive an exemption. More detailed information about the

[151] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on November 11, 2015.

pesticides currently used in the NAP is provided below, in the section entitled "Specific Types of Pesticides Currently Used in the Natural Areas."

Summary of EIR Conclusions Relative to Pesticide Use

Draft EIR p. 392 (in Impact HZ-7) concluded that a less-than-significant impact would occur with respect to hazardous conditions occurring as a result of the application of pesticides for vegetation control because: (1) only aquatic-specific herbicides would be applied in or next to waterbodies; (2) pesticides and herbicides would be implemented only when other means, such as physical or biological control, would not be sufficient; (3) pesticides (including herbicides) would only be applied by trained personnel in a manner consistent with the manufacturer's label; (4) the public would be alerted of a scheduled application by posting a notice in a prominent location three days before the application and for four days after the application; (5) all use of pesticides would be recorded by the SFRPD and forwarded to the San Francisco Department of the Environment; and (6) the NAP would use pesticides that are the least toxic option that effectively controls the weed.

Draft EIR Section V.G, Biological Resources, pp. 294 to 333, evaluates impacts on biological resources due to pesticide and herbicide use, as follows: Impacts BI-1 (impacts on special-status species, Draft EIR p. 295); BI-2 (impacts on special-status bird species, Draft EIR pp. 304 to 305); BI-4 (impacts on special-status aquatic species, Draft EIR pp. 309 to 312); and BI-7 (impacts on sensitive natural communities, Draft EIR pp. 330 to 331). The Draft EIR concludes that all impacts could be mitigated to a less-than-significant level. With respect to vegetation, pesticides would be specifically applied to invasive, nonnative vegetation and would not be used on special status plants or sensitive natural communities. Further, the SFRPD would adhere to the City's IPM Program, which requires that pesticide use in the Natural Areas be applied in as little quantities as possible to achieve the desired results; the application would be carefully monitored; and the SFRPD would use the least toxic methods and materials that are appropriate for the environment in which they are applied. Due to the low toxicity of the pesticides that would be applied, Draft EIR p. 305 concluded that accumulation in the environment would not likely result in adverse impacts to protected bird species, and the removed vegetation would be replaced with native vegetation, which provides higher quality habitat.

The potential effects of pesticide use, including Garlon® on biological resources are addressed in the following sections of the Draft EIR: Impact BI-1, on Draft EIR p. 295, impacts on special-status plant species; Impact BI-2, on Draft EIR pp. 304 to 305, impacts on special-status bird species; and Impact BI-4, Draft EIR pp. 309 to 312, impact on special-status aquatic species.

Similar to the analysis of impacts to biological resources, in Section V.H, Hydrology and Water Quality, Draft EIR p. 365 concludes that pesticide use in the Natural Areas would have less-than-significant environmental impacts to water quality because SFRPD would use as little pesticide as possible to achieve the desired results; its application would be carefully monitored; it would involve the use of the least toxic methods and materials that are appropriate to the environment in

which they are applied; and it would adhere to the requirements of the IPM Program, as well as any applicable federal, state, and county pesticide regulations. Further, as also stated on Draft EIR p. 92 "Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies." Therefore, the Draft EIR determined that impacts related to pesticide use near waterbodies, such as the stream that runs through Glen Canyon Park, would be reduced to a less-than-significant level.

As described in Draft EIR Section V.I.2, Environmental Setting, and Section V.I.3, Impacts (in Impacts HZ-7, HZ-9, and HZ-11 on Draft EIR pp. 391 through 393), the SNRAMP employs several measures to ensure that pesticide application does not endanger public health and safety in terms of the exposure to hazardous conditions. Among these are following the manufacturer's label, posting notices of pesticide application, and adhering to the requirements of the IPM Program and IPM Ordinance, as well as any applicable federal, state, and county pesticide regulations. Further, as previously stated, the SFRPD employs a least toxic decision-making model for its vegetation management activities, which means that it first uses the least-toxic pest control methods, combining methods as necessary.

The CEQA analysis provided in the Draft EIR compares the baseline (or existing conditions) at the project site, with the potential environmental impacts that would result from the proposed project; it does not analyze the impacts of current practices, except where they may appropriately be considered in a cumulative impact analysis. Pesticide use under the SNRAMP is expected to be substantially similar to the current use of pesticides in Natural Areas since the existing controls would continue to be in place.

In summary, the IPM Program promotes nonchemical control strategies. Where pesticides must be used, an additional layer of precaution is provided by the Department of the Environment's IPM Program. Only pesticides specifically allowed Department of the Environment on the Reduced Risk Pesticide List, which is published by the Department of the Environment and updated annually by San Francisco's IPM Program, can be used, unless an exemption is granted. Further, the IPM Ordinance requires that herbicide applicators are trained and are required to follow the manufacturer's label when applying pesticides. Signs alerting the public of a scheduled spray must be posted in a prominent location three days before the application and must remain posted for four days after the application. Lastly, any use of pesticides or herbicides must also follow the manufacturer's label, adhere to limitations stipulated by the San Francisco Department of Environment, and comply with all federal, state, and county pesticide regulations.

Specific Types of Pesticides Currently Used in the Natural Areas

Of the pesticides identified on the Reduced-Risk Pesticide List, the NAP currently (as of 2014) uses four types of pesticides or herbicides; glyphosate (AquaMaster®), imazapyr (Habitat® and Stalker®), triclopyr (Garlon 4 Ultra®), and aminopyralid (Milestone®). As previously mentioned, since the Draft EIR was written, the Reduced-Risk Pesticide List has been updated and it is expected

that this list will continue to be revised as information becomes available and better products are introduced into the market. As the list is updated, the NAP will continue to use pesticides and herbicides listed on the most current San Francisco Reduced-risk Pesticide List, unless they request and receive an exemption.

According to SNRAMP p. 4-5, in 2004, the NAP used less than 10 percent of the overall SFRPD herbicide usage (P. Rossi, pers. comm. 2005), although the Natural Areas account for approximately 25 percent of the land managed by the SFRPD. Based on information provided in the Department of the Environment's database, in 2011, approximately 1.3 pounds of triclopyr were used in the Natural Areas as compared to 21.6 pounds of triclopyr that were used by SFRPD throughout the land it manages, which represents only 6 percent of the total triclopyr usage. Overall, the Natural Areas use the lowest amount of pesticides (at 4 percent) as compared to other divisions within SFRPD, despite accounting for over 40 percent of the parkland under SFRPD control.[152] Further, while the number of applications may have increased, the total use of glyphosate, triclopyr, imazapyr, and aminopyralid has substantially declined since 2003, with all three pesticides being used at levels of less than 4 pounds per year each, and imazapyr and aminopyralid being used at levels of less than 1 pound per year each.[153] Also, it is the practice of the SFRPD to use herbicides in Natural Areas and parks as a last resort to combat invasive weeds.

In response to the comments about pesticide/herbicide use and safety, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 386 (after the first full paragraph) has been changed as follows, to provide more information about the Reduced-Risk Pesticide List:

> San Francisco's IPM Program maintains a Reduced Risk Pesticide List that is updated annually. It is a list of the only pesticides approved for use on City-owned property without an approved exemption. In addition to an initial screening by the EPA, each pesticide on the list goes through a four-step screening process prior to being added to the list:
>
> 1. First, it is screened using the San Francisco Pesticide Hazard Screening Protocol, which is available on the San Francisco Department of the Environment's website at http://sfenvironment.org/article/pest-management/managing-pests-on-City-properties. This screening includes a hazard assessment and an exposure assessment.
> 2. Second, it is reviewed by the San Francisco IPM Technical Advisory Committee, which is composed of City IPM Coordinators, contractors, IPM specialists from non-City agencies, and other interested parties. Each year, the committee considers product hazards, potential for exposure, data gaps, and existence of safer alternatives before placing products on the Reduced Risk Pesticide List.
> 3. Third, it is presented at a public hearing, where the public is invited to comment.

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152 San Francisco Department of the Environment. *Pesticide Use in Significant Natural Areas, San Francisco Recreation and Park Department.* 2014.

153 San Francisco Department of the Environment. *Pestricide Use in Significant Natural Areas, San Francisco Recreation and Park Department*. 2014.

4. Finally, the Commission on the Environment approves or rejects its inclusion on the Reduced Risk Pesticide List.

City Departments must request a temporary exemption in order to use a pesticide that is not on the San Francisco Department of the Environment's current Reduced Risk Pesticide List. Each request for exemption must contain a written justification that is thoroughly reviewed by the San Francisco Department of the Environment, which will only grant exemptions when there is a well-documented need for the pesticide and when all other alternatives have been tried and deemed impractical or for the trial use of new reduced risk products. If the exemption is approved, any limitations necessary to protect public health and safety and the environment are detailed. Typical limitations include the date range, location, and methods of application that are approved. Pesticide applications covered by an approved exemption are not considered violations of the IPM Ordinance.

Text will also be added to the Draft EIR to clarify the discussion concerning the difference between the current use of pesticides and use of pesticides as a result of implementation of the SNRAMP. The text on Draft EIR p. 391 has been modified, as indicated in RTC Section 5.A, Changes in Response to Comments, p. 5-1, as follows:

The amount and frequency of pesticide applications as a result of implementation of the SNRAMP would be similar to what currently occurs within the NAP areas and what has occurred over the past 10 years. Although it will sometimes be necessary to treat vegetation with pesticides containing active ingredients such as glyphosate, triclopyr, imazapyr, and aminopyralid after removal, vegetation removal activities would occur gradually over time (over 20 years). Pesticide use would fluctuate from year to year, as it does now, for multiple reasons, including the vegetation to be removed, the timeframe of those projects, weather, and the number and types of pests present.

The SFRPD acknowledges that mistakes have been made in the past with respect to pesticide application and posting; however, once discovered, the circumstance has been fully corrected. SFRPD complies with all applicable laws and regulations, as well as the IPM Ordinance; therefore, the Draft EIR assumes compliance with applicable laws and regulations, as well as the IPM, in implementation of the SNRAMP. As discussed on Draft EIR pp. 385 and 391, it is the NAP's policy to comply with San Francisco's IPM Ordinance. In addition, the NAP must comply with state and federal pesticide regulations; therefore, future compliance is assumed.

Use and Toxicity of Garlon 4 Ultra®, AquaMaster®, and Imazapyr

Based on information provided in the Department of the Environment's database, in 2011, approximately 1.3 pounds of triclopyr (under the product name Garlon®) were used in the Natural Areas as compared to 21.6 pounds of triclopyr that were used by SFRPD throughout the land it manages, which represents only 6 percent of the total triclopyr usage. SFRPD does not use Garlon® in or near lakes, waterbodies, or streams, consistent with the manufacturer's recommendations. Further, Garlon® is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity. As described in Draft EIR Section III.E.5, only aquatic-specific herbicides, such as AquaMaster®, would be applied to wetlands and to areas next to waterbodies.

With respect to the Draft EIR statements concerning Garlon®, there are two Garlon® products, Garlon 3® and Garlon 4 Ultra®, with different forms of the active ingredient triclopyr. SFRPD previously used Garlon 3® for terrestrial applications (and Garlon 3® was being used when the Draft EIR was distributed for public review); however, SFRPD is presently using Garlon 4 Ultra® for terrestrial applications. Garlon 4 Ultra® provides better control of invasive, woody plants and herbaceous broadleaf weeds than Garlon 3®, and it contains no petroleum distillates; however, it cannot be used in aquatic environments (for that purpose, other pesticides, such as AquaMaster®, are used).

It appears the commenters claims were based on information for Garlon 4 Ultra®. The active ingredient in Garlon 4 Ultra® is triclopyr-2-butoxyethyl ester (BEE). BEE is considered to be toxic to aquatic organisms and, therefore, is not recommended for use in aquatic environments or in proximity to aquatic environments. Also, application is recommended during dry weather conditions, when migration to an aquatic environment is unlikely. BEE is registered for residential uses, such as on turf, and has low toxicity to humans and most animals.

BEE degrades rapidly (within hours to several days) through exposure to sunlight and by microbial degradation in soils. If applied away from aquatic environments and during dry weather periods, BEE is not expected to pose a significant threat to the environment. Extensive literature is available regarding the use and effects of BEE. Sources include the United States Environmental Protection Agency's Registration Eligibility Decision (RED) document (EPA 1998); the EPA's report on the risks of triclopyr use to red-legged frogs (EPA 2009), and the National Marine Fisheries Service biological opinion on the effects of BEE on endangered species (NMFS 2011). A risk assessment for triclopyr prepared for the US Forest Service[154] also contains a detailed literature review (Durkin 2003).

Based on the Material Safety Data Sheet (MSDS) for Garlon 4 Ultra® (dated May 17, 2015),[155] some of the commenters claims did not appear in the most recent MSDS; however, as the commenter mentioned, and as affirmed in this response, the MSDS for Garlon 4 Ultra® did indicate that it is

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154 Revised Human Health and Ecological Risk Assessments Final Report, Prepared for: USDA, Forest Service, Forest Health Protection, GSA Contract No. GS-10F-0082F, USDA Forest Service BPA: WO-01-3187-0150, USDA Purchase Order No.: 43-1387-2-0245, Task No. 13, Submitted to: Dave Thomas, COTR, Forest Health Protection Staff, USDA Forest Service, Rosslyn Plaza Building C, Room 7129C, 1601 North Kent Street, Arlington, VA 22209, Submitted by: Patrick R. Durkin, Syracuse Environmental Research Associates, Inc., 5100 Highbridge St., 42C, Fayetteville, New York 13066-0950, March 15, 2003. This document is available online at: www.fs.fed.us/r5/hfqlg/.../2003_triclopyr.pdf, accessed June 7, 2016.

155 http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCUQFjABahUKEwisl8jwvLjHAhXIK4gKHR_NDCA&url=http%3A%2F%2Fwww.cdms.net%2FLDat%2Fmp7IN012.pdf&ei=QDXWVaz3KMjXoASfmrOAAg&usg=AFQjCNEUlBsjkXuW2xmndMWP3GXLUpxzlQ&sig2=IXLHxqrQrjXxJ41ir7ikRw, accessed on August 20, 2015.

highly toxic to aquatic organisms on an acute basis to the most sensitive species tested. The company that manufactures Garlon®, Dow AgroSciences, indicates that:[156]

> As you can see in the Exposure Assessment Chart above, there's a large margin of safety for birds. However, you'll find no additional margin of safety figures of aquatic organisms. This reflects laboratory studies showing that triclopyr applied directly to water and artificially maintained for 96 hours at a concentration equal to 2 quarts per acre, in a 1-foot-deep stream or pond, is potentially harmful to aquatic organisms.
>
> Scientists conducting field trials in a natural aquatic setting find it's impossible to maintain that laboratory concentration for 96 hours due primarily to natural degradation of the active ingredient. These study results for Garlon 4 Ultra show that the moderately toxic ester formulation quickly converts to the practically nontoxic technical acid within a few hours. In other words, even intentional applications to water in outdoor field trials did not reach toxic levels for the length of time necessary to cause harm.
>
> Although these aquatic studies indicate some margin of safety, label directions do not permit Garlon 4 Ultra to be applied to water. In addition, the label directions specify a buffer zone (land where no herbicide can be applied) be left between the application site and any lakes, rivers or streams to add an extra measure of protection.

The SFRPD uses Garlon 4 Ultra® in accordance with the instructions for its use, and Garlon 4 Ultra® is only applied by appropriately-trained personnel. All precautions are taken to protect workers, visitors, and the environment, including avoiding applications near aquatic environments. While care must be taken to avoid exposure to high concentrations of the herbicide (such as might impact workers mixing or handling the product), the active ingredient in Garlon 4 Ultra®, BEE, is not toxic to humans at the concentrations expected to be present shortly after the applications are completed.

The UCSF also prepared a Mount Sutro Herbicide Risk Assessment[157] to determine, in part, the risks associated with using two herbicides (AquaMaster® and Garlon 4 Ultra®). This report concludes that by adhering to specific application guidelines and improvement measures outlined in the Mount Sutro Management Project Draft EIR, the probability of an accidental spill is considered improbable to highly improbable. The likelihood that the general public or wildlife could be exposed to hazardous conditions is largely improbable, although certain exposures (e.g., dermal contact by the public wearing shorts or wildlife consumption as 30 percent of diet) are possible. The likelihood for contamination after peak herbicide runoff is probable.

As stated on page 1-21 of the UCSF Mount Sutro Herbicide Risk Assessment (provided in Appendix G of the Mount Sutro Management Project Draft EIR), herbicide applicators are likely to have the

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156 http://msdssearch.dow.com/PublishedLiteratureDAS/dh_08b7/0901b803808b7d68.pdf?filepath=ivm/pdfs/noreg/010-50546.pdf&fromPage=GetDoc, accessed on August 7, 2014.

157 Pesticide Research Institute, *University of California San Francisco (UCSF) Mount Sutro Herbicide Risk Assessment*, April 25, 2012, pp. 1-20 and 1-21. This document is included as Appendix G to the Mount Sutro Management Project Draft EIR.

highest exposures, since they would be working directly with the chemicals. Visitors to Mount Sutro could be exposed through contact with treated plants or nearby soils, rocks, and logs. Terrestrial wildlife could be exposed through direct spray contact, by eating contaminated food or drinking contaminated water, and through contact with treated surfaces; aquatic organisms could be exposed if herbicides are spilled into puddles, pools, or ruts, or if runoff of herbicide-contaminated water from treated sites occurs. The hazard quotient for the most likely exposure scenario for someone who wears contaminated gloves for one minute (an event that is considered to be likely to occur for workers applying herbicide) is 0.000021, which is less than one hundredth of one percent of the reference dose of 2 mg/kg-day. The Mount Sutro Management Project Draft EIR concluded that the use of herbicides would result in less-than-significant project-related and cumulative impacts on human health, terrestrial wildlife species, aquatic wildlife, water quality, and vegetation. By comparison, at Mount Sutro, Garlon® is used at an application rate of one to four quarts per acre, whereas in the 1,107 acres of the Natural Areas, during all of 2004, less than 8 quarts were used (refer to SNRAMP p. 4-5).

To determine potential impacts of triclopyr on canids (i.e., dogs, coyotes, foxes), the SFRPD retained the Pesticide Research Institute to conduct a United States Forest Service (USFS) risk assessment to determine the hazard potential.[158] The Pesticide Research Institute used the acute and chronic worksheets for a large mammal, changing the coefficients to match those of a canid, instead of an herbivore, and changing the weight of the animal to 30 kilograms (kg).

The HQ is the ratio of the expected intake of the chemical (for a particular exposure scenario, such as acute or chronic) divided by the toxic reference value for that chemical (TRV). Essentially, the HQ provides the threshold for each exposure scenario. To exceed a HQ of 1, which is the chronic toxicity threshold, a 30 kg (or 66 lb) dog would have to eat 2.1 kg (4.63 lbs) of grass per day, if the grass were treated at 1 lb/acre. For a treatment rate of 9 lbs/acre, the same dog would have to eat 0.22 kg (or 0.48 lbs) of grass per day. By comparison, the NAP uses less than 2 gallons (or 16.7 pounds) of Garlon 4 Ultra® over the 1,100 acres represented by the NAP, which translates to a treatment of 0.02 lbs/acre. Therefore, a 30 kg dog would have to eat far more grass per day (at least 232 lbs per day) in order to experience a chronic or acute reaction.

In addition, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 392 (lines 26 to 29) has been changed, as follows:

> Further, the Natural Areas Program would use pesticides that are the least toxic option that effectively controls the weeds. <u>Because the application of herbicides are applied following IPM guidance, as well as the fact that staff remain onsite until the application has dried and it is safe to re-enter the area, dogs that are walked on leash as required by SFRPD rules would not risk an unsafe level of exposure to herbicides.</u>

[158] Email from Dr. Susan E. Kegley, Pesticide Research Institute, to Stacy Bradley, SFRPD, and Terri Avila, ESA, entitled "Dog Eating Grass," June 8, 2016.

> ~~Therefore,~~ For the reasons stated above, impacts from applying herbicides as part of the IPM for programmatic projects under the SNRAMP would be ***less than significant***.

Comments suggesting that SFRPD uses Garlon® to control eucalyptus are incorrect; as previously mentioned, SFRPD applies Garlon® only to control grasslands. Further, as described in Draft EIR Section III.E.5, Management Practices, p. 91, only aquatic-specific herbicides would be applied to wetlands and to areas next to waterbodies.

With regard to imazapyr, and whether it was mentioned in the Draft EIR, p. 365 states that the primary herbicides used by the SFRPD in the Natural Areas are glyphosate (under the trade name AquaMaster®), imazapyr (Habitat® and Stalker®), triclopyr (Garlon 4 Ultra®), and aminopyralid (Milestone®).

The Human Health and Ecological Risk Assessment for Imazapyr (as prepared by Syracuse Environmental Research for the United States Department of Agriculture, Forest Service) states the following in terms of toxicity:[159]

> "While adverse effects on plants may be anticipated, there is no basis for asserting that applications of imazapyr will pose any substantial risk to humans or other species of animals. The U.S. EPA/OPP classifies imazapyr as practically non-toxic to mammals, birds, honeybees, fish, and aquatic invertebrates. This classification is clearly justified. None of the expected (non-accidental) exposures to these groups of animals raise substantial concern; indeed, most accidental exposures raise only minimal concern. The major uncertainties regarding potential toxic effects in animals are associated with the lack of toxicity data on reptiles and amphibians."

While the NAP still uses glyphosate, imazapyr, triclopyr, and aminopyralid, which are the chemical names for the herbicides that are used, the specific products that the NAP uses may vary (e.g., AquaMaster is currently used, rather than Roundup or Rodeo), with the NAP always striving to use the least toxic pest control methods, as previously mentioned. Further, product names can change, as well. Therefore, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 365 (second full paragraph) has been changed to address the comments above, as follows:

> The primary herbicides used by the SFRPD in the Natural Areas are glyphosate (under the trade name~~s Roundup,~~ Aquamaster~~, and Rodeo~~), imazapyr (Habitat and ~~Polaris~~Stalker), triclopyr (Garlon), and aminopyralid (Milestone). Glyphosate~~, the primary product used,~~ is a broad spectrum, nonselective systemic herbicide that is effective against weeds; it has low toxicity to wildlife but moderate toxicity to fish (Monsanto 2005). ~~Roundup~~Aquamaster binds tightly to soil, which reduces the potential for migration to surface water or groundwater. Garlon is a selective systemic herbicide that controls broadleaf weeds without harming grasses. ~~It~~ Two forms of Garlon are currently available: Garlon 3 and Garlon 4 Ultra. The SFRPD has used Garlon 3 in the past and

[159] Syracuse Environmental Research Associates, *Imazapyr, Human Health and Ecological Risk Assessment, Final Report,* December 16, 2011.

> is currently using Garlon 4 Ultra. Each contains a different form of the active ingredient triclopyr. The form present in Garlon 3 degrades quickly in the environment and has low toxicity to aquatic species (Dow 2009). The active ingredient in Garlon 4 Ultra is triclopyr-2-butoxyethyl ester (BEE). BEE is considered to be highly toxic to fish and aquatic organisms and therefore is not recommended for use in aquatic environments or in proximity to aquatic environments. BEE degrades rapidly (within hours to several days) through exposure to sunlight and by microbial degradation in soils. If applied away from aquatic environments and during dry weather periods, BEE is not expected to pose a significant threat to the environment. Extensive literature is available regarding the use and effects of BEE. Sources include the EPA's Registration Eligibility Decision (RED) document (EPA 1998); the EPA's report on the risks of triclopyr use to red-legged frogs (EPA 2009), and the National Marine Fisheries Service biological opinion on effects of BEE on endangered species (NMFS 2011). A risk assessment for triclopyr prepared for the US Forest Service also contains a detailed literature review (Durkin 2003).
>
> The SFRPD and the San Francisco Department of Environment are looking at alternatives to Garlon ~~is being phased out from~~ for use in the Natural Areas; however, ~~and is only used for invasive plants in biologically diverse grasslands due to its target specificity.~~ a~~A~~s described in Section III.E.5, only aquatic-specific herbicides, such as ~~Rodeo~~Aquamaster, ~~and Habitat~~ would be applied to wetlands and to areas next to water bodies.

While the above text has been changed in the Draft EIR, which represents the portion of the document that most specifically addresses the pesticides and herbicides used in the Natural Areas, the Draft EIR includes numerous other references to products that are no longer used (e.g., Rodeo or Roundup) and product names that may have changed (e.g., Garlon 3® to Garlon 4 Ultra®); however, the chemicals that are used remain the same (glyphosate, imazapyr, triclopyr, and aminopyralid). Further, as previously mentioned, while the specific products that the NAP uses may vary and the product names may change, the NAP strives to use the least toxic pest control methods. Therefore, the Draft EIR has not been revised to change every reference to product names.

Mosquito and Tick Populations[160]

The NAP's procedures for controlling mosquito and tick populations and eliminating breeding habitat are described in Draft EIR Section V.I.2, Environmental Setting, under the subheading "Mosquito and Tick Control." Specifically, Draft EIR p. 386 states that "The San Francisco Department of the Environment implements the San Francisco IPM program to control mosquitoes and to prevent insect-borne diseases, including the West Nile virus. The city's program emphasizes the elimination of breeding habitat and the use of least-toxic larvicides to target mosquitoes at their most vulnerable stage, before they emerge as adults (San Francisco Department of the Environment 2005)."

The impacts of the proposed project on mosquito and tick control would be less than significant as concluded in Section V.I.3, Impacts, Impact HZ-2, Impact HZ-4, and Impact HZ-6 for the same reasons as identified for the use of pesticides, which are previously addressed in this response.

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160 Similar to an herbicide being a form of a pesticide (with the "pest" considered unwanted vegetation), a larvicide is also a form of a pesticide (with the "pest" considered mosquito or tick larvae).

Comment HZ-2	**Public safety impacts from closure and relocation of dog play areas**

The response to Comment HZ-2 addresses all or part of the following individual comment:

SFDOG-2-19

- The NAP EIR does not consider the impact on public safety if DPAs are closed, and especially if 80% of the legal off-leash space is ultimately closed. People with dogs are major park users in nearly every park. They are in the parks at all hours of the day (and often into the night), in rain or shine. Public safety officials have known for years that a well-used park is a safe park. People (and especially those with dogs) convince drug dealers, gang bamgers, rapists, robbers and other "bad actors" to go somewhere else to commit their crimes. By kicking out people with dogs, the parks will have significantly fewer people in them, and criminals will have less fear of being observed. Prospect Park in New York City was a well known drug dealing haven in the early 1970s (there were even movies made about it). In an article in the September 29, 2005 edition of the New York Daily News, Tupper Thomas, who was appointed the New York City Parks Administrator in 1980, was quoted as saying, "Everybody was terrified of Prospect Park. I remember going around to several schools with a park ranger and telling the principals that if they brought their schoolchildren to the park, I would assign them their own personal ranger to make sure nothing happened to them." Today, Prospect Park hosts several million visitors annually. According to the article, dogs deserve a lot of the credit for the turnaround. Despite the threat of muggings, people with dogs still used the park. In 1982, the NYC Parks Department started ticketing people with dogs in Prospect Park. They complained and in response, the Parks Department came up with a timed-use policy – dogs could be off-leash in the park from 9 pm to 9 am. In the article Thomas goes on to say," That dog group became a symbol that it was safe to come to the park. It made an enormous difference. Runners started seeing people in the park, so people started running in the park rather than around it. Over time, because there were people coming to the park, the park came back to the people." The NAP EIR has to consider the negative impacts on public safety of forcing major park users out of large portions of city parks, especially with the potential 80% closures of DPAs. Force the people with dogs out, and there will be no one in the parks to challenge the drug dealers, gang bangers, and others who pose a real public safety threat, and the parks will ultimately become less safe. [SFDOG-2-19]

Response HZ-2

This comment relates to whether the closure or relocation of DPAs would result in secondary impacts related to public safety.

The commenter incorrectly states that 80 percent of the legal off-leash space would be ultimately closed. Instead, as stated in Response G-25, RTC p. 4-106, and as reflected in Draft EIR Table 5 (p. 114), 20 percent (or 19.3 acres of the 95.2 total acreage of DPAs) of off-leash DPAs would be converted to native habitats. Approximately 75.9 acres of DPAs within Natural Areas would remain.

Instead, dogs are welcome, on leash, at all SFRPD parks. In fact, within the 31 parks that contain Natural Areas within San Francisco and at Sharp Park, there are a total of approximately 2,724 acres of parkland that would be available for on-leash dog use (refer to Table 5 of the Draft EIR), and additional park acreage is available at other parks throughout the city. Further, approximately 75.9 acres of off-leash DPAs would also be available. The number of park visitors walking dogs on-leash would be expected to be similar to current levels or increase in parks near DPAs that were closed or reduced in size. Therefore, to the extent that the current use of Natural Areas by visitors (some with dogs) provides a deterrent to crime, the activities proposed under the SNRAMP would not present a change in conditions (such as visitorship) that would be expected increase or decrease crime.

As discussed in Draft EIR Section V.F.2, Environmental Setting, recreation activities that take place in Natural Areas include walking, hiking, running, dog walking, and nature watching. Of the individuals surveyed for a 2004 SFRPD Recreation Assessment, 67 percent participated in running or walking, the highest percentage for any of the 26 activities identified in the survey. Other activities that San Francisco residents participate in included visiting nature areas (61 percent, second on the activities list), bicycling (38 percent, fifth on the activities list), volunteering (22 percent, tenth on the activities list), and dog walking (20 percent, twelfth on the activities list). Based on this usage information, it is not reasonable to conclude that the closure of some DPAs would reduce overall park visitation substantially such that a public safety hazard would result. Further, the SNRAMP has an express goal related to public safety; as stated on SNRAMP p. 2-2, one of the goals of the SNRAMP is "To design and maintain landscapes that promote public safety."

Comment HZ-3 Concerns regarding contaminated sites

The response to Comment HZ-3 addresses all or part of the following individual comment:

Valente-1-04

- NAP refuses to prioritize legitimate safety issues over habitat creation. NAP proposals for Lake Merced and Sharp Park make no mention of the need for toxic lead waste cleanup as part of any rehabilitation of these parks. In both cases, there is toxic lead in the soil in old rifle range areas that currently endangers wildlife and water quality. At Sharp Park, SFRPD has been promising cleanup since 1994, often citing the expense as a factor preventing completion of this task. How is it SFRPD justifies spending millions of dollars "reinventing" our parks to suit the desires of a few native plant enthusiasts, while toxic waste is allowed to persist in damaging our environment? [Valente-1-04]

Response HZ-3

This comment expresses a concern about whether there is a need for toxic lead waste cleanup at Lake Merced and Sharp Park in association with restoration activities.

As discussed in Draft EIR Section V.I.2, Environmental Setting, the corrective action for lead-contaminated soil at the former rifle range in Sharp Park has been completed. Therefore, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 387 (last paragraph) has been changed, as follows:

> The SFRPD used to maintain a rifle range in Sharp Park. This facility has been closed for over 13 years. Located near the archery club, this facility is outside of the Natural Areas at Sharp Park. A soil and groundwater investigation identified the presence of lead, polycyclic aromatic hydrocarbons, antimony, and arsenic in soil in an area covering approximately 4 acres; groundwater was not impacted (DTSC 2009). The Department of Toxic Substances Control issued a Notice of Exemption on August 5, 2009, for the removal action work plan for consolidation of lead-contaminated soil at the former Sharp Park Rifle Range. Implementation of the work plan involves the excavation of approximately 12,000 to 16,000 cubic yards of contaminated soil, which would be placed on-site and covered with imported clean soil (DTSC 2009). These cleanup and remediation activities ~~have been~~ were completed in January 2011. Contaminated soil in the area was excavated, consolidated onto a 1.35-acre portion of the site, and covered with 2 feet of clean soil to prevent exposure to contaminants. SFRPD will continue to monitor and periodically report to the Department of Toxic Substances Control on the effectiveness of this corrective action.

The Pacific Rod and Gun Club, which is closed at this time, was located on the western side of the South Lake of Lake Merced, outside of the Natural Areas boundary. The site was subject to a recent soil remediation project. As a result, the text on Draft EIR p. 387 (following the last paragraph) has been changed, as follows, to reflect the new information that became available in March 2016 regarding the Pacific Rod and Gun Club Upland Soil Remedial Action Project:

> The San Francisco Public Utilities Commission (SFPUC) has completed the Pacific Rod and Gun Club Upland Soil Remedial Action Project, which included the remediation of upland[161] soil contamination at the former Pacific Rod and Gun Club (PRGC) site in compliance with RWQCB Order No. R2-2013-0023. The site is located on the southwest side of Lake Merced. The City and County of San Francisco own the approximately 10-acre property, which is managed by SFPUC. SFPUC had leased the site to the PRGC, which had built and operated skeet and trap shooting facilities there since 1934.
>
> On March 4, 2016, final site inspections were conducted with respect to the completion of the remediation project; however, the Contractor is still maintaining the newly planted vegetation, and restored wetlands and is also required to ensure that the site is stable with respect to stormwater management before the project is deemed entirely complete.
>
> In completing the remediation aspects of the project, the following objectives have been achieved:
>
> - Achieve the highest cleanup standards to minimize the risk of human exposure to elevated concentrations of lead, PAHs, and arsenic in site soils; this would avoid restrictions on site use and additional ongoing monitoring and maintenance requirements
> - Reduce the potential for leaching of contaminants into Lake Merced

[161] Upland refers to the elevated areas lying above the level where water flows or where flooding occurs.

A Final Mitigation Negative Declaration (Case No. 2013.1220E) was published on October 23, 2014, which indicated that all impacts would be less than significant or mitigated to a less-than-significant level.

For the reasons documented in Draft EIR Section V.I.2, Environmental Setting, as revised based upon the cleanup information provided for the Sharp Park Rifle Range and the Pacific Rod and Gun Club, and the analysis provided in Impact HZ-8, Impact HZ-10, and Impact HZ-12, soils contaminated with lead are outside the Natural Areas, and there would be no impact with respect to disturbing lead-contaminated soil. Further, the clean-up activities at both Sharp Park and Lake Merced are occurring as part of separate projects, unrelated to the SNRAMP.

Comment HZ-4 Disagree with Draft EIR explanation of vegetation and fire hazards

The response to Comment HZ-4 addresses all or part of the following individual comments:

SFFA-3-25	Burgard-1-02	Hess-1-04
Hovland-1-02	McAllister-2-01	McAllister-2-02

- **1. Non-native vegetation, including eucalyptus is NOT inherently more flammable than native vegetation**

  The DEIR makes the following claims:

  > "… maximize indigenous vegetation for fire control." (DEIR, page 78)

  > "… vegetation with high fire hazard ratings such as broom and eucalyptus." (DEIR, page 111,396)

  > "… replacing highly flammable eucalyptus trees with more fire resistant species." (DEIR, page 410)

  Fear of fire has fueled the heated debate about native plant restorations in the Bay Area. Native plant advocates want the public to believe that the non-native forest is highly flammable, that its destruction and replacement with native landscapes would make us safer. Nothing could be further from the truth. The fact is that the forest-whether it is native or non-native-is generally less flammable than the landscape that is native to California. In the specific case of the Sutro Forest in San Francisco, this general principal is particularly true: the existing forest is significantly less flammable than the landscape that is native to that location.

  The "Mount Sutro Management Plan" was written by UCSF and is available on their website. It describes "native" Mount Sutro as follows: "In the 1800s, **like most of San Francisco's hills**, Mount Parnassus [now known as Mount Sutro] was covered predominantly with coastal scrub chapparal [sic], consisting of native grasses, wildflowers, and shrubs …" (page 4) (emphasis added)

  A Natural History of California[1] tells us that chaparral is not only highly flammable, but is in fact dependent upon fire to sustain itself:

> "Chaparral … is … most likely to burn. The community has evolved over millions of years in association with fires, and in fact **requires fire for proper health and vigor.** Thus it is not surprising that most chaparral plants exhibit adaptations enabling them to recover after a burn … **Not only do chaparral plants feature adaptations that help them recover after a fire, but some characteristics of these plants, such as fibrous or ribbonlike shreds on the bark, seem to encourage fire.** Other species contain volatile oils. In the absence of fire, a mature chaparral stand may become senile, in which case growth and reproduction are reduced." (emphasis added)

The local chapter (Yerba Buena) of the California Native Plant Society acknowledges the value of fire to restore and maintain native plant populations. A wildfire fire on San Bruno Mountain in native grassland and coastal scrub "consumed about 300 acres" in June 2008, according to an article on their website[2]. The article reports that

> "Fire is an adaptive management tool that, along with natural grazing and browsing, has been missing in promoting healthy grasslands that once covered much of the lower elevations of California … The threats to native grasslands are invasions of non-native grasses and forbs, and succession by native and invasive shrubs. Fortunately the fire scrubbed the canyons pretty clean of just about everything. This gives the land a shot of nutrients to recharge the soil and awaken the seedbanks that have long been lying dormant."

The fire on Angel Island in October 2008, demonstrates that native grassland is more flammable than the non-native forest. According to an "environmental scientist" from the California state park system, 80 acres of eucalyptus were removed from Angel Island 12 years ago in order to restore native grassland. Only 6 acres of eucalyptus remain.[3] The fire that burned 400 acres of the 740 acres of Angel Island in 2008 stopped at the forest edge: "At the edge of the burn belt lie strips of intact tree groves … a torched swath intercut with untouched forest."[4] It was the native grassland and brush that burned on Angel Island and the park rangers were ecstatic about the beneficial effects of the fire: "The shrubs-coyote bush, monkey flower and California sage-should green up with the first storms … The grasses will grow up quickly and will look like a golf course." Ironically, the "environmental scientist" continues to claim that the eucalyptus forest was highly flammable, though it played no part in this fire and there was no history of there ever having been a fire in the eucalyptus during the 100 years prior to their removal.

Unfortunately, the 1991fire in the Oakland hills has enabled native plant advocates to maintain the fiction that eucalyptus is highly flammable. And in that case there is no doubt that they were involved in that devastating fire. However, there were factors in that fire that are not applicable to San Francisco. The climate in San Francisco is milder than the climate in the East Bay because ofthe moderating influence of the ocean. It is cooler in the summer and warmer in the winter. There are never prolonged, hard freezes in San Francisco that cause the eucalyptus to die back, creating dead, flammable leaf litter. The 1991 fire in the Oakland hills occurred in the fall, following a hard winter freeze that produced large amounts of flammable leaf litter. In fact, there were several wildfires in the Oakland hills in the 20th century. Each followed a hard winter causing vegetation to die back.

According to the FEMA Technical Report, the 1991 Oakland hills fire started in grass, spread to dry brush, and was then driven by the wind to burn everything in its path. The fire burned native plants and trees as readily as eucalyptus.[5]

When it is hot and dry in the Oakland hills, as it was at the time of the 1991fire, it is cool and damp in San Francisco. Fogs from the ocean drift over the eucalyptus forests, condensing on the leaves of the trees, falling to the ground, moistening the leaf litter.[6] When the heat from the land meets the cool ocean air, the result is the fog that blankets San Francisco during the summer. These are not the conditions for fire ignition that exist in the Oakland hills.

UCSF applied for a FEMA grant to fund its project to destroy the eucalyptus forest and restore native chaparral, based on its claim that the eucalyptus forest is highly flammable. In its letter of October 1, 2009 (obtained by FOIA request), FEMA raised questions about UCSF's claim of fire hazard. (See Attachment VII-A) FEMA asked UCSF to explain how fire hazard would be reduced by eliminating most of the existing forest, given that **reducing moisture on the forest floor by eliminating the tall trees that condense the fog from the air could increase the potential for ignition**. FEMA also asked UCSF to provide "scientific evidence" to support its response to this question. Rather than answer this and other questions, UCSF chose to withdraw its FEMA application.

The reputation of eucalyptus as a fire hazard is also based on the assumption that oils in its leaves are flammable. The National Park Service reports on its website that the leaves are, in fact, fire resistant: "The live foliage [of the eucalyptus] proved fire resistant, so a potentially catastrophic crown fire was avoided."[7]

The predominant species of eucalyptus in California, the blue gum eucalyptus (*E. globulus*) is native to Tasmania. Scientists at the University of Tasmania conducted laboratory experiments on the plants and trees in the Tasmanian forest to determine the relative flammability of their native species. The blue gum eucalyptus (*E. globulus*) is included in this study. The study reports that, "*E. globulus* leaves, both juvenile and adult, presented the greatest resistance [to ignition] of all the eucalypts studied. In this case, leaf thickness was important as well as the presence of a waxy cuticle." Also, in a table titled "Rate of flame front movement," the comment for *E. globulus* leaves is "resistant to combustion.''[8] In other words, **despite the oil content in the leaf, its physical properties protect the leaf from ignition.**

Even if oils were a factor in flammability, there are many native plants that are equally oily, such as the ubiquitous coyote brush and bays. According to Cornell University studies, essential/volatile oils in blue gum eucalyptus leaves range from less than 1.5 to over 3.5%.[9] The leaves of native California bay laurel trees contain 7.5% of essential/volatile oils, **more than twice the amount of oil in leaves of blue gums.**[10]

These principles are best illustrated by a photograph of an actual fire in San Diego in 2003 in which all the homes burned to the ground, but the eucalyptus forest surrounding those homes did not ignite:

Likewise, non-native broom is not more flammable than its native counterpart in the chaparral plant community, coyote brush. The leaves of both shrubs are small, the fine fuel that ignites more readily than larger leaves and branches. But the leaves of native coyote brush contain oil not found in non-native broom. And the branches of broom are green to the ground, unlike the branches of coyote brush which become woody thickets with age. Broom therefore contains more moisture than coyote brush, which reduces its combustibility.

Fire is an essential feature of the landscape that is native to California.[11] Destroying a non-native forest in order to create a native landscape of grassland and scrub will not reduce fire hazard.

2. Thinning the non-native forest will NOT reduce fire hazard

The DEIR makes the following claim:

> "… timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread." (DEIR, page 396)

Most fires in California are hot, wind-driven fires in which everything burns. The composition of the fuel load in a wind- driven fire is irrelevant. Everything in its path will burn.[12] The 1991fire in the Oakland hills was an example of such a fire. According to the FEMA technical report on that fire, both native and non-native vegetation, as well as about 3,800 homes burned in that fire.

Windbreaks are therefore one of the few defenses in a wind-driven fire. For that reason, in its letter of October 1, 2009 (see attachment Vii-A), FEMA asked UCSF to explain how the destruction of the tall trees on Mount Sutro would reduce fire hazard. FEMA noted that **eliminating the windbreak that the tall trees provide has the potential to enable a wind-driven fire to sweep through the forest unobstructed.** FEMA also asked UCSF to provide "scientific evidence" to support its answer to this question. We repeat, UCSF chose to withdraw its application for FEMA funding of its project rather than answer this question.

In 1987, 20,000 hectares burned in a wildfire in the Shasta-Trinity National Forest. The effects of that fire on the forest were studied by Weatherspoon and Skinner of the USDA Forest Service. They reported the results of their study in Forest Science.[13] **They found the least amount of fire damage in those sections of the forest that had not been thinned or clear-cut.** In other words, the more trees there were, the less damage was done by the fire. They explained that finding:

> "The occurrence of lower Fire Damage Classes in uncut stands [of trees] probably is attributable largely to the absence of activity fuels [e.g., grasses] and to the relatively closed canopy, which reduces insolation [exposure to the sun], wind movement near the surface, and associated drying of fuels. Conversely, **opening the stand by partial cutting adds fuels and creates a microclimate conducive to increased fire intensities."** (emphasis added)

In other words the denser the forest,

> The less wind on the forest floor, thereby slowing the spread of fire

> The more shade on the forest floor.
>
> - The less flammable vegetation on the forest floor
> - The more moist the forest floor

All of these factors combine to reduce fire hazard in dense forest. Likewise, in a study of fire behavior in eucalyptus forest in Australia, based on a series of experimental controlled burns, wind speed and fire spread were significantly reduced on the forest floor.[14]

Furthermore, a recently published study corroborates that thinning the forest does not significantly reduce fire risk, nor does it increase carbon storage in the forest[15]

> "It has been suggested that thinning trees and other fuel-reduction practices aimed at reducing the probability of high-severity forest fire are consistent with efforts to keep carbon (C) sequestered in terrestrial pools, and that such practices should therefore be rewarded rather than penalized in (- accounting schemes. By evaluating how fuel treatments, wildfire, and their interactions affect forest C stocks across a wide range of spatial and temporal scales, we conclude that this is extremely unlikely. **Our review reveals high C losses associated with fuel treatment, only modest differences in the combustive losses associated with high-severity fire and the low-severity fire that fuel treatment is meant to encourage, and a low likelihood that treated forests will be exposed to fire.** Although fuel- reduction treatments may be necessary to restore historical functionality to fire-suppressed ecosystems, we found little credible evidence that such efforts have the added benefit of increasing terrestrial C stocks." (emphasis added)

Thinning the forest will not reduce fire hazard. In fact, it will increase fire hazard.

The DEIR also says that fire hazard will be reduced by removing dead trees:

> "Removed trees would include those that are diseased and dying, thereby reducing easily combustible fuel loads." (DEIR, page 396)

We do not dispute that dead trees are more flammable than living trees because they contain less moisture, one of the key variables in combustibility. However, we have established in another comment (Part I) that the claim that only dead and dying trees will be removed is contradicted by the SNRAMP which the DEIR is supposedly evaluating. There is no evidence that the trees that will be removed are dead or dying. Furthermore, if the predictions of experts on Sudden Oak Death prove to be true, 90% of the native oak woodland which SNRAMP proposes to expand will be dead and highly flammable within 25 years.[16]

Conclusion

Unless scientific evidence can be provided to support statements in the DEIR regarding fire hazard, the final EIR must be corrected to reflect the scientific and experiential evidence that refutes it:

> **Native vegetation is not inherently less flammable than non-native vegetation, including eucalyptus**

> **Thinning the forest will not reduce fire hazards.** [SFFA-3-25]

- The claim that the existing flora presents a fire hazard has been reasonably cast into doubt as the natural ecology is that of a cloud forest with high moisture. [Burgard-1-02]
- (4) My understanding is cutting the trees down would increase fire danger as there would no longer be enough trees to create their own moist atmosphere. [Hess-1-04]
- The most important statement I can make to you is that there is absolutely no evidence to support the idea that native plants are, by their nature, more resistant to fire than non-natives. It is the characteristics of a plant or tree that make it more or less flammable. For example, it is true that oily leaves make the non-native blue-gum eucalyptus flammable if fire reaches the crown of the tree. Yet, according to the USDA, blue gum leaves are classed as "intermediate in their resistance to combustion, and juvenile leaves are highly resistant to flaming." http://vvvvw.fas.fed.us/database/feis/plants/tree/eucglo/all.html.

  If a tree is well-maintained, with understory removed and branches cut that grow less than 6-8 feet from the ground, there is very little risk of fire reaching the crown of a tall tree.

  Moreover, the trunk of a eucalyptus tree, especially the trunks of older eucs, are not easy to burn; the trunks of oaks (of the same diameter) burn much more quickly. In fact, many blue gum eucalyptus trees in the North Hills survived the 1991 fire. I know this from my own observation and experience. The fire stopped, up the street from my house on Alvarado Road, at three giant eucalyptus trees that the flames did not even singe. The fire did burn to the ground all of the vegetation, including several coast live oaks, across the street from my house.

  What about those oily leaves? The oils in leaves of blue gum eucalyptus trees range from less than 1.5 to over 3.5%. hup://www.ansci.cornell.edu/plants/medicinal/eucalyp.html/ Our research has shown that the leaves of native bay trees contain more oil (7.5%) than the leaves of a blue gum eucalyptus. That is twice the amount of oil in leaves of blue gum eucalyptus! http://www.paleotechnics.com/Articles/Bayarticle.html.

  Bay trees in their scrub form, often growing as understory to oak trees, are highly flammable because the oily leaves (and oily branches) grow close to the ground, which is often covered in tall grass that dries out at the height of the fire season.

  On page 396 the EIR notes the "high fire hazard rating of aging French broom and eucalyptus." It is amazing to me that the EIR considers French broom and eucalyptus to be similar in fire hazard risk since they are totally different species with completely different characteristics. French broom, like native coyote bush, is highly flammable; in fact, coyote

bush, like most native chaparral species, especially manzanitas, chamise, buck brush scrub oaks, and mountain mahogany, are more flammable than French broom because they contain more dead wood than French broom, and their leaves are small and oily. According to Napafirewise.org, chaparral species grow in dense stands that "create impenetrable fields that burn with intense heat and are very difficult to suppress or control, chaparral species are the hardest to manage and to keep fire safe."

According to the Hills Emergency Forum, all brush communities, which include chaparral, can reach flames in excess of 69 feet. Grassland fires (made up of native and/or non-native grasses) can reach flame lengths of 12-38 feet. There is no scientific evidence (only wishful thinking) to support the idea that native grasses are more resistant to fire than non-native grass. The way to prevent ignition through a carelessly thrown cigarette or a spark from a catalytic converter is to keep the grass short (and watered if possible, especially in the fire season).

What about flame lengths in a eucalyptus grove? The EIR does not mention that flame lengths in a eucalyptus grove range from 6-21 feet, depending on the depth of litter under the trees. Eucs are in fact the only tree species where the depth of the litter under the tree is considered in estimating flame length even though several other tree species produce litter that is drier (more conducive to ignition) than the moist litter under eucalyptus trees. If the euc litter is regularly picked up, flame lengths are even lower.

It is astounding to me that that the EIR constantly employs the use of the words "highly flammable" with "eucalyptus trees," as if repeating that epithet will convince readers of its truth. As I have written above, eucalyptus trees have been scapegoated and vilified to suit the agenda of nativists. There is no reason to believe that native trees are resistant to fire. In prehistoric times, the Native Americans set fire to meadows of native grass and hills of native chaparral with scrub oaks and bays. In those days before non-native trees had been introduced, Native Americans had no trouble setting these fires on a regular basis for hunting and harvesting purposes.

There is no scientific evidence for the claim that native plants and trees are less flammable than non-natives. The characteristics of some plants and trees make them easier to ignite and quicker than burn than others, but whether they are native or non-native has nothing to so with how flammable they are. Fire does not discriminate between native and non-native vegetation. It is the advocates of native plant restoration who discriminate because they are determined to advance their own irrational agenda. [Hovland-1-02]

- Non-native vegetation, including eucalyptus is NOT inherently more flammable than native vegetation. The DEIR makes the following claims:
  - > "… maximize indigenous vegetation for fire control." (DEIR, page 78)
  - > "… vegetation with high fire hazard ratings such as broom and eucalyptus." (DEIR, page 111,396)
  - > "… replacing highly flammable eucalyptus trees with more fire resistant species." (DEIR, page 410)

Fear of fire has fueled the heated debate about native plant restorations in the Bay Area. Native plant advocates want the public to believe that the non-native forest is highly flammable, that its destruction and replacement with native landscapes would make us safer. Nothing could be further from the truth. The fact is that the forest – whether it is native or non-native – is generally less flammable than the landscape that is native to California. In the specific case of the Sutro Forest in San Francisco, this general principal is particularly true: the existing forest is significantly less flammable than the landscape that is native to that location.

The "Mount Sutro Management Plan" was written by UCSF and is available on their website. It describes "native" Mount Sutro as follows: "In the 1800s, like most of San Francisco's hills, Mount Parnassus [now known as Mount Sutro] was covered predominantly with coastal scrub chapparal [sic], consisting of native grasses, wildflowers, and shrubs …" (page 4) (emphasis added)

A Natural History of California[1] tells us that chaparral is not only highly flammable, but is in fact dependent upon fire to sustain itself:

> "Chaparral … is … most likely to burn. The community has evolved over millions of years in association with fires, and in fact **requires fire for proper health and vigor**. Thus it is not surprising that most chaparral plants exhibit adaptations enabling them to recover after a burn … **Not only do chaparral plants feature adaptations that help them recover after a fire, but some characteristics of these plants, such as fibrous or ribbonlike shreds on the bark, seem to encourage fire.** Other species contain volatile oils. In the absence of fire, a mature chaparral stand may become senile, in which case growth and reproduction are reduced." (emphasis added)

The local chapter (Yerba Buena) of the California Native Plant Society acknowledges the value of fire to restore and maintain native plant populations. A wildfire fire on San Bruno Mountain in native grassland and coastal scrub "consumed about 300 acres" in June 2008, according to an article on their website. The article reports that

> "Fire is an adaptive management tool that, along with natural grazing and browsing, has been missing in promoting healthy grasslands that once covered much of the lower elevations of California … The threats to native grasslands are invasions of non-native grasses and forbs, and succession by native and invasive shrubs. Fortunately the fire scrubbed the canyons pretty clean of just about everything. This gives the land a shot of nutrients to recharge the soil and awaken the seedbanks that have long been lying dormant."

The fire on Angel Island in October 2008, demonstrates that native grassland is more flammable than the non-native forest. According to an "environmental scientist" from the California state park system, 80 acres of eucalyptus were removed from Angel Island 12 years ago in order to restore native grassland. Only 6 acres of eucalyptus remain. The fire that burned 400 acres of the 740 acres of Angel Island in 2008 stopped at the forest edge: "At the edge of the burn belt lie strips of intact tree groves … a torched swath intercut with untouched forest." It was the native grassland and brush that burned on Angel Island and

the park rangers were ecstatic about the beneficial effects of the fire: "The shrubs – coyote bush, monkey flower and California sage – should green up with the first storms … The grasses will grow up quickly and will look like a golf course." Ironically, the "environmental scientist" continues to claim that the eucalyptus forest was highly flammable, though it played no part in this fire and there was no history of there ever having been a fire in the eucalyptus during the 100 years prior to their removal.

Unfortunately, the 1991 fire in the Oakland hills has enabled native plant advocates to maintain the fiction that eucalyptus is highly flammable. And in that case there is no doubt that they were involved in that devastating fire. However, there were factors in that fire that are not applicable to San Francisco. The climate in San Francisco is milder than the climate in the East Bay because of the moderating influence of the ocean. It is cooler in the summer and warmer in the winter. There are never prolonged, hard freezes in San Francisco that cause the eucalyptus to die back, creating dead, flammable leaf litter. The 1991 fire in the Oakland hills occurred in the fall, following a hard winter freeze that produced large amounts of flammable leaf litter. In fact, there were several fires in the Oakland hills in the 20th century. Each followed a hard winter causing vegetation to die back.

The 1991 Oakland hills fire started in grass, spread to dry brush, and was then driven by the wind to burn everything in its path. The fire burned native plants and trees as readily as eucalyptus.

When it is hot and dry in the Oakland hills, as it was at the time of the 1991 fire, it is cool and damp in San Francisco. Fogs from the ocean drift over the eucalyptus forests, condensing on the leaves of the trees, falling to the ground, moistening the leaf litter. When the heat from the land meets the cool ocean air, the result is the fog that blankets San Francisco during the summer. These are not the conditions for fire ignition that exist in the Oakland hills.

UCSF applied for a FEMA grant to fund its project to destroy the eucalyptus forest and restore native chaparral, based on its claim that the eucalyptus forest is highly flammable. In its letter of October 1, 2009 (obtained by FOIA request), FEMA raised questions about UCSF's claim of fire hazard. (See Attachment A) FEMA asked UCSF to explain how fire hazard would be reduced by eliminating most of the existing forest, **given that reducing moisture on the forest floor by eliminating the tall trees that condense the fog from the air could increase the potential for ignition.** FEMA also asked UCSF to provide "scientific evidence" to support its response to this question. Rather than answer this and other questions, UCSF chose to withdraw its FEMA application.

The reputation of eucalyptus as a fire hazard is also based on the assumption that oils in its leaves are flammable. The National Park Service reports on its website that the leaves are, in fact, fire resistant: "The live foliage [of the eucalyptus] proved fire resistant, so a potentially catastrophic crown fire was avoided."'

The predominant species of eucalyptus in California, the blue gum eucalyptus (E. globulus) is native to Tasmania. Scientists at the University of Tasmania conducted laboratory experiments on the plants and trees in the Tasmanian forest to determine the relative flammability of their native species. The blue gum eucalyptus (E. globulus) is included in

this study. The study reports that, "E. globulus leaves, both juvenile and adult, presented the greatest resistance [to ignition] of all the eucalypts studied. In this case, leaf thickness was important as well as the presence of a waxy cuticle." Also, in a table titled "Rate of flame front movement," the comment for E. globulus leaves is "resistant to combustion." In other words, **despite the oil content in the leaf, its physical properties protect the leaf from ignition.**

Even if oils were a factor in flammability, there are many native plants that are equally oily, such as the ubiquitous coyote brush and bays. According to Cornell University studies, essential/volatile oils in blue gum eucalyptus leaves range from less than 1.5 to over 3.5%. The leaves of native California bay laurel trees contain 7.5% of essential/volatile oils, **more than twice the amount of oil in leaves of blue gums."**

Likewise, non-native broom is not more flammable than its native counterpart in the chaparral plant community, coyote brush. The leaves of both shrubs are small, the fine fuel that ignites more readily than larger leaves and branches. But the leaves of native coyote brush contain oil not found in non-native broom. And the branches of broom are green to the ground, unlike the branches of coyote brush which become woody thickets with age. Broom therefore contains more moisture than coyote brush, which reduces its combustability.

Fire is an essential feature of the landscape that is native to California. Destroying a non-native forest in order to create a native landscape of grassland and scrub will not make us safer. [McAllister-2-01]

- **2. Thinning the non-native forest will NOT reduce fire hazard.**

The DEIR makes the following claim:

> "… timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread." (DEIR, page 396)

Most fires in California are hot, wind-driven fires in which everything burns. The composition of the fuel load in a wind-driven fire is irrelevant. Everything in its path will burn. The 1991 fire in the Oakland hills was an example of such a fire. According to the FEMA technical report on that fire, both native and non-native vegetation, as well as about 3,800 homes burned in that fire.

Windbreaks are therefore one of the few defenses in a wind-driven fire. For that reason, in its letter of October 1, 2009 (see attachment A), FEMA asked UCSF to explain how the destruction of the tall trees on Mount Sutro would reduce fire hazard. FEMA noted that **eliminating the windbreak that the tall trees provide has the potential to enable a wind-driven fire to sweep through the forest unobstructed.** FEMA also asked UCSF to provide "scientific evidence" to support its answer to this question. We repeat, UCSF chose to withdraw its application for FEMA funding of its project rather than answer this question.

In 1987, 20,000 hectares burned in a wildfire in the Shasta-Trinity National Forest. The effects of that fire on the forest were studied by Weatherspoon and Skinner of the USDA Forest Service. They reported the results of their study in Forest Science. **They found the least amount of fire damage in those sections of the forest that had not been thinned or clear-**

cut. In other words, the more trees there were, the less damage was done by the fire. They explained that finding:

> "The occurrence of lower Fire Damage Classes in uncut stands [of trees] probably is attributable largely to the absence of activity fuels [e.g., grasses] and to the relatively closed canopy, which reduces insolation [exposure to the sun], wind movement near the surface, and associated drying of fuels. Conversely, opening the stand by partial cutting adds fuels and creates a microclimate conducive to increased fire intensities."

In other words the denser the forest,

- The less wind on the forest floor, thereby slowing the spread of fire
- The more shade on the forest floor.
  - The less flammable vegetation on the forest floor
  - The more moist the forest floor

All of these factors combine to reduce fire hazard in dense forest. Likewise, in a study of fire behavior in eucalyptus forest in Australia, based on a series of experimental controlled burns, wind speed and fire spread were significantly reduced on the forest floor. **Thinning the forest will not reduce fire hazard. In fact, it will increase fire hazard.**

The DEIR also says that fire hazard will be reduced by removing dead trees:

> "Removed trees would include those that are diseased and dying, thereby reducing easily combustible fuel loads." (DEIR, page 396)

We do not dispute that dead trees are more flammable than living trees because they contain less moisture, one of the key variables in combustability. However, we have established in another comment that the claim that only dead and dying trees will be removed is contradicted by the SNRAMP which the DEIR is supposedly evaluating. There is no evidence that the trees that will be removed are dead or dying (see Attachment B). Furthermore, if the predictions of experts on Sudden Oak Death prove to be true, 90% of the native oak woodland which SNRAMP proposes to expand will be dead and highly flammable within 25 years. [McAllister-2-02]

Response HZ-4

These comments suggest that native vegetation is not inherently less flammable than nonnative vegetation (such as eucalyptus) and further states that thinning the nonnative forest will not reduce fire hazards. Comment SFFA-3 also included a series of attachments, including various correspondence, a Material Safety Data Sheet, and herbicide application data within SFRPD parks from 2008 to 2011.

As discussed in Draft EIR Section V.I.2, Environmental Setting, the Natural Areas have an assigned fire hazard rating (as rated by the California Department of Forestry and Fire Protection) that ranges from moderate to very high/severe classifications. As stated in Draft EIR Chapter III, Project Description, the objectives of the SNRAMP include installing fire breaks, where appropriate, and

discouraging the establishment of vegetation with high fire hazard ratings, all to reduce the likelihood of fires and to prevent the spread of fires.

Many factors contribute to the flammability of a species or habitat. According to the *2010 Strategic Fire Plan for California*,[162] some of the factors include the type of vegetation, the moisture content of the vegetation, and weather conditions (e.g., high wind or hot, dry conditions). In the case of trees, flammability is affected by various characteristics of the tree and stand (such as the amount of leaf litter and the presence or absence of lower branches) and ranges from moderate to high. For instance, at very high temperatures, eucalyptus species release a flammable gas that mixes with air to send fireballs exploding out in front of the fire,[163] while large oak trees, which are one of the species proposed in the Natural Areas, have a thick, fireproof bark.[164]

In terms of the flammability of eucalyptus trees, the California Invasive Plant Council states that:

> "The fuel complex formed by this debris is extremely flammable, and under severe weather conditions could produce drifting burning material with the potential to ignite numerous spot fires. Because stringy bark is carried away while burning, eucalyptus forests are considered the worst in the world for spreading spot fires. The Oakland hills firestorm was both intense and difficult to control because of the many stands of eucalyptus."[165]

Draft EIR Table 5 (provided on p. 114) indicates that of the 117,433 invasive trees located within the Natural Areas (including Sharp Park), 18,448 trees (or 16 percent) would be removed and 98,985 trees (or 84 percent) would remain. Of the 18,448 trees that would be removed, 15,000 trees would be removed in Sharp Park and 3,448 trees would be removed in the San Francisco Natural Areas; therefore, under the SNRAMP, nonnative trees and brush would not be removed in the majority of open spaces in the city. Also, restoration would be accomplished in both unforested areas, as well as areas where nonnative, invasive species have been removed. As stated on SNRAMP p. 1-3, one of the objectives of the Plan is to promote the functioning of San Francisco's native ecosystem, including the maintenance of native biodiversity, which requires the removal of invasive species. The amount of trees that would be removed and native species that would be replaced pursuant to the SNRAMP will not contribute a significant amount of a flammable fuel source. In fact, in high

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162 Board of Forestry and Fire Protection, *2010 Strategic Fire Plan for California*, January 27, 2010. This document is available online at: http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf668.pdf, accessed on June 7, 2016.

163 Liza Gross, KQED Science Contributor, Eucalyptus: California Icon, Fire Hazard and Invasive Species, June 12, 2013. This document is available online at: http://ww2.kqed.org/science/2013/06/12/eucalyptus-california-icon-fire-hazard-and-invasive-species/epicormic-bud-crop/, accessed on June 7, 2016.

164 Allan A. Schoenherr, *A Natural History of California*, London, England: University of California Press, 1992. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA, 94103, as part of Case File No. 2012.1427E 400 with three-days advance notice.

165 http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm@usernumber=48&surveynumber=182.php, accessed on August 7, 2014.

hazard risk areas, particularly where the natural areas abut developed areas (e.g., residential uses), species with lower fire hazard ratings would be used for revegetation, and revegetation efforts will also include planting species at appropriate set-backs from buildings and structures so as not to increase the potential spread of fire, if a fire does occur. Additionally, due to the relatively low percentage of tree removals, existing windbreak effects, which help reduce the spread of fires, would not be significantly reduced (see Response WS-1 and Response WS-2, RTC pp. 4-309 and 4-310).

Given the existing fire hazard ratings and the objectives of the SNRAMP to reduce fire potential through active means such as setbacks, fire breaks, etc., fire hazard would be reduced when compared to existing conditions, particularly with the removal of dead or dying trees. Thus, an impact conclusion of less than significant, as described for Impact HZ-16, Impact HZ-17, and Impact HZ-18, is appropriate.

The text on Draft EIR pp. 396, 397, and 410 has been changed, as follows.

- On Draft EIR p. 396 (line 28):

  Also, implementing recommendation GR-13a would reduce the presence of vegetation with high fire hazard ratings~~, such as dense and aging French broom and eucalyptus.~~ adjacent to homes and other structures. Recommendation GR-13a further states that, when possible, minimum fire reduction zones of 30 feet should be maintained. Also, no brush piles shall be created within fire reduction zones. Trees determined to be hazardous to adjacent homes by the SFRPD Arborist should be removed. Tree and invasive weed removal ~~would~~ could reduce the amount of available fuel for fires. More important, timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread in some instances.

- On Draft EIR p. 397 (beginning with line 7):

  As Sharp Park and a few Natural Areas within San Francisco are classified as moderate to high fire hazard zones, tree and invasive weed removal as part of the programmatic projects would reduce the available fuel loads and ~~would~~ could reduce the potential of fire hazards within these areas.

- Also on Draft EIR p. 397 (lines 18 to 21):

  Similar to the impacts described under the programmatic projects, routine maintenance activities that remove fuel loads ~~would~~ could reduce the presence of vegetation with high fire hazard ratings~~, such as dense and aging French broom and eucalyptus~~. Therefore, tree and invasive weed removal ~~would~~ could reduce the amount of available fuel for fires.

- On Draft EIR p. 410 (beginning with line 15):

  Among the objectives of the recommended actions at Mount Sutro are replacing ~~highly flammable~~ eucalyptus trees with more fire resistant species, increasing age diversity of trees, and improving the health and safety of the remaining trees.

The comments mentioned the "Mount Sutro Management Plan," which was written by UCSF and made available in 2001. Since publication of the SNRAMP Draft EIR, UCSF also published a Draft

EIR for the UCSF Mount Sutro Management project,[166] which proposed a number of management activities and demonstration projects in the UCSF Mount Sutro Open Space Reserve that were aimed towards the removal of nonnative trees and plants and the conversion to native species, consistent with the general goals of the 2001 Management Plan. However, in the fall of 2013, UCSF decided to revise the 2001 Mount Sutro Management Plan and formed a Technical Advisory Committee (TAC) to provide expert guidance on best practices in forest management and retained independent forest management consultants to develop a draft management plan for the Reserve that will be reviewed by the TAC and then vetted by the community. Once the TAC has completed its review, UCSF will present the plan to the community for feedback. After a final proposed plan is in place, UCSF will begin the environmental review process with the goal of publishing a draft EIR in late 2016 or early 2017. Therefore, there is currently no project related to the Mount Sutro Open Space Reserve that is currently under consideration by UCSF.

Comment HZ-5	**Disagree that all project alternatives will have less than significant effects from pesticide use**

The response to Comment HZ-5 addresses all or part of the following individual comment:

Borden-1-07

- I question the EIR's statement the impact of herbicide use will be less than significant for all project alternatives. If people and animals pass through areas that have recently been sprayed with herbicides, is it safe? Natural Areas already does a lot of herbicide application. I frequently pass through such areas. [Borden-1-07]

Response HZ-5

This comment expresses general disagreement with the Draft EIR's conclusion that impacts related to herbicide use under all project alternatives are less than significant but provides no evidence that such impacts would be significant.

As described in Response HZ-1, RTC p. 4-531, and in Draft EIR Section V.I.2, Environmental Setting, Impact HZ-7, Impact HZ-9, and Impact HZ-11, the NAP employs several measures to ensure that pesticide application would not endanger public health and safety, and overall, the Natural Areas use the lowest amount of pesticides (at 4 percent) as compared to other divisions within SFRPD, despite accounting for over 40 percent of the parkland under SFRPD control. As further described in Response HZ-1, RTC p. 4-531, the SFRPD uses the IPM approach, which integrates all pest control operations; establishes regular monitoring, accountability requirements, and phasing out use of the most hazardous pesticides. SFRPD participates in the Department of Environment's IPM Technical Advisory Committee, which is populated by staff who are committed to reducing pesticide use. The NAP uses herbicides in its parks as a last resort to combat invasive weeds, the single biggest threat

[166] University of California San Francisco, *Mount Sutro Management Project Draft EIR*, January 18, 2013.

to San Francisco's natural heritage. Response HZ-1, RTC p. 4-531, provides a detailed discussion of the SFRPD's pesticide use in the Natural Areas, as well as additional information regarding the Draft EIR's conclusion that impacts resulting from pesticide use would be less than significant. With respect to the alternatives analysis, the amount of pesticide use under the No Project Alternative would not change from existing baseline conditions, and was, therefore, determined to be less than significant. The Maximum Recreation Alternative and Maintenance Alternative would include less invasive tree and vegetation removal. As such, the potential need for chemical control of invasive tree and vegetation would similarly decrease when compared to the proposed project. Only the Maximum Restoration Alternative would include more invasive tree and vegetation removal than the proposed project. As described on Draft EIR p. 490, under this Alternative, impacts of hazardous materials would be similar to the proposed project and the SFRPD would implement similar management practices for pesticide use that would reduce the potential to impact nearby human populations, wildlife and groundwater (including continued implementation of the City's IPM ordinance, which prioritizes using mechanical or biological controls before using select chemical controls approved by the Department of the Environment).

This comment presents no evidence that the proposed project would result in a significant impact. In the absence of substantial evidence that the proposed project would result in a significant impact, the Draft EIR properly concludes that the impacts of herbicide use, under all project alternatives would be less than significant. The Final EIR will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project.

4.E ALTERNATIVES [AL]

The comments and corresponding responses in this section cover topics in Draft EIR Chapter VII.

4.E.1 No Project Alternative

Comment AL-1	**Support the No Project Alternative**

The response to Comment AL-1 addresses all or part of the following individual comment:

Ray-1-01

- I support the No Project Alternative. NAP jurisdiction should not be expanded beyond the areas of their detrimental activities. Most plants require at least one or two summer waterings to establish. The NAP policy to not water any of the plants they install is instrumental in the monumental failure of many of their planted areas. [Ray-1-01]

Response AL-1

This comment expresses support for the No Project Alternative analyzed in the EIR. This comment does not raise any specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts that require a response in this RTC document under CEQA Guidelines Section 15088. Comments in support of an EIR alternative over the proposed project will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

Comments regarding the NAP maintenance activities are directed to Response G-6, RTC p. 4-34. Further, in terms of watering, plants are typically watered during their establishment period, through one or two dry seasons, to help the plants develop sufficient root structures to thrive.

4.E.2 Maximum Restoration Alternative

Comment AL-2 Inadequate description of Maximum Restoration Alternative

The response to Comment AL-2 addresses all or part of the following individual comments:

NTC-1-01 SFT-1-04 Gerrie-1-04
Langille-1-08 Pfister-1-06 Wilson-1-05
PH-Brastow-03

- The Natural Areas Plan goals are excellent. The DEIR describes accurately the environments of the 32 natural areas, and with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan. However, we are concerned that the analysis neglects to fully address the long-term impact of invasive plants from the retention of invasive weed-nurturing eucalyptus groves in the MA-3 areas. The true impacts (and benefits!) of the maximum restoration alternative – one which presumably would restore significant portions of the MA-3 areas – cannot be properly evaluated against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about relative impacts from invasive plants, i.e., the degree to which they remain a threat to biodiversity, as a function of that alternative versus the Proposed Plan, can be made by the public because there is no substance to the alternative. It is completely general. [NTC-1-01]
- ➢ The maximum restoration alternative is inadequately described, and so cannot be properly evaluated as a potential environmentally superior alternative. [SFT-1-04]
- The true impacts of the maximum restoration alternative cannot be adequately evaluated since it is only two pages long therefor no definitive conclusions about the impacts of recreation nor of biological benefits since there is no depth to the alternative. [Gerrie-1-04]
- The true impacts (and benefits!) of the maximum restoration alternative cannot be properly evaluated against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about recreation impacts or biological benefits can be made

because there is no substance to the alternative. It is totally general. [Langille-1-08] [Pfister-1-06] [Wilson-1-05]

- And a couple more things, so I'm afraid that the true impacts of the maximum restoration alternative are really hard to evaluate because the description of that is literally only two pages long, and then it goes into the impacts, which is a few pages, but within describing the impacts, there's no specifics.

  There's nothing about how the maximum restoration alternative varies from the project plan – from the project at the remainder – at all of the sites, and so I find it really hard for the public to say, well, this is what the maximum restoration alternative is going to do or this is what the maximum recreation alternative is going to do at any given site.

  And finally, we would like to have a lot more specifics, as I said, included in those other alternatives, including at Sharp Park. [PH-Brastow-03]

Response AL-2

These comments state that the Draft EIR's description of alternatives is insufficient and does not provide a meaningful analysis of project alternatives. There are also specific questions about the relative impacts from invasive plants.

The significant effects of the maximum restoration alternative are provided in Draft EIR Section VII.B, Maximum Restoration Alternative, pp. 480 to 493, a total of 13 pages. Also, the commenters have not provided any supporting evidence to indicate how or in what manner the Maximum Restoration Alternative was inadequately described.

The alternatives described and evaluated in Draft EIR Chapter VII, Alternatives, are alternatives to the SNRAMP that were developed based on comments and recommendations received during the EIR scoping period and with the goal of reducing or eliminating impacts as compared to the proposed project. CEQA requires that an EIR consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation and that the analysis evaluate the comparative environmental impacts and merits of the alternatives (CEQA Guidelines Section 15126.6(a)).

In accordance with CEQA Guidelines Section 15126.6(d) and (f), the alternatives in the Draft EIR focus on the major characteristics of the proposed SNRAMP to support a comparison of the features and environmental impacts of that alternative to the proposed project. The alternatives were also developed to meet many of the project objectives, in accordance with CEQA Guidelines 15126.6(c), which balance habitat restoration and enhancement of native biodiversity with recreation. The major theme of each alternative provides a different balance to these project objectives. For example, the Maximum Recreation Alternative prioritizes public access and trails over habitat restoration.

As presented in Table 20, SNRAMP Alternatives Comparison, Draft EIR pp. 462 to 464, the major characteristics of the alternatives include differing levels of action with respect to: habitat

restoration, invasive tree and vegetation removal, public access and trail modifications, DPA reduction, and the Sharp Park Restoration Project. Table 20 of the Draft EIR describes the similarities and differences of the four alternatives as compared with the proposed project, providing sufficient information about each alternative that enabled a meaningful analysis and comparison with the proposed project in the Draft EIR.

One of the commenters also questions the impacts that would occur from the retention of invasive plants, including eucalyptus groves in the MA-3 areas. Invasive plants are not proposed to be removed in MA-3 areas under the proposed project (or the No Project Alternative), and, they are not being removed in MA-3 areas now; therefore, the project (and the No Project Alternative) would have no effects related to invasive plant removal in MA-3 areas compared to existing conditions.

Refer also to Response BI-15, RTC p. 4-402, for an additional discussion of the impacts of retaining invasive or nonnative species.

Comment AL-3	**Maximum Restoration Alternative should restore all of Sharp Park Golf Course**

The response to Comment AL-3 addresses all or part of the following individual comments:

Sierra Club-1-01 Langille-1-01 Murphy-D-1-02
PH-Brastow-04

- Our main objection to the DEIR, as it is currently structured, is its treatment of restoration proposals for Laguna Salada in Sharp Park. We are submitting (under separate cover) as part of our comments the report, *Conceptual Ecosystem Restoration Plan and Feasibility Assessment Laguna Salada, Pacifica, California*, Prepared by: ESA PWA with Peter Baye, Ph.D. and Dawn Reis Ecological Studies, which contains a substantive critique of the Sharp Park Laguna Salada project as presented in the SNRAMP. We believe the DEIR analysis and alternatives presented for the Laguna Salada project are flawed and inadequate.

  A major flaw of the Report's project-level analysis for the proposed Laguna Salada restoration is the insufficient scope of the project, which renders the project incapable of achieving its stated objectives, particularly with regard to provision of adequate habitat for the San Francisco Garter Snake (SFGS). In scoping comments and in the *ad hoc* alternative analysis performed by consultants earlier, the Sierra Club and other environmental organizations have consistently argued that a full range of alternatives, including a maximum restoration alternative (no golf), needs to be considered to give decision-makers the information necessary to determine which alternative best meets the project's objectives. By restricting the scope of the project exclusively to options which include an 18-link golf course, the analysis greatly compromises the project's ability to meet its goals. Indeed, the Report tacitly admits as much, as the proposed maximum restoration alternative goes beyond the original plan by including more acreage for upland habitat, in addition to re-constructed golf links. [Sierra Club-1-01]

- I am writing to advocate that the maximum restoration alternative must include restoring the whole Sharp Park golf course to endangered species, bird and other wildlife habitat for a truly ecologically sustainable coastal lagoon restoration.

  Therefore, please separate out Sharp Park from the Natural Areas Plan! In addition, please ensure that the City and County of San Francisco places the protection of the natural environment and endangered species at Sharp Park Golf Course at the highest priority. [Langille-1-01]

- We encourge the removal of Sharps Park Golf Course from the plan. The golf course should be considered in much more detail. In fact, the failure to include the option to remove the entire golf course and restore it to nature should have been included, even if it were not the preferred alternative. The failure to do so suggests a failure in the CEQA process. [Murphy-D-1-02]

- I think given that the proposed project includes the 18-hole golf alternative from the alternatives report, the maximum restoration alternative should include restoring all of Sharp Park golf course. Thank you. [PH-Brastow-04]

Response AL-3

These comments request that the Draft EIR include an alternative that restores all of Sharp Park to provide habitat for the San Francisco garter snake and California red-legged frog, including the entire golf course, or at least those portions west of Highway 1.

The Draft EIR considered an alternative to the proposed project that would include restoration of all of Sharp Park, in Draft EIR Section VII.F, Alternatives Considered but Rejected, pp. 526 to 527. In accordance with CEQA Guidelines Section 15126.6, "… alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the proposed project and could avoid or substantially lessen one or more of the significant effects" and "alternatives shall be limited to ones that would avoid or substantially lessen the significant effects of the project."

While an alternative that would restore all of Sharp Park to provide a greater amount of habitat for the San Francisco garter snake and California red-legged frog could result in more beneficial long-term effects for these species, such an alternative would require removal of the Sharp Park Golf Course, which is both a recreational and historic resource. As such, this alternative would exacerbate significant environmental impacts identified in the Draft EIR instead of avoiding or substantially lessening them. Therefore, an alternative that would restore all of Sharp Park need not be analyzed under CEQA and was rejected from further consideration.

Comment AL-4 Support the Maximum Restoration Alternative

The response to Comment AL-4 addresses all or part of the following individual comments:

Adam-1-01 Gaar-1-03 Gaar-1-04
Holzman-1-07

- I am strongly in favor of the implementation of the Maximum Restoration Alternative proposed in the Significant Natural Resource Areas Management Plan. [Adam-1-01]
- What is Recreation? The Maximum Recreation Alternative fails to discuss sustainable, nature enhancing recreation. If the priorities of the Maximum Recreation Alternative are defined as dog walking, bicycling or hiking-jogging then other forms of "green recreation" such as bird watching, botanizing, insect watching and habitat restoration are denied or reduced. With support for the Maximum Restoration Alternative more people will engage in nature loving recreation. Habitat restoration is the perfect form of recreation because volunteers sweat-off excess body weight, socialize with friends, neighbors and city gardeners and improve the biological health of our natural areas. [Gaar-1-03]
- Since I have twenty years of habitat restoration experience in San Francisco and since I founded and operate a San Francisco Native Plant Nursery in Golden Gate Park you might say that I am biased in stating that the Maximum Restoration Alternative is the best option for repairing the damage that has been inflicted on San Francisco's native plant communities. As the biological systems that support the diversity of life continue to deteriorate, our species is beginning to realize that we need to repair the damage now, not later. [Gaar-1-04]
- San Francisco has a responsibility locally, regionally, and globally to protect and enhance the native remnants of this unique city. As reported in the EIR, the Maximum Restoration Alternative is the Environmentally Superior Alternative and should be pursued. [Holzman-1-07]

Response AL-4

These comments express support for the Maximum Restoration Alternative, and one of the commenters also noted that participating in habitat restoration activities is a form of recreation. None of these comments address the adequacy or accuracy of the analysis contained in the Draft EIR.

The Draft EIR's summary chapter erroneously identified the Maximum Restoration Alternative as the Environmentally Superior Alternative. As correctly stated on Draft EIR p. 526, the Maintenance Alternative is considered the Environmentally Superior Alternative. A thorough analysis of the Environmentally Superior Alternative is provided on Draft EIR pp. 524 to 526, which states that:

> "The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative. Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance

Alternative would be the environmentally superior alternative for two reasons. While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative. First, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. For these reasons, the Maintenance Alternative is the environmentally superior alternative."

As also discussed in Response AL-10, RTC p. 4-595, the text on Draft EIR p. 2 (line 8) has been changed, as follows:

The ~~Maximum Restoration~~ Maintenance Alternative is the Environmentally Superior Alternative.

Comment AL-5 Opposition to the Maximum Restoration Alternative

The response to Comment AL-5 addresses all or part of the following individual comments:

MPIC-1-02	Tank Hill Neighbors-1-03	Drechsler-1-02
Fong-1-01	Lapins-1-03	Rotter-E-1-04

- We absolutely oppose the Maximum Restoration Alternative because it involves even more tree removal than the proposed project total of 1600 trees and would thus maximize the negative impact on Park recreational use and appearance. [MPIC-1-02]
- We are opposed to the Maximum Restoration Alternative. The Natural Areas Program does not seem to have sufficient staff to take care of the existing natural areas. Furthermore, they are not supervising the volunteers who are sometimes engaging in what amounts to vandalism in the natural areas. It is not realistic to expect the Natural Areas Program to expand their active restoration efforts into the MA-3 areas. Given the severe economic constraints on public funding, it is not feasible, nor would it be beneficial, to expand the staff of the Natural Areas Program. [Tank Hill Neighbors-1-03] [Lapins-1-03]
- The plan to "Maximize Restoration" is dangerous and irreparable. At very least you should make sure that our residents know about this radical plan and are prepared to deal with its consequences. [Drechsler-1-02]
- While the conservation and preservation of native habitats, plants and species is very important, in my opinion the "Maximum Restoration Alternative" places too many restrictions on the current and future recreational needs of San Franciscans. I urge you to adopt a plan that more evenly balances preservation and recreation, either the "No Project Alternative," the "Maximum Recreation Alternative," or the "Maintenance Alternative." [Fong-1-01]

- There is no way the NAP could expand their efforts to another 42% of the parkland in San Francisco, which is what the Maximum Restoration Alternative would require. The city does not have the resources, nor should it have the will, to destroy healthy trees that flourish here – just because they aren't native. [Rotter-E-1-04]

Response AL-5

These comments express opposition to the Maximum Restoration Alternative and, in some cases support for other alternatives in the EIR. These comments do not raise any specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts that require a response in the RTC document under CEQA Guidelines Section 15088. Comments in support or opposition to an EIR alternative will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

Comment AL-6 At Mount Davidson, use cypress, cedar, and pine trees

The response to Comment AL-6 addresses all or part of the following individual comments:

MPIC-1-08 Risk-1-03 Stewart-E-1-02

- Furthermore, if the MRA alternative or some variant of it is adopted, to mitigate the negative impacts on appearance and recreational use, the MPIC insists that all healthy cypress and pine trees in the MA-1c, MA- 2c, and MA-2e areas be allowed to remain. Unlike eucalyptus, these species from the original historic forest are not invasive and add greatly to pleasure of viewing within the Park, as well as hosting a varied bird population that would be lost with their removal. The MPIC further insists that all trees removed from Mt. Davidson as part of SNRAMP be replaced one-for-one within the Park in the locations vacated by the removed trees using cypress, cedar, or pine species in order to maintain the historic visual character of the Sutro forest. The historic cypress and pine species and cedar as well are neither exotic nor invasive, grow much faster than oaks, and are more suited than oaks to survive the soil and climate conditions in Mt. Davidson Park. In fact, oaks never existed on Blue Mountain or Mt. Davidson, so no valid argument can be made for replacement of removed trees with oaks. [MPIC-1-08]
- *According to the NAP plan, some 'non-native trees' would be removed and replaced with 'native' species. But there is no guarantee that those new trees will be planted in the same location, or even on Mt. Davidson. And there is a strong likelihood that 'native' trees such as scrub oaks may not survive on the windy western slope of Mt. Davidson. If there are hazardous or unhealthy eucalyptus trees that need to be removed, we ask that they be replaced with Monterey Cypress, a beautiful non-native tree that already thrives in this location. [Risk-1-03]
- If hazardous or unhealthy trees need to be removed, they should be immediately replaced with Monterey Cypress and more amenities (benches, etc.) should be installed near native plant zones. [Stewart-E-1-02]

Response AL-6

These comments request that if the Maximum Restoration Alternative is approved, or if eucalyptus trees are removed at Mount Davidson, that these trees be replaced with cypress, cedar, or pine species to reduce impacts to historic forests.

As described on Draft EIR p. 140, all of the invasive trees to be removed at Mount Davidson are eucalyptus; pine and cypress trees are not proposed for removal in this Natural Area. At Mount Davidson a total of 1,600 blue gum eucalyptus trees are proposed for removal over the next 20 years within management areas MA-1c, MA-2c, and MA-2e. Other actions in these management areas include: maintaining and enhancing the pacific reed grass and prairie-scrub mosaic, maintaining and enhancing cypress, oak trees and berry-producing scrub while augmenting and introducing sensitive plant species. With respect to the commenters' requests to replace eucalyptus trees with cypress, cedar, or pine species, as stated on SNRAMP p. 6.2-8, eucalyptus trees are being removed to allow additional light to reach the sensitive coastal scrub and reed grass communities that exist at the forest floor, allowing these communities to both persist and expand. Approximately 1,600 of an overall 11,000 trees on Mount Davidson would be removed from MA-1 and MA-2 areas, and approximately 9,400 trees would remain in the urban forest at Mount Davidson. Tree removal activities would retain scattered large individuals in order to minimize large scale disturbance and disruption to wildlife and to promote a gradual conversion to reed grass prairie.

In the case of Mount Davidson, of the approximately 40 acres located in this Natural Area, approximately 30 acres are "urban forest," a term used to describe the eucalyptus-dominated forest. Tree removal and thinning for habitat preservation and effective opening of the understory would occur only within nine acres, or approximately 30 percent of the 30-acre urban forest. No tree removal would occur in the remaining 21 acres of urban forest. As a result, 70 percent of the urban forest at Mount Davidson would remain as is.[167]

With respect to the proposed activities at Mount Davidson, Management Recommendation MD-1e, provided on SNRAMP p. 6.2-9, seeks to reduce the potential for local extinction of sensitive species in San Francisco by considering the reintroduction of rare plants such as beach paintbrush (*Castilleja wightii*) (MA-1a), meadow white (*Cerastium arvense*) (MA-1a), coast larkspur (*Delphinium decorum*) (MA-1a), western goldenrod (*Euthamia occidentalis*) (MA-1a), thimbleberry (*Rubus parviflorus*) (MA-2c to MA-2e, MA-1b and MA-1c), and blue violet (*Viola adunca*) (MA-1a), western choke cherry (*Prunus virginiana*) (MA-2c and MA-2e), fairy bells (*Disporum hookeri*) (MA-1b and MA-1c), Raven's manzanita (all MA-1 areas), and Franciscan manzanita (all MA-1 areas).

The Draft EIR evaluated the potential for tree removal to impact potentially historic forests. As described in Impact CP-2, the Draft EIR determined that impacts to potentially historic forest

[167] http://sfrecpark.org/parks-open-spaces/natural-areas-program/natural-areas-faqs/, accessed on August 6, 2014.

landscapes from removal of trees and vegetation would not result in a substantial adverse change and that this impact was determined to be less than significant. Refer to Response CP-8, RTC p. 4-265, for a further discussion of the impacts of tree removal on the historic Mount Davidson area and Response CP-9, RTC p. 4-270, for a discussion of cultural landscapes at Mount Davidson. The Draft EIR also determined that impacts of tree removal on aesthetics were less than significant (Impact AE-4, Draft EIR pp. 191 to 195). Accordingly, no mitigation measures are necessary. Refer to Response AE-1, RTC p. 4-219, for a discussion of the aesthetic impact of tree removal. Under CEQA, an EIR need only identify and analyze a reasonable range of project alternatives that would reduce or eliminate the significant environmental impacts of the proposed project; therefore, an alternative designed to replace removed trees with cypress, cedar or pine species is not required to be analyzed in this EIR.

One of the commenters specifically mentions the Maximum Restoration Alternative, which would remove more invasive trees and vegetation than the proposed project, but would also revegetate these areas with native plants. With respect to cultural resource (historic landscape) impacts under the Maximum Restoration Alternative, Draft EIR pp. 482 and 483 states that:

> "Impacts on cultural and paleontological resources are similar to those under the proposed project and possibly greater as a result of more aggressive habitat restoration, which would remove more nonnative and invasive vegetation. However, those impacts resulting from recreation aspects of the SNRAMP, such as trail construction, would be removed, so impacts on cultural and paleontological resources under the Maximum Restoration Alternative would be relatively similar to those of the proposed project. Programmatic large-scale projects and routine maintenance activities would continue to have the potential for significant impacts on cultural and paleontological resources; however, these impacts would be reduced to less than significant by implementing mitigation measures similar to those developed for the proposed project."

In terms of aesthetic impacts under the Maximum Restoration Alternative, Draft EIR p. 482 states the following, with one word changed to correct a typographical error:

> "The Maximum Restoration Alternative would have aesthetic impacts similar to those under the proposed project but with moderately more invasive vegetation and tree removal projects. Therefore, although the types of aesthetic impacts are similar to those of the proposed project, the magnitude of those impacts on scenic resources in the Natural Areas and on the visual character or quality of the Natural Areas would be greater than under the proposed project because the Maximum ~~Recreation~~Restoration Alternative would result in more changes to vegetation. However, invasive tree and vegetation removal would be followed by revegetation with native plants, so, overall, the Natural Areas would continue to be characterized as relatively undeveloped landscapes that allow for recreation. As evidenced in the visual simulations under the proposed project at Sharp Park and Mount Davidson, tree removal would not result in noticeable changes to the visual character or quality of the Natural Areas and would not

have a substantial adverse effect on a scenic vista. Even with a moderately greater number of trees removed, as proposed under the Maximum Restoration Alternative, tree removal, which would be followed by revegetation with native trees and other native plants, would not significantly affect scenic views or vistas and would not result in a substantial demonstrable impact on the visual character or quality of the Natural Areas. Similar to the proposed project, under the Maximum Restoration Alternative, new trees would be placed in the Natural Areas to preserve important viewsheds and vistas. As such, the Maximum Restoration Alternative would have less than significant aesthetics impacts."

In response to the critical habitat designation, SFRPD offered a comment letter to the USFWS, requesting that the designated areas should be limited to MA-1 and MA-2 land, which provides the highest conservation value, rather than MA-3 land, which is primarily for higher intensity recreational use. In response, for Corona Heights and Bernal Hill, the USFWS eliminated the existing off-leash DPAs from the designated critical habitat areas.

4.E.3 Maximum Recreation Alternative

Comment AL-7 Support for Maximum Recreation Alternative

The response to Comment AL-7 addresses all or part of the following individual comments:

NPS-1-02	MPIC-1-01	Demetrious-1-01
Form Letter-1-22	Litehiser-1-02	Nelson-1-05
PH-Emanuel-01		

- Maximum Recreation Alternative (pg. 498): Please clarify the sentence under "Recreation": "However, under this alternative, Natural Areas Program staff would continue routine maintenance, which would ensure that the physical deterioration of recreation facilities (trails, DPAs, and other facilities) would not be substantially degraded." [NPS-1-02]
- If required to choose among the alternatives in the DEIR for SNRAMP, the MPIC must urge adoption of the more reasonable Maximum Recreation Alternative (MRA) of the SNRAMP for Mt. Davidson Park because this alternative involves substantially less invasive tree removal, and thus mitigates the extensive and unavoidable impact on this important recreation and cultural resource that the more radical alternatives will involve. [MPIC-1-01]
- I support the maximum recreation alternative because I believe that natural areas are important public spaces in our urban fabric. They promote, relaxation, rejuvenation, and recreation and offer a unique connection with the natural world. I can speak for myself and say that I would not do well or thrive in such a densely urban setting without access to our precious natural spaces. Our natural areas mean the world to me. In modern architecture, the importance of bringing the natural into the urban is becoming recognized as increasingly important as the scale of urbanization grows worldwide. [Demetrious-1-01]

- As founder/advisor of Give a Dog a Bone (www.gadab.org) and guardian of three well-behaved trained dogs, I know firsthand how exercise positively impacts dog behavior; and conversely, the lack of exercise creates frustrated dogs with high probability of losing good social skills. I wholeheartedly support the Maximum Recreation Alternative. Thank you. [Form Letter-1-22]
- The current trend in our city planning is to provide more housing and increase density (Park Merced development is a good example), this mean we will need to have more accessible open space for recreation and park enjoyment, not less. [Litehiser-1-02]
- I fully support the Maintenance or Maximum Recreational Alternative and urge you to do the same. [Nelson-1-05]
- I am for the maximum recreational alternative, and I just wanted to point out the Golden Gate National Recreational Area just proposed a dog management plan, and they forcefully cited the dog play areas in the San Francisco parks as alternatives.

  So if those areas are closed, like the maximum plan is suggesting, people with dogs will not have places to take their animals for exercise with them. So I just want to point out that it's – that this plan is just a further reduction of those areas, and please consider allowing our animals to have space because they are compatible with plants. Thank you. [PH-Emanuel-01]

Response AL-7

These comments primarily express support for Maximum Recreation Alternative and do not comment on the adequacy or accuracy of the information contained in the Draft EIR. Comments in support of an EIR alternative will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

The Maximum Recreation Alternative as described in Table 20, SNRAMP Alternatives Comparison, Draft EIR pp. 462 to 464, is distinguished from the proposed project and the Maximum Restoration Alternative in that it would not close or reduce existing DPAs and would result in more trail creation that is available for greater recreational multiuse purposes than the proposed project. Conversely, under the Maximum Restoration Alternative, these same areas would emphasize restoration activities, with recreational activities limited to what would occur in association with restoration activities, either in terms of volunteer planting efforts, maintenance, or monitoring.

In response to the commenters request to clarify a sentence regarding the physical deterioration of recreation facilities, the text on Draft EIR p. 498 (beginning with line 11) has been changed, as follows:

> However, under this alternative, Natural Areas Program staff would continue routine maintenance, which would ensure that the physical deterioration of recreation facilities (trails, DPAs, and other facilities) would ~~not be substantially degraded~~ be avoided."

4.E.4 Maintenance Alternative

Comment AL-8 Support the Maintenance Alternative

The response to Comment AL-8 addresses all or part of the following individual comments:

DB-1-02	SFDOG-1-01	SFFA-3-22
Tank Hill Neighbors-1-04	Beemsterboer-1-01	Borden-1-02
Bose-1-14	Bowman-1-01	Buckley-1-05
Buffa-1-01	Buffa-1-03	Caughman-1-01
Cerf-1-01	Cerf-1-03	Chambers-1-05
Chirico-1-02	Coxon-1-01	DeWitt-1-02
Dougherty-1-05	Drechsler-1-01	Emanuel-1-01
Emanuel-2-01	Fasman-1-01	Fasman-1-03
Glikshtern-1-02	Gordon-1-01	Gottesman-1-01
Heldman-1-03	Hooker-1-01	Hooker-1-04
Kalafati-1-02	Kessler-1-13	Kessler-2-13
Klebaner-1-02	Lapins-1-04	Litehiser-1-01
Lorenz-1-01	Mace-1-02	Mar-1-01
McAllister-3-08	Mills-1-03	Miner-1-01
Minsuk-1-01	Minsuk-1-03	Moyer-1-05
Norton-1-02	Perrins-1-01	Pruitt-1-04
Quinn-1-01	Raffaelli-1-02	Reichardt-1-01
Rotter-E-1-01	Rotter-P-1-01	Saltzer-Lamb-1-01
Stafford-1-01	Wilford-1-01	PH-Rotter-P-01
PH-Rotter-P-04	PH-Rotter-N-01	PH-Stephens-01

- Let me get to the point. I am in favor of the Maintenance Alternative. It maintains the "recreation" in city parks and "recreation" is what a city the size of San Francisco needs. [DB-1-02]
- SFDOG supports the Maintenance or Maximum Recreation Alternatives because they protect existing natural areas yet preserve access for people. [SFDOG-1-01]
- **Our support for the Maintenance Alternative is based on the fact that it is the least destructive of the alternatives presented by the DEIR:**
  - > **The Maintenance Alternative will destroy the least number of trees and existing vegetation**
  - > **The Maintenance Alternative will require the least amount of pesticide**
  - > **The Maintenance Alternative will require the least restrictions on recreational access**
  - > **In addition to being the Environmentally Superior Alternative, the Maintenance Alternative is also the only viable and sustainable alternative because:**
    - o **The Maintenance Alternative will not require that native plants which are no longer adapted to present conditions be planted where they will not grow**

- **The Maintenance Alternative will not require that the City of San Francisco substantially increase the budget of the Natural Areas Program so that native plant gardens can be expanded**

1. The Maintenance Alternative will have less negative impact on the environment

The Natural Areas Program (NAP) has destroyed hundreds of trees in the "natural areas" in the past 15 years. The destruction of these trees has given NAP the opportunity to demonstrate that removing trees is beneficial to native plants. In fact, there is little evidence that the destruction of trees has resulted in successful native plant gardens.

The Pine Lake "natural area" is an example of the destruction of trees which did not result in a successful native plant garden. In 2004, about 25 trees were destroyed at the western end of Pine Lake. This destruction is documented by the Hort Science report of December 2011("Stern Grove-Pine Lake Park, Parkside Square tree risk assessment"). This report was written as an update on Hort Science's comprehensive assessment of all trees in Stern Grove-Pine Lake in 2003, in preparation for finally removing the hundreds of trees that had been evaluated as hazardous 8 years before. Here is what Hort Science found at the "West end of the park, near Wawona and 33rd Ave:" **"This area had a number of trees removed by the Natural Areas Program."**

The area in which the trees were destroyed was then planted with native plants and surrounded by the limbs of the trees that were destroyed. This is what that garden looked like in May 2008, four years later:

Little remains from that effort. This is not an isolated example of the results of 15 years of attempting to restore native plants in places where they have not existed for over 100 years. In addition to the 25 healthy trees that were destroyed at the western end of Pine Lake,132 trees judged as hazardous were destroyed around the lake in 2006 (these tree removals are documented in SNRAMP). The southern and northern shores of Pine Lake have been planted repeatedly. These areas are now dominated by foxtails and non-native nasturtiums which are thriving, despite being eradicated repeatedly.

Other parks have had similar experiences in their "natural areas." Sometimes toxic herbicides are used in the attempts to eradicate the non-native plants. Here is a picture of a field of oxalis and mustard in Glen Canyon Park that has been sprayed with toxic Garlon numerous times. There is no evidence that these non-native plants have been defeated by this chemical warfare.

According to "UC [Davis] IPM Online"[2], Garlon only poisons the visible part of the plant; it doesn't kill the root of the plant (in this case, the "bulbil"). So, the plant grows back the next year and is poisoned again. Between March and October 2010, the Natural Areas Program and its contractors (Shelterbelt Builders) sprayed Glen Canyon with herbicides 10 times. If this futile effort continues, it will be sprayed again every year, for as long as the public is willing to tolerate this poisoning of its public parks. There is a creek at the bottom of this canyon that is probably being poisoned as well. According to the federally mandated Material Safety Data Sheet for Garlon, it is "highly toxic" to aquatic life. Alongside the creek

is a day camp that is attended by children year around. Do their parents realize that this toxic chemical is being sprayed repeatedly in proximity of their children?

More fortunate "natural areas" have essentially been abandoned by the Natural Areas Program. Tank Hill has not been gardened by the NAP staff for several years. It has been spared the spraying of herbicides. However, it is visited by an unsupervised volunteer who hacks at the trees that remain. In other words, so many acres of parkland have been designated as "natural areas" that the staff is unable to garden them and is unable to supervise the volunteers who are free to do whatever they want in them, including mutilate trees.

2. The conditions that supported native plants in San Francisco have changed

One of many questions that was asked during the public comment period for the Initial Study was: is it still possible to sustain native plant gardens in San Francisco, given the radical changes in underlying conditions, e.g., higher levels of Carbon Dioxide, higher temperatures resulting from climate change and urban heat effect, changes in soil such as increased nitrogen levels and as a result of non-native vegetation, etc.?

This is one of many questions that were raised at the time of the Initial Study that are neither acknowledged nor answered by the DEIR. We will therefore ask and answer this question because it is our last opportunity to do so. The evidence that the ranges of native plants and animals have changed is overwhelming. We should not be surprised that the Natural Areas Program has had little success in achieving their goals after 15 years of effort. NAP and its supporters would like the public and the City's policy makers to believe that its lack of success is because they are not adequately funded.

Even if the City had the resources to substantially increase the staff of the Natural Areas Program-and chose to use them for that purpose--we would not see a substantially different outcome from their efforts. To demonstrate the futility of this effort, we turn to the living roof on the California Academy of Sciences.

When the California Academy of Sciences reopened in Golden Gate Park in August 2008, its "living roof" was considered its most unique feature. Thirty species of native plants were candidates for planting on the roof. They were planted in test plots with conditions similar to the planned roof and monitored closely. Only nine species of native plants were selected for planting on the roof because they were the only plants that were capable of self-sowing from one season to the next, implying that they were "sustainable." A living demonstration of "sustainability" was said to be the purpose of the living roof. [3]

So what have we learned from the living roof about the sustainability of native plants in San Francisco? Two of three of the predominant species on the roof after 2-1/2 years were native. The third-moss--is a "cosmopolitan" species that occurs everywhere. It is not considered native or non-native. It was not planted on the roof and therefore should be considered "invasive" in this context. The Academy's monitoring project has divided the roof into four quadrants. By February 2011, non-natives outnumbered natives in two of the quadrants.

Although natives outnumbered non-natives in the other two quadrants which are actively gardened, non-natives were also growing in these quadrants.[4]

The consultant hired by the Academy to plan the roof garden, Rana Nursery, advised the Academy to walk the streets of San Francisco and identify the plants growing from the cracks in the sidewalks. These are the plants he advised the academy to plant because these are the plants that are adapted to current conditions in the city. The academy rejected this advice because they were committed to planting exclusively natives on the roof.

The designer also advised the academy not to irrigate the roof, because the point of the roof is that it is a demonstration of sustainability. Again, the academy refused because they knew that without irrigation most of the native plants would be brown during the dry season, roughly half the year. (In fact, it is not clear that the plants would even survive without irrigation.) They wanted the public to believe that the plants that are native to San Francisco are beautiful year around.

There is a lesson here for anyone who is willing to learn from it. The living roof is not natural because it is irrigated and intensively gardened (e.g., weeded, fertilized, replanted, reseeded, etc. 5), yet non-natives not only found their way there on their own, but were dominating it within only 2-1/2 years. Native plants are not sustainable in San Francisco without intensive gardening effort. The living roof on the Academy is a tiny fraction of the acres that have been designated as "natural areas." The Academy is one building in Golden Gate Park. All of Golden Gate Park is about the same acreage as all of the 1,100 acres of "natural areas."

Peter Del Tredici has been telling us this for several years. He is a Senior Research Scientist at the Arnold Arboretum at Harvard University and a Lecturer in the Department of Landscape Architecture at the Harvard Graduate School of Design.

In a recent publication, he advises the managers of public lands in urban areas to abandon their fantasy that native plants are sustainable in urban settings:

> **"The notion that self-sustaining, historically accurate plant associations can be restored to urban areas is an idea with little credibility in light of the facts** that 1) the density of the human populations and the infrastructure necessary to support it have led to the removal of the original vegetation, 2) the abiotic growing conditions of urban areas are completely different from what they were originally; and 3) the large number of non-native species that have naturalized in cities provide intense competition for the native species that grew there prior to urbanization."[6]

Sure, he says, we can grow native plants, but they require at least the same amount of effort as growing any other plant and are therefore just another form of gardening: "Certainly people can plant native species in the city, but few of them will thrive unless they are provided with the appropriate soil and are maintained to the same level as other intentionally cultivated plants."

He concludes that native plant advocates are making a "cultural value judgment:"

> "… people are **looking at the plant through the subjective lens of a cultural value judgment which places a higher value on the nativity of a given plant than on its ecological function.** While this privileging of nativity may be appropriate and necessary for preserving large wilderness areas or rare native species it seems at odds with the realities of urban systems, where social and ecological functionality typically take priority over the restoration of historic ecosystems."

Conclusion

Although the Maintenance Alternative is the least destructive of the alternatives considered by the DEIR, the closure of the Natural Areas Program would be less destructive than the Maintenance Alternative

> **The Natural Areas Program has had 15 years to demonstrate that destroying trees and spraying our parks with herbicides will enable them to recreate sustainable native plant gardens. They have failed.**

> **NAP has little to show for the destruction of hundreds of healthy trees, the use of gallons of toxic herbicides, and the investment of millions of dollars of taxpayers' money.**

> **At a time of extreme economic sacrifice, it is unseemly to suggest that further destruction of trees, poisons spread and money squandered would be worthwhile.**

> **Furthermore, greater sacrifice of money, trees, public safety, and recreational access will not result in sustainable native plant gardens.**

The environmental impacts of the Proposed Project, No Project, and Maximum Restoration Alternatives are significant and the final EIR must judge them as such in these categories: Aesthetics, Wind and Shadow, Recreation, Biological Resources, Hydrology and Water Quality, Hazards and Hazardous Materials, and Air Quality. [SFFA-3-22]

- We support the Maintenance Alternative because it will do the least damage to the environment. Fewer trees will be destroyed and less pesticide will be needed to destroy more non-native plants and trees. The native wild flowers on Tank Hill are thriving in the company of non-native trees. We would be happy to have more native plants on Tank Hill, but we do not believe that it is necessary to destroy trees for that purpose. [Tank Hill Neighbors-1-04] [Lapins-1-04]
- Please support the maintenance alternative – the environmentally superior option in planning for rec and park. Dog play areas, already limited will be more limited with other approaches. [Beemsterboer-1-01]
- The Maintenance Alternative is the best choice. It has the least environmental impact and minimizes resources spent on the Sisyphean battle against invasive species. [Borden-1-02]

- The Maintenance Alternative appears to be the most rational option:
  - > the Environmentally Superior alternative;
  - > lower investment of time and money required;
  - > lowered requirement for pesticides compared to the Proposed Project;
  - > and in terms of potential outcomes that are aesthetically pleasing and ecologically viable. [Bose-1-14]
- I support the Maintenance Alternative or the Recreation Alternative. San Francisco city-managed parks are landmarks and part of our communities' identities and health and well-being. Preserving existing native plant communities should be supported but that should not include restoring 1/3 of our small parklands to native plants and displacing recreation and our existing landscape and nature. [Bowman-1-01]
- I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives. [Buckley-1-05]
- I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR. [Buffa-1-01] [Cerf-1-01] [Fasman-1-01] [Hooker-1-01] [Minsuk-1-01] [Perrins-1-01]
- I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks. [Buffa-1-03] [Cerf-1-03] [Fasman-1-03] [Hooker-1-04] [Minsuk-1-03]
- I am concerned about preservation of both native and non-native resources discussed in the proposed EIR for Significant Natural Resource Areas Management Plan. The alternative I favor is the Maintenance Alternative because the proposed tree removal carries danger of erosion and loss of habitat, especially for birds and insects. Please forward my comments to the commissioners voting on the alternatives presented in the draft EIR. [Caughman-1-01]
- I would, however, endorse the Maintenance Alternative in the EIR. Under this alternative, Rec and Park would continue current management plans at the natural areas, but would not convert any more non-native habitat to native habitat. The current distribution of native and non-native plants would be preserved. Fewer trees would need to be cut down, and there would be no closures of or reductions in any off-leash areas. No trails would be closed, but no new trails would be created. The NAP EIR identifies this alternative as the Environmentally Superior alternative, because it has fewer unmitigated impacts on the environment than the other alternatives considered in the EIR. Implementing the Maintenance Alternative would result in less damage to the existing environment in natural areas, yet would preserve existing native species, and is the only alternative that is sustainable over the long term. [Chambers-1-05]
- I support the Maintenance Alternative as being the "environmentally superior" option (Rec and Park s own word) [Chirico-1-02]

- I am writing to lend my support to Maintenance Alternative for our city parks and GGNRA open lands for use by all citizens and also those with canine companions. I live in Pacifica which is surrounded by open land mostly GGNRA land and the restoration processes by the Park Conservancy, et al. These urban areas need to be kept available for recreational use by the people who live in the neighborhoods and in these towns and cities. The wildlife also inhabiting these areas have coexisted with the human inhabitants for decades and would continue to successfully coexist if not for human intervention. I have never understood the intent to make these areas like Fort Funsten and Mori Point exclusively native plant restoration areas to the exclusion of all other recreational activity enjoyed by the citizens of San Francisco and San Mateo counties and beyond. It would seem that having healthy, available and safe recreation for people and their dogs should have precedence over plants that are thriving in many other locations around the area that are not used by people and dogs. Why can't we have a few places to go where dogs can run and be dogs? It makes for a much healthier community for both the dogs and their handlers. [Coxon-1-01]
- I strongly support the Maintenance Alternative, which maintains recreation in city parks at the same time as supporting the Natural Areas Program. [DeWitt-1-02]
- I fully support the Maintenance or Maximum Recreational Alternative and urge you to do the same. [Dougherty-1-05]
- I urge San Francisco's Planning Department to choose the "Maintenance Alternative" when developing plans to manage San Francisco's Parks and open spaces. I advise for these practical reasons: The EIS "Summary of Environmental Effects" (Pg. 3, Table 1) shows the "proposed project" and the "Maximum Restoration Alternative" have significant impacts on 42% (6 or 14) of the environmental categories being considered. [Drechsler-1-01]
- I am a 23-year resident of San Francisco and avid user of city parks, which I think are managed relatively well. I support the Maintenance Alternative for the Natural Areas Program because it is environmentally superior. [Emanuel-1-01] [Emanuel-2-01]
- But since it's not likely to happen: MAINTAINCE ALTERNATIVE is the only acceptable alternative - at least, hopefully, no additional (plenty has been done already) harm will be done. [Glikshtern-1-02]
- I'm writing to oppose the expansion of the Natural Areas Program and to voice my support for the maintenance alternative described in the Environmental Impact Review.

  Please strongly consider implementing the maintenance alternative in the Environmental Impact Review. I very much appreciate your consideration of this issue. [Gordon-1-01]
- I support the Maintenance Alternative to allow dogs to play freely in parks while being environmentally sound. [Gottesman-1-01]
- I favor the Maintenance Alternative. [Heldman-1-03]
- I that a maintenance plan should be the only good alternative. [Kalafati-1-02]
- The "Maintenance Alternative", as stated in the Draft Environmental Impact Report on page 526, states that this is the Environmentally Superior Alternative because it has the least

negative impact on the environment of all alternatives. Of these alternatives, I am advocating the "Maintenance Alternative." [Kessler-1-13] [Kessler-2-13]

- MAINTENANCE ALTERNATIVE is the only acceptable alternative. Personally, I'd like the NAP eliminated all together. [Klebaner-1-02]
- I am strongly in favor of adopting the least restrictive plan I believe this is the Maintenance Alternative. I feel that our parks and open spaces must be as "multi-use" as possible. We need to allow both passive and active recreation in our parks. [Litehiser-1-01]
- I am a frequent user of the SF city parks and support the maintenance alternative. I grew up in SF and my elderly parents are long time residents of the Richmond district. We all enjoy the parks as they are and oppose significant changes in the balance of native vs non-native plants, cutting down trees and underbrush, using toxic chemicals to control invasive plants, and closing 25% of park trails. All of these have a significant impact on my family's quality of life and the recreational value of the parks to my family. [Lorenz-1-01]
- I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks. San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. Less recreational space will negatively impact the quality of life in our city. [Mace-1-02]
- From what I've seen, it seems obvious to me that "Maintenance Alternative" is much preferable to a "Maximum Restoration Alternative". I don't see what's inherently better about a "native habitat." We should be going for a natural one, no matter how the plants got here. [Mar-1-01]
- **My support for the Maintenance Alternative is based on the fact that it is the least destructive of the alternatives presented by the DEIR:**

  > **The Maintenance Alternative will destroy the least number of trees and existing vegetation**

  > **The Maintenance Alternative will require the least amount of pesticide**

  In addition to being the Environmentally Superior Alternative, the Maintenance Alternative is also the only viable and sustainable alternative because:

  > **The Maintenance Alternative will not require that native plants which are no longer adapted to present conditions be planted where they will not grow**

  > **The Maintenance Alternative will not require that the City of San Francisco substantially increase the budget of the Natural Areas Program so that native plant gardens can be expanded**

  1. The Maintenance Alternative will have less negative impact on the environment

  The Natural Areas Program (NAP) has destroyed hundreds of trees in the "natural areas" in the past 15 years. The destruction of these trees has given NAP the opportunity to

demonstrate that removing trees is beneficial to native plants. In fact, there is little evidence that the destruction of trees has resulted in successful native plant gardens.

The Pine Lake "natural area" is an example of the destruction of trees which did not result in a successful native plant garden. In 2004, about 25 trees were destroyed at the western end of Pine Lake. I documented that destruction (because the trees were not posted as required by department policy) by testifying to the Recreation and Park Commission and submitting the attached letter on May 4, 2004. (see Attachment A) My testimony is also recorded in the minutes of that meeting.

The area in which the trees were destroyed was then planted with native plants and surrounded by the limbs of the trees that were destroyed. This is what that garden looked like in May 2008, four years later:

Little remains from that effort. This is not an isolated example of the results of 15 years of attempting to restore native plants in places where they have not existed for over 100 years. In addition to the 25 healthy trees that were destroyed at the western end of Pine Lake, 132 trees judged as hazardous were destroyed around the lake in 2006 (these tree removals are documented in SNRAMP). The southern and northern shores of Pine Lake have been planted repeatedly. These areas are now dominated by foxtails and non-native nasturtiums which are thriving, despite being eradicated repeatedly.

Other parks have had similar experiences in their "natural areas." Sometimes toxic herbicides are used in the attempts to eradicate the non-native plants. Here is a picture of a field of oxalis in Glen Canyon Park that has been sprayed with toxic Garton numerous times. There is no evidence that the oxalis has been defeated by this chemical warfare.

According to "UC [Davis] 1PM Online"2, Garton only poisons the visible part of the plant; it doesn't kill the root of the plant (in this case, the "bulbil"). So, the plant grows back the next year and is poisoned again. Between March and October 2010, the Natural Areas Program and its contractors (Shelterbelt Builders) sprayed Glen Canyon with herbicides 10 times. If this futile effort continues, it will be sprayed again every year, for as long as the public is willing to tolerate this poisoning of its public parks. There is a creek at the bottom of this canyon that is probably being poisoned as well. According to the federally mandated Material Safety Data Sheet for Garton, it is "highly toxic" to aquatic life. Alongside the creek is a day camp that is attended by children year around. Do their parents realize that this toxic chemical is being sprayed repeatedly in proximity of their children?

More fortunate "natural areas" have essentially been abandoned by the Natural Areas Program. Tank Hill has not been gardened by the NAP staff for several years. It has been spared the spraying of herbicides. However, it is visited by an unsupervised volunteer who hacks at the trees that remain. In other words, so many acres of parkland have been designated as "natural areas" that the staff is unable to garden them and is unable to supervise the volunteers who are free to do whatever they want in them, including mutilate trees.

2. The conditions that supported native plants in San Francisco have changed

One of many questions that was asked during the public comment period for the Initial Study was: is it still possible to sustain native plant gardens in San Francisco, given the radical changes in underlying conditions, e.g., higher levels of Carbon Dioxide, higher temperatures resulting from climate change and urban heat effect, changes in soil as a result of non-native vegetation, etc.?

This is one of many questions that were raised at the time of the Initial Study that are neither acknowledged nor answered by the DEIR. We will therefore ask and answer this question because it is our last opportunity to do so. The evidence that the ranges of native plants and animals have changed is overwhelming. We should not be surprised that the Natural Areas Program has had little success in achieving their goals after 15 years of effort. NAP and its supporters would like the public and the City's policy makers to believe that its lack of success is because they are not adequately funded.

Even if the City had the resources to substantially increase the staff of the Natural Areas Program – and chose to use them for that purpose--we would not see a substantially different outcome from their efforts. To demonstrate the futility of this effort, we turn to the living roof on the California Academy of Sciences.

When the California Academy of Sciences reopened in Golden Gate Park in August 2008, its "living roof" was considered its most unique feature. Thirty species of native plants were candidates for planting on the roof. They were planted in test plots with conditions similar to the planned roof and monitored closely. Only nine species of native plants were selected for planting on the roof because they were the only plants that were capable of self-sowing from one season to the next, implying that they were "sustainable." A living demonstration of "sustainability" was said to be the purpose of the living roof. 3

So what have we learned from the living roof about the sustainability of native plants in San Francisco? Two of three of the predominant species on the roof after 2-1/2 years were native. The third – moss--is a "cosmopolitan" species that occurs everywhere. It is not considered native or non-native. It was not planted on the roof and therefore should be considered "invasive" in this context. The Academy's monitoring project has divided the roof into four quadrants. By February 2011, **non-natives outnumbered natives in two of the quadrants**. Although natives outnumbered non-natives in the other two quadrants which are actively gardened, non-natives were also growing in these quadrants.

The consultant hired by the Academy to plan the roof garden, Rana Nursery, advised the Academy to walk the streets of San Francisco and identify the plants growing from the cracks in the sidewalks. These are the plants he advised the academy to plant because these are the plants that are adapted to current conditions in the city. The academy rejected this advice because they were committed to planting exclusively natives on the roof.

The designer also advised the academy not to irrigate the roof, because the point of the roof is that it is a demonstration of sustainability. Again, the academy refused because they knew that without irrigation most of the native plants would be brown during the dry season,

roughly half the year. They wanted the public to believe that the plants that are native to San Francisco are beautiful year around.

There is a lesson here for anyone who is willing to learn from it. The living roof is not natural because it is irrigated and intensively gardened (e.g., weeded, fertilized, replanted, reseeded, etc.5), yet non-natives not only found their way there on their own, but were dominating it within only 2-1/2 years. Native plants are not sustainable in San Francisco without intensive gardening effort. The living roof on the Academy is a tiny fraction of the acres that have been designated as "natural areas." The Academy is one building in Golden Gate Park. All of Golden Gate Park is about the same acreage as all of the 1,100 acres of "natural areas."

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In a recent publication, he advises the managers of public lands in urban areas to abandon their fantasy that native plants are sustainable in urban settings:

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He concludes that native plant advocates are making a "cultural value judgment:"

> "… people are **looking at the plant through the subjective lens of a cultural value judgment which places a higher value on the nativity of a given plant than on its ecological function.** While this privileging of nativity may be appropriate and necessary for preserving large wilderness areas or rare native species it seems at odds with the realities of urban systems, where social and ecological functionality typically take priority over the restoration of historic ecosystems."

Conclusion

The Maintenance Alternative is the only viable alternative going forward.

> **The Natural Areas Program has had 15 years to demonstrate that destroying trees and spraying our parks with herbicides will enable them to recreate sustainable native plant gardens. They have failed.**

> **NAP has little to show for the destruction of hundreds of healthy trees, the use of gallons of toxic herbicides, and the investment of millions of dollars of taxpayers' money.**

> **At a time of extreme economic sacrifice, it is unseemly to suggest that further destruction of trees, poisons spread and money squandered would be worthwhile.**

> **Furthermore, greater sacrifice of money, trees, and public safety will not result in sustainable native plant gardens.** [McAllister-3-08]

- If an alternative must be chosen, please support the Maintenance or Maximum Recreation Alternatives and please remember these are CITY parks, not Yosemite. [Mills-1-03] [Pruitt-1-04]
- As a responsible dog owner in SF without a backyard, dog walkers and dog parks are a necessity in my life. Please consider the Maintenance Alternative to the City Parks Plan to maintain more space for our furry friends. Thanks! [Miner-1-01]
- 5) I support the Maintenance Alternative, which EIR identifies as being environmentally superior alternatives. [Moyer-1-05]
- As such, I support the "Maintenance Alternative" which Parks & Recreation has designated the environmentally superior option. [Norton-1-02]
- That said, my request is the maintenance alternative of the EIR be adopted. It is the most realistic and healthy option. [Quinn-1-01]
- With this in mind, I ask you to implement the maintenance alternative and not the maximum restoration alternative or, for that matter, any alternative which reduces recreational space in our city. I would point out that adding recreational areas in Crocker Amazon playground has done wonders for the tenor of the park. It's a popular and welcoming spec compared to what it was five years ago. [Raffaelli-1-02]
- I support the Maintenance Alternative in the EIR. [Reichardt-1-01]
- In the Draft Environmental Impact Report (DEIR) that is now under consideration, four different alternatives are given: Proposed Project, Maximum Recreation, Maximum Restoration, Maintenance. ONLY the Maintenance Option is a supportable ecological program, as the DEIR states [Rotter-P-1-01]
- Contrary to what it says on page 2 of the Summary of the EIR, the preferred alternative of the EIR is the Maintenance Alternative. And we agree with that choice. [Rotter-E-1-01]
- As a San Francisco resident (and a City employee), I would like to ask you for your help in supporting the Maintenance Alternative plan as an answer to the issue facing SF dog owners and walkers. [Saltzer-Lamb-1-01]
- I am writing in support of the maintenance plan. I was in favor of preserving natural areas in San Francisco when the plan first started, and when I thought these areas were a few out of the way pockets of land, but I don't want to see the areas San Franciscans need for recreation being turned into native plant habitats. We city dwellers don't have big suburban backyards

in which to play; our parks are where we go to run around, throw frisbees, toss balls, etc. I am in favor of lots of grass meadows with surrounding trees and flowers. [Stafford-1-01] [Wilford-1-01]

- For these reasons the maintenance alternative is environmentally superior alternative. That's not what's being proposed by this EIR. The EIR is proposing that you adopt a program that is environmentally least good. [PH-Rotter-P-01]
- We should be going into a more environmentally protected type of alternative, and that is maximum maintenance of the existing environment. [PH-Rotter-P-04]
- Hi, I'm Neaf Rotter, and I agree with my husband that the maintenance alternative would be the very best way to go for San Francisco. [PH-Rotter-N-01]
- We obviously support the maintenance or maximum recreational alternatives because they protect existing natural areas yet preserve access for people. [PH-Stephens-01]

Response AL-8

These comments primarily express support for the Maintenance Alternative. Commenters express support for the Maintenance Alternative for a variety of reasons including lower levels of herbicide and pesticide use, and claims that NAP restoration efforts thus far have been unsuccessful.

The Draft EIR analyzes potential environmental impacts from the use of herbicides and pesticides within Section V.G, Biological Resources; Section V.H, Hydrology and Water Quality; and Section V.I, Hazards and Hazardous Materials. The SNRAMP also includes a monitoring plan to assess effectiveness of restoration efforts, would include an adaptive management approach, as described on Draft EIR p. 90, that evaluates the success of those efforts and modifies implementation strategies, priorities and methods based on that evaluation. Comments in support of an EIR alternative will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

Commenters are correct that the environmentally superior alternative was determined to be the Maintenance Alternative for the reasons discussed on Draft EIR pp. 524 to 526; this determination is made considering all environmental topics analyzed under CEQA.

The SNRAMP does not propose the removal of any trees at Pine Lake. In terms of the previous tree removal activities at Pine Lake, they are not within the scope of this project and, therefore, are not addressed in this EIR. However, in terms of the general concept of replacing nonnative trees with native species in order to increase biodiversity, refer to Response PD-11, RTC p. 4-159. Refer also to Response HZ-1, RTC p. 4-531, for a discussion of the use of pesticides in the Natural Areas; Response G-6, RTC p. 4-34, for a discussion of previous successful restoration projects undertaken by the SFRPD; Response AL-12, RTC p. 4-605, for a discussion of choosing feasible alternatives over

the proposed project; and Response AL–13, RTC p. 4-606, for a discussion of alternatives of reducing, redirecting, or shutting down the Natural Areas Program.

Comment AL-9 Support minimum activity

The response to Comment AL-9 addresses all or part of the following individual comments:

Art-1-01	Cook-1-01	Delacroix-1-01
Fox-1-01	Jungreis-1-01	Koury-1-01

- I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity. [Art-1-01] [Cook-1-01] [Delacroix-1-01] [Fox-1-01] [Jungreis-1-01]

- I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

  The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created.

  This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

  Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

  San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.

  Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

  Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

  We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

  I love the lush vegetation in our parks and do not want ANY of it removed for any reason – but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

  As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.

The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.

Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks. [Koury-1-01]

Response AL-9

These comments express support for a minimal amount of NAP activities, which most closely resembles the Maintenance or No Project Alternatives.

Refer also to Response G-6, RTC p. 4-34, for a discussion of an alternative that would result in the removal of Natural Areas from the NAP. These comments do not raise any specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts that require a response in the RTC document under CEQA Guidelines Section 15088. Comments in support of an EIR alternative will be considered by the decision makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

4.E.5 Environmentally Superior Alternative

Comment AL-10 Environmentally Superior Alternative

The response to Comment AL-10 addresses all or part of the following individual comments:

CBD-1-04	CNPS-1-05	MPIC-2-01
NTC-1-02	SFFA-3-23	SFT-1-03
Sierra Club-1-04	Bose-1-01	Form Letter-1-05
Gerrie-1-03	Ghosh-1-06	Gravanis-1-01
Kessler-1-15	Kessler-2-15	Kushner-1-03
Kushner-1-05	Kushner-1-07	Langille-1-07
McAllister-1-01	McAllister-3-09	Pfister-1-05
Reichardt-1-02	Valente-1-01	Wilson-1-04
Yip-1-05	PH-Brastow-02	

- The DEIR analysis is flawed since it identifies recreation and maintenance alternatives as the "environmentally superior alternatives." [CBD-1-04]
- The statement on page 524 (VII.E - Environmentally Superior Alternative) has this astounding statement: "… In determining the environmentally superior alternative for the proposed project, this EIR considers the environmental effects of the project and project alternatives. The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because …." I have no idea what this means, but it sounds like a non sequitur. Please revisit this. [CNPS-1-05]

- We agree with the conclusion of the DEIR (page 525) that the Maintenance and Maximum Recreation Alternatives are the Environmentally Superior Alternatives because these alternatives involve removal of substantially fewer trees and less access, as well as less herbicide use. [MPIC-2-01]
- That the recreation and maintenance alternatives are the "environmentally superior alternatives" and neither the restoration nor the proposed project are, may be a function of a misinterpretation of the intent of CEQA, where the protection of wildlife and our natural environment are central to the intent of the legislation. The assumptions made about what defines recreation for this particular DEIR are subjective and not based on best available science about recreation (there are plenty of citations on the web). For the purposes of the SNRAMP DEIR, recreation should include community stewardship, a legitimate form of recreation, practiced by thousands of people every week all over the Bay Area. This could change the balance of purported impacts to recreation, and could, for example, lead to the proposed project being considered to be the environmentally superior alternative. [NTC-1-02]
- **1. The refusal to correct the mistake in the DEIR about the "Environmentally Superior Alternative"**

  The Summary of the DEIR at the beginning of the document says that the "Maximum Restoration Alternative" is the "Environmentally Superior Alternative" (page 2). This is a mistake. The "Maximum Restoration Alternative" is NOT the "Environmentally Superior Alternative." The "Environmentally Superior Alternative" is the "Maintenance Alternative." The correct statement does not appear in the DEIR until the very end of the document:

  > **"The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative."** Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance Alternative would be the environmentally superior alternative for two reasons. **While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative.** First, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. **For these reasons, the Maintenance Alternative is the environmentally superior alternative."** (DEIR, page 525-526) (emphasis added)

  Attached is the email correspondence with Jessica Range, the staff member in the Planning Department responsible for the environmental review process, about this error. Ms. Range acknowledges the error, confirms that the "Environmentally Superior Alternative" is the

"Maintenance Alternative," but refuses to correct the error until the public comment period is over. (See Attachment VI-A)

Few readers will read a document that is over 500 pages long. This mistake will therefore mislead the public into supporting the "Maximum Restoration Alternative" which expands the destructive and restrictive aspects of the Natural Areas Program. Furthermore, and perhaps more importantly, this expansion is NOT legal because it violates the requirements of the California Environmental Quality Act (CEQA), which requires that the "Environmentally Superior Alternative" has the least negative impact on the environment of all proposed alternatives:

> **"§21002. APPROVAL OF PROJECTS; FEASIBLE ALTERNATIVE OR MITIGATION MEASURES**
>
> The Legislature finds and declares that it is the policy of the state that **public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects,** and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." CEQA Guidelines, page 2 (emphasis added)

This mistake will profoundly prejudice the public review and comment period. The mistake was exacerbated by the refusal to correct the mistake before the public process was complete.

Although the mistake was verbally acknowledged by the staff of the Planning Department at the beginning of the public hearing on October 6th, it was characterized as a "typographical error." The dictionary definition of "typographical error" is: "an error in printed or typewritten material resulting from a mistake in typing or from mechanical failure or the like."[1] It is an insult to the public's intelligence to characterize the substitution of an entire phrase ("Maximum Restoration Alternative") for another ("Maintenance Alternative") as a typographical error. Trivializing this error further misleads the public by failing to acknowledge the substantive differences between these alternatives. The "Maintenance Alternative" is at the opposite extreme from the "Maximum Restoration Alternative" in the range of alternatives.

The "Maximum Restoration Alternative" proposes an expansion of the active restoration efforts of the Natural Areas Program to 100% of all acreage designated as "natural areas." This represents a 73% increase in the acres subjected to tree removals, herbicide applications, recreational access restrictions, and the planting of endangered plants and animals that could potentially require further access restrictions.

In addition to the inaccurate and misleading identification of the environmentally superior alternative, the public notice of the DEIR was inadequate. No mention was made in the original public notice of the locations of the natural areas that would be impacted by the implementation of SNRAMP. No mention was made of the significant impacts on the

environment such as the removal of thousands of trees or the loss of recreational access. The public notice did not enable the public to understand that the implementation of SNRAMP would have a significant impact on their parks or their neighborhoods.

Conclusion

The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

> **Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"**

> **Distribute the corrected DEIR in the same manner as the original was distributed** [SFFA-3-23]

- The identification of the recreation and maintenance alternatives as the "environmentally superior alternatives" rather than either the proposed project or the recreation project, is inappropriate, as it discounts the value of biodiversity as an environmental benefit. [SFT-1-03]

- Alternative analysis needs to be corrected and refined.

  In the analysis of alternatives – as has already been pointed out by RPD staff – there is a discrepancy between the introductory summary and the analysis at the end of the report. While this will need to be corrected, the instrumental matrix used to analyze and quantify environmental impacts is methodologically flawed because it accords all impacts to be equal. Thus recreational resources and historical resources are treated the same as biological resources in terms of impacts and mitigations. This is contrary to the legislative intent of CEQA, which places emphasis not so much on incidental impacts but on the preservation of a healthy environment. Especially as the DEIR has already generated much confusion in its analysis of alternatives, it would be useful to include some language explicating the methodology used to determine what constitutes an "environmentally superior" alternative. In addition, some analysis of the alternatives according to which would better accomplish the project's goals and objectives, in this case biological resource protection, would give decision-makers a more accurate assessment of which alternative is preferable from a certification standpoint. In particular, it is clear from the analysis that the maximum restoration alternative is, with respect to the project's major goals and purpose, at least the "ecologically superior" alternative. It is also clear that, with the exception of Sharp Park, the over-all impacts of the maximum restoration alternative are only slightly greater than those of the proposed project, while in many instances significantly furthering the plan's overall objectives. However, this is not all clear in the accompanying analysis, which presents a rather confusing quantification of impacts and mitigations across a broad spectrum of categories. We ask therefore that the final EIR contain language clarifying the purpose and methodology of the alternatives analysis, lest the conclusions be misunderstood, as well as straight-forward language assessing which alternative is superior in terms of natural resource protection. [Sierra Club-1-04]

- Page 2, Section 1B: It's the 'Maintenance Alternative' that was determined to be the Environmentally Superior Alternative on Page 526. [Bose-1-01]
- I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives. [Form Letter-1-05]
- If the environmental superior alternatives are recreation and maintenance, and not restoration, the analysis is flawed. [Gerrie-1-03]
- Support the Maintenance Alternative and the Maximum Recreation Alternative. The NAP EIR identifies them as "environmentally superior." [Ghosh-1-06] [Yip-1-05]
- Environmentally Superior Alternative (p. 524) – The arguments presented for the selection of the Recreation and Maintenance Alternatives as superior to the proposed project and the Maximum Restoration Alternative are not convincing. A reduction in recreational access is not a negative environmental impact, and even if it were the claims of reduced recreational access are exaggerated. Enforcement of the leash law is not a loss of access. Restricting the use of bicycles is not a loss of access. (In fact, some trails will get greater use if walkers don't fear encountering bikes.) Reducing the number of trails in favor of better design and maintenance can improve public access for a greater diversity of park users (as well as reducing maintenance costs and damage from erosion). Also, the Maximum Restoration Alternative could result in greater opportunities for recreational activities such as wildlife observation and hands-on stewardship. Please re-visit the designation of the environmentally superior alternative, especially in the light of a more fully fleshed-out Maximum Restoration Alternative. [Gravanis-1-01]
- Page 2 of your summary needs to be corrected to reflect what page 526 of the Draft says: that the "Environmentally Superior Alternative" is the "Maintenance Alternative." [Kessler-1-15] [Kessler-2-15]
- Table 21 in the dEIR compares the project and the proposed alternatives relative to the various considerations that make up an environmental impact, i.e., Land Use and Land Use Planning, Aesthetics, Cultural and Paleontological Resources, Wind and Shadow, Recreation, Biological Resources, Hydrology and Water Quality, Hazards and Hazardous Materials, Agriculture and Forest Resources, and Air Quality. This list in the dEIR does not grade or weight the considerations; it merely views them as though they were all equal. The legislative intent of the California Environmental Quality Act does not view these considerations as equal. The preservation and enhancement of the environment are more important than these other issues. The evaluation of the different alternatives in the NAP dEIR relative to their environmental impacts should be made in the context of the intent of the CEQA legislation and not treat impact considerations as equals. The most disconcerting aspect of the considerations listed in Table 21 is that all are treated as though each is equivalent to biological resources, and yet this is not according to the legislative intent of the CEQA code. (For example, there is even no mention of "recreation" in the legislative intent.) [Kushner-1-03]

- "The Maximum Restoration Alternative meets some, but not all, of the project objectives presented in Section III.C. Specifically, the Maximum Restoration Alternative does not meet the objective related to recreation, as the Maximum Restoration Alternative would provide additional restrictions on public use and access of the Natural Areas." "This alternative has impacts similar to those discussed for the proposed project. However, implementing management actions that restore native habitat throughout all Natural Areas would take precedent over implementing management actions for recreation facilities. Compared to the proposed project, this alternative involves no new trails in the Natural Areas, thereby providing reduced recreation opportunities. The Natural Areas Program would continue to promote passive recreation. "This alternative would further reduce the size of existing DPAs, so it could increase the use of the remaining DPAs, potentially resulting in greater physical deterioration of recreation facilities, compared to the proposed project. As with the proposed project, these impacts are expected to be less than significant. Within the cumulative timeframe, the GGNRA Dog Management Plan also would restrict dog use on GGNRA lands that may result in potentially significant and unavoidable cumulative impacts associated with the physical deterioration of the Natural Areas DPAs." These excerpts demonstrate the crux of the issue of how recreation and public use (i.e., unleashed dogs) are given the same weight as habitat restoration. This is counter to the intent of the CEQA legislation, which nowhere mentions recreation (or dogs or companion animals). [Kushner-1-05]
- Simply stated by the organization, Nature in the City, "If the recreation and maintenance alternatives are the 'environmentally superior alternatives' and neither the restoration nor the proposed project are, then this analysis is flawed." [Kushner-1-07]
- That the recreation and maintenance alternatives are the "environmentally superior alternatives" and neither the restoration nor the proposed project are, is, apparently, an unfortunate paradox of CEQA, where biodiversity is considered no more important than aesthetics or recreation within the human environment. [Langille-1-07] [Pfister-1-05] [Wilson-1-04]
- Thank you for your reply. This error will seriously compromise the public comment period because the majority of readers will be unaware of it. The error is made on page 2 of the document and is therefore prominent to readers. Few, if any readers will read the entire document to find the correct statement that does not appear until page 525 of the document, nearly the last page of the document. The error will profoundly prejudice readers to a project alternative that is not preferred by the environmental analysis. [McAllister-1-01]
- **The refusal to correct the mistake in the DEIR about the "Environmentally Superior Alternative"**

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Conclusion

The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

> **Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"**

> **Distribute the corrected DEIR in the same manner as the original was distributed**

> **Announce another public hearing along with the corrected DEIR**

> **Announce another deadline for written public comments that is at least as long as the original period**

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters. [McAllister-3-09]

- While I am a hundred percent for the betterment of the natural areas in the City of San Francisco, the EIR identifying the Maximum Restoration Alternative as the "Environmentally Superior Alternative" is contradictory to the rest of the evidence presented in the document. I am particularly disappointed to learn that the NAS management plan calls for the destruction of healthy trees even after failed attempts to sustain the native plants. It seems unreasonable to spend any more of taxpayers' money to bring back the plants that simply don't do well in these places that are surrounded by populated urban areas. [Reichardt-1-02]

- This violation of the public confidence is highlighted in the EIR itself. On page 2, the EIR misleads the public by asserting the "Maximum Restoration Alternative" is the "Environmentally Superior Alternative." THIS IS WRONG. When this error was brought to the attention of the SFRPD, they refused to publish a retraction or correction until AFTER the public comment period was over. In reality, the "Maximum Recreation" and "Maintenance Alternative" are the environmentally superior alternatives because they have fewer

unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative. [Valente-1-01]

- The true environmentally superior alternatives apparently are the recreation and maintenance alternatives, which I find to be quite ironic, considering that we're trying to restore the natural environment. So the project plan – neither the project plan nor the maximum restoration alternative are the environmentally superior alternatives, and I would just like to ask a few questions about that.

  What are the assumptions behind those alternatives becoming the environmentally superior alternative? Which human environment are we actually trying to create if the maximum restoration alternative is not the environmentally superior alternative? One where nature conservation is not paramount? [PH-Brastow-02]

Response AL-10

These comments express concern that Draft EIR p. 2 incorrectly identified the environmentally superior alternative and disagree with the Draft EIR's conclusion that the Maintenance Alternative was determined to be the environmentally superior alternative. In addition, one comment expressed specific support for the "environmental superior alternatives."

The commenters are correct that Draft EIR p. 2 ("Summary" chapter) incorrectly identified the Maximum Restoration Alternative as the environmentally superior alternative (although it was discussed fully and accurately in the remainder of the document). The Draft EIR (pp. 524 to 526) correctly identifies the Maintenance Alternative as the environmentally superior alternative and provides a thorough analysis of the project alternatives. As discussed in Response G-10 and Response AL-4, RTC pp. 4-50 and 4-565, as indicated in RTC Section 5.A, Changes in Response to Comments, the text on Draft EIR p. 2 (line 8) has been changed, as follows:

> The ~~Maximum Restoration~~ Maintenance Alternative is the Environmentally Superior Alternative.

With regards to identifying the environmentally superior alternative, there is nothing within CEQA or the CEQA guidelines to suggest that one impact analysis be weighed greater than another impact analysis. The "environment" as defined by CEQA means, "the physical conditions which exist within the area which will be affected by the proposed project including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance. The area involved shall be the area in which significant effects would occur either indirectly or directly as a result of the project. The 'environment' includes both natural and man-made conditions" (CEQA Guidelines Section 15360). Therefore, all impact topic areas were weighed equally in identifying the environmentally superior alternative.

CEQA requires that an EIR identify alternatives to the proposed project that would avoid or substantially lessen the significant environmental impacts of the project. As such, it is often the case that project alternatives have less severe or different environmental impacts than the proposed project. The Draft EIR identified significant unavoidable impacts of the proposed project on

historical resources and air quality, and cumulative recreation, biological resources, and air quality. The cumulative impacts to recreational and biological resources result from the potentially significant combined impacts of the proposed project and the GGNRA Dog Management Plan.

Although the No Project Alternative has less environmental impacts than the proposed project and the other alternatives, CEQA Guidelines Section 15126.6(e) require that where the No Project Alternative is the environmentally superior alternative, the EIR shall identify an environmentally superior alternative among the other alternatives. Therefore, the environmentally superior alternative may only be the Maximum Recreation, Maximum Restoration, or Maintenance Alternative. While the Maximum Restoration Alternative may have greater long-term benefits for biological resources, it would require conversion of additional lands within the Sharp Park Golf Course for habitat restoration, resulting in greater significant and unavoidable impacts to historic resources. The Maintenance and Maximum Recreation Alternatives on the other hand would limit the Laguna Salada Restoration to within the current natural areas boundary, thereby eliminating the significant and unavoidable historic resource impacts of the proposed project. As discussed on Draft EIR p. 526, when the Maximum Recreation Alternative is compared with the Maintenance Alternative, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Additionally, the Maximum Recreation Alternative would result in natural areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage while the Maintenance Alternative would preserve the existing distribution and extent of biological resources. For these reasons, the Maintenance Alternative was determined to be the environmentally superior alternative under CEQA. This determination is consistent with CEQA, the CEQA Guidelines, and the San Francisco Administrative Code Chapter 31, but should not be confused with identification of an "environmentally superior ecological alternative"; that determination is not required by CEQA.

In terms of how recreation is defined, the Glossary of the Draft EIR has been updated to define recreation as an "Activity done for enjoyment when one is not working. Within the Natural Areas, typical recreational activities include, but are not necessarily limited to, walking, hiking, running, nature watching, dog walking, picnicking, other passive recreational activities, and volunteering." Further, as stated in Response PD-27, RTC p. 4-203, the SFRPD and the Draft EIR consider community stewardship as a form of recreation.

4.E.6 Alternatives Considered but Rejected

Comment AL-11 Nondredging alternatives for Sharp Park

The response to Comment AL-11 addresses all or part of the following individual comment:

Baye-1-05

- In fact, the DEIR misrepresents the factual condition of Laguna Salada's long-term sediment and vegetation changes, and the justification for dredging it to "restore" it. There is no

evidence presented to support the DEIR assertion that Laguna Salada suffers from "excess sediments" rather than excessive pumping and drainage to maintain golf greens – lowering of lagoon levels to the point at which the bottom is so shallowly flooded that tules and cattails can invade most of it. Neither the DEIR nor its supporting documents (Appendix I) identify any source of watershed sediment, field evidence of sediment deposition, sediment deposition rates, or mode of transport to deliver terrestrial sediments into the lagoon. The DEIR simply assumes that if cattails and tules are "excessive", it must be due to sedimentation. This is a fallacy. The pumps are set to maintain the lagoon water surface level at less than + 7.5 ft NA VD (Tetra Tech 2009), which results in prevalence of shallow water (3 ft or less deep) across the lagoon bed. This chronic stable drawdown condition makes most of the lagoon bed suitable for progressive long-term spread by tules and cattails, even in the complete absence of any sediment deposition.

The shallowness of the lagoon controlled by the artificial water surface elevation range maintained by pump operations is sufficient to explain the multi-decade encroachment of tules and cattails. There is no direct evidence (sediment cores, bed elevation change, suspended sediment concentration measurements) presented for the hypothesis of that shallowness of the lagoon is driven by increased bed elevations cause by "excess sedimentation" in the lagoon during the period of tule and cattail growth.

The proposed dredging is not really compensating for excessive sedimentation: it is merely a way of compensating for artificially stable low lagoon water levels by lowering the bed instead of raising the lagoon to drown out or inhibit growth of tules and cattails (species with submergence tolerance up to about 4 feet). It is this fallacious, biased analysis of the lagoon's alleged "excessive sedimentation" and "excessive vegetation" problems. This fallacy is at the heart of the flaws of the alternatives analysis as well.

3. The DEIR fails to assess environmentally superior and feasible non-dredging alternatives for Sharp Park wetland and endangered species habitat enhancement and management.

The DEIR uncritically presumes that dredging is the most appropriate (least environmentally damaging) method of providing adequate depth and area of shallow open water marsh-edged wetland habitat suitable for California red-legged frog breeding. It fails to consider feasible environmentally superior alternatives that could achieve the same objectives. The most obvious environmentally superior feasible alternative that was ignored was modification of water level management of the lagoon, which is controlled by artificial drainage of the lagoon by pumps operated by the City. Increased water surface elevations and seasonal fluctuation of lagoon levels, combined with peripheral flood control berms that double as buffers, upland refuge. and basking habitat is a wetland habitat management/ enhancement alternative that would eliminate the need for high-cost, high-impact risk engineered dredging alternatives, and would have superior environmental benefits for salinity intrusion and endangered species habitat enhancement. Artificially managing water level fluctuations in the lagoon, emulating natural lagoon hydrology, would maintain a favorable seasonal dynamic balance of shallow open water habitat (submerged aquatic vegetation, principally sago pondweed) and emergent marsh (tule, bulrush, cattail,

spikerush) that is evident in the constructed GGNRA ponds at the toe of Mori Point slopes, where California red-legged frogs and tree frogs are now breeding.

Under existing conditions, there is an unnecessary conflict between lagoon wetland hydrology and upland golf drainage because there is no hydrologic separation between them. Golf fairways extend (by mowing marsh into turf) into the lagoon. Flooding of the lagoon in winter to elevations above the set upper limit of +7.5 ft NA VD that triggers pumping rapidly forms flooded seasonal wetland conditions consisting of shallow open water edged with emergent marsh vegetation - conditions that are evidently attractive for California red-legged frog egg mass deposition. (DEIR, p. 377 describes the long-term winter flooding history) The only reason these flooded wetland margins are not allowed to remain flooded for months in winter (enabling red-legged frog eggs may develop in situ with persistent flooded conditions) is because low-lying golf greens are not hydrologically separated from seasonal lagoon-edge wetlands. Consequently, the entire lagoon is pumped down to drain together both wetlands and topographically continuous golf greens, instead of draining the golf greens alone.

Construction of a low berm or levee bordering the upland side of the lagoon's wetland-upland transition zone would be a feasible alternative way of separating the flood control of golf greens and seasonally flooded lagoon wetlands that support red-legged frog breeding habitat. This would require less fill than raising all flood-prone low-lying fairways that are above the elevation of mown marsh, but would require some pumping on the landward side of the berm. A low flood control berm or levee would allow seasonal flooding along the lagoon edge to be tolerated without rapid pumping to lower the lagoon to drain golf greens. A low flood control levee, with dimensions commensurate with the 2-3 ft depth increase proposed in the dredging alternatives, would allow tolerance of higher chronic winter flooding levels at the lagoon margins, and consequently would allow a significant reduction in the frequency of pump operation. Reduction in the frequency and amplitude of rapid water level fluctuations caused by frequent pumping would therefore reduce the risk of egg mass desiccation and stranding. This alternative would require reversing the current encroachment of golf greens into seasonal wetlands: some golf greens bordering the lagoon that are subject to flooding are in fact routinely mown marsh vegetation, not turgrass (PW A 2011, and section 1 of this letter).

A low flood control berm placed along the truly upland edge of the golf greens would reduce or eliminate the acme flooding conflicts between winter golf management and lagoon management for red-legged frog breeding. A berm would not need to encroach into wetlands at all (as the marsh mowing to expand fairways currently does), and would additionally provide burrowing mammal (ground squirrel, vole, gopher) habitats (estivation and foraging habitat) and emergent thermal refuges (basking sites) for San Francisco Garter Snakes. This may offset "need" for artificial upland fill in wetlands to provide upland refuge habitat. The soils in this infrequently flooded seasonal wetland zone are also relatively lower in sulfide content (less anoxic) and so would be more suited to excavation of shallow ponds (further hydrologically isolating them from lagoon drawdown, allowing more stable pond water levels to further enhance frog breeding habitat quality).

The DEIR failed to consider, even at a screening level, this environmentally superior alternative based on raised winter lagoon levels and low flood control berms bordering golf greens, which is a reconfigured (downsized) golf-adapted version of the comprehensive ecosystem restoration alternative proposed by PWA and others (PWA et al. 2011).

Instead, all DEIR alternatives for Sharp Park that include restoration are exclusively and arbitrarily limited to ones based on dredging potentially toxic sulfidic organic lagoon bed and marsh sediments (and minimize encroachment of golf greens) – even in alternatives that are not "maximum recreation". There is no valid reason given in the DEIR to exclude review of alternatives that allow for flood management to separate well-drained upland golf greens from wetlands within areas of increased lagoon water levels in the range at least +9 to +10ft NA VD. It appears that (tacit) recreational priorities for the status quo of golf fairway boundaries are an overriding arbitrary consideration in the range of feasible alternatives.

In effect, from a perspective of wetland enhancement methods, the DEIR examines only one "restoration" alternative, one that maximizes potential water quality and sediment impact risks for federally listed California red-legged frogs, and minimize or eliminates wetland management (or recapture) of golf greens. The DEIR provides no rational basis for excluding water level management alternatives for lagoon enhancement (no screening-level CEQA explanation of alternatives considered but rejected), and merely adopts the golf-biased, technically flawed proposal of the City's Sharp Park restoration plan (Tetra Tech 2009), which entirely neglected the issue of sediment and water quality impacts associated with sulfidic anoxic lagoon bed sediments, and also provided no sediment testing data or water quality impact analysis of dredging in endangered species habitat.

The omission of water-level management alternatives in the DEIR, and the cursory, superficial assessment of sediment and water quality impacts of dredging Laguna Salada, are particularly problematic because the San Francisco Recreation and Parks Department (SFRPD) hosted a "Sharp Park working group" composed of stakeholder advisors from Golden Gate National Recreation Area (GGNRA, National Parks Service) and San Mateo County, and other park advisors, in which the issues of sulfidic anoxic sediment impacts and water level management alternatives were explicitly discussed in November, 2010.

Furthermore, both these issues were assessed (along with field indicators of existing high sulfide lagoon sediments) in a widely circulated technical report on Laguna Salada restoration alternatives provided to the City, prepared by Philip Williams and Associates (PWA et al. 2011). The DEIR's failure to adequately address water level management that avoids potentially significant impacts of dredging sulfidic sediments is arbitrary, given its knowledge of the potential significance of the impacts and feasibility of alternatives.

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

> fails to screen or analyze less environmentally damaging alternatives to dredging, such as combined water level management and perimeter flood management, to provide equivalent or environmentally superior wetland benefits; [Baye-1-05]

Response AL-11

This comment suggests a non-dredging alternative for the Sharp Park restoration project. This comment also questions whether the potential water surface elevation ranges that are maintained by pump operations could explain the presence of tules and cattails, and whether the proposed dredging operation could compensate for excessive sedimentation or low lagoon water levels by lowering the bed instead of raising the lagoon.

The existing pumphouse operations are part of the baseline conditions at the project site and not a part of the SNRAMP project. Thus, although the existing pumphouse operations inform the project setting and are part of the baseline conditions against which the proposed project's impacts are measured, the operation of the pumphouse itself is not properly considered as part of the proposed project. However, a response is voluntarily provided. Cattails and bulrush grow and spread vigorously in shallow, flooded conditions and can even extend out into deeper waters. Draft EIR pp. 337 and 338 describe the purpose of the restoration efforts with respect to removing accumulated sediments and invasive species, thereby creating more open-water habitat:

> "Over the years, cattails and other vegetation have encroached into the historically open water habitat, converting this habitat to freshwater marsh and/or wet meadow and limiting its value as breeding habitat for the California red-legged frog. Removing accumulated sediments and encroaching vegetation would reverse the effects of a trend that would eventually result in the conversion of the remaining open water to vegetated wetland and ultimately conversion of those wetlands to upland. The project proposes to convert vegetated wetland habitat back to open water, resulting in a permanent loss of vegetated wetland. This conversion of wetland to open water habitat would not result in a loss of waters of the US and would be consistent with the historical conditions of Laguna Salada. Freshwater marsh habitat at Laguna Salada is currently dominated by dense stands of cattails (*Typha angustifolia*) and bulrush (*Scirpus* sp.). These species tend to form monostands and prevent the growth of other species. By converting these wetlands to open water, not only will a higher quality habitat be created for protected species, but the biodiversity of native wetland vegetation along the periphery of the open water will increase. This condition would be more consistent with historical conditions of the wetland complex …"

The proposed activities under the SNRAMP are articulated on Draft EIR pp. 144 to 146. These activities include dredging excess sediments and accumulated organic matter, including stands of encroaching tules. Under this project, the SFRPD would continue to use the pumps to manage water levels in Horse Stable Pond to maintain California red-legged frog habitat. The SNRAMP project does not propose to modify the operations of the existing pumps at Horse Stable Pond.

The existing pumping operations are intended to protect sensitive habitats. To further protect sensitive habitats, in the USFWS's Biological Opinion for the Pumphouse Project, Conservation

Measure 15 (on p. 13 of the Biological Opinion) dictates the specific manner in which the pumps must be operated in order to minimize the potential effects on special-status species.

The commenter also suggests nondredging alternatives for the restoration activities at the Sharp Park wetland complex, including water-level management of the lagoon and construction of a low berm or levee bordering the upland side of the lagoon's wetland-upland transition zone. The creation of a berm and the maintenance of higher water levels at the lagoon would eliminate more areas of the golf course, which would create additional impacts related to historic resources and recreation. Further, the maximum restoration alternative was designed to maximize restoration activities while allowing the golf course to operate, which would not be achieved with the commenters proposed changes to this alternative.

The Sharp Park Conceptual Restoration Alternatives Report[168] (sometimes called the Laguna Salada Restoration Plan in other documents), which is provided as Draft EIR Appendix I, lays out multiple options for the restoration of the Laguna Salada wetland complex. This report addresses alternative methods of operating pumps as well as other measures to control hydrological features, under each of the alternatives evaluated (refer to pp. 2 and 3). The main purpose of managing pump operations is to be able to better control water levels without stranding California red-legged frog egg masses and also to reduce golf course flooding. To reduce the extent to which the pumps must be operated, another option was to raise the ground level of the fairways that traditionally flood. Draft EIR Section VII.F, Alternatives Considered but Rejected, presents yet another alternative that included a model of natural flood control, outdoor recreation, environmental education, and endangered species recovery. This alternative would involve full restoration of the entire Sharp Park property, including the elimination of the golf course.

Kamman Hydrology and Engineering, Inc. (KHE) performed a hydrological evaluation of the Laguna Salada marsh complex and watershed during an entire hydrological cycle in 2008 and 2009. The purpose of the hydrological assessment was to provide a better understanding of the hydrologic processes that affect the distribution of ecological habitats in the wetland system and flooding of the adjacent golf course. Two of the main objectives behind the formulation of the hydrological study were to determine how to regulate water levels to avoid flooding parts of the golf course and to avoid stranding California red-legged frog egg masses. One of the key findings of this report regarding San Francisco garter snake and California red-legged frog habitat and restoration design was that the marsh system is not water limited, as water surface levels are maintained by groundwater even in very dry years. Increases in precipitation and runoff to the system only increase the amount of water that must be pumped out of the system, indicating that the problem is an excess of water, rather than artificially low water levels. Additionally, the report found that

168 Tetra Tech, Swaim Biological, and Nickels Golf Group, *Sharp Park Conceptual Restoration Alternatives Report*, November 2009.

increasing the system's storage capacity through extensive dredging would not result in diminished water levels or compromised water quality (including salinity levels). Therefore, a nondredging alternative did not present any benefits.[169]

On December 17, 2009, the San Francisco Recreation and Parks Commission passed resolution 0912-018, which recommends proceeding with the Laguna Salada restoration while maintaining the 18-hole golf course (also known as Alternative A18 in the Sharp Park Conceptual Restoration Alternatives Report). Alternative A18 requires raising the level of fairways that flood, which also reduces the extent to which the pumps must be operated to prevent flooding of the fairways. Many of the project elements that originate from Alternative A18 in the Sharp Park Restoration Report have been incorporated into the proposed SNRAMP and are being analyzed in the Draft EIR.

According to CEQA Guidelines Section 15126.6(a), "an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." CEQA Guidelines Section 15126.6(c) goes on to state that "[t]he range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects."

For the SNRAMP project, significant and unavoidable effects (even with the implementation of all identified mitigation measures) relate to cultural resources and air quality on a project-specific basis and cultural resources, recreation, biological resources, and air quality on a cumulative basis. All other impacts are less than significant or less than significant with implementation of the mitigation measures identified in the Draft EIR. As reflected on Draft EIR p. 82, the proposed project's basic objectives are as follows:

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native[170] ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management[171] approach;

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169 Kamman Hydrology & Engineering. *Report for the Hydrologic Assessment and Ecological Enhancement Feasibility Study: Laguna Salada Wetland System*, Pacifica, California, March 30. 2009.

170 Native – Grown, produced, or originating from a particular geographic area.

171 Adaptive management – A flexible, learning-based approach to managing complex ecosystems.

- To provide guidelines for passive recreation[172] compatible with San Francisco's natural resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex for the benefit of special status species.

The alternatives presented in the Draft EIR, as opposed to those presented in the Sharp Park Conceptual Restoration Alternatives Report, were developed to avoid or substantially lessen one or more of the significant effects, while feasibly accomplishing most of the basic project objectives. The alternatives include a maximum restoration alternative, a maximum recreation alternative, and a maintenance alternative.

As previously mentioned, the commenter suggests an alternative to dredging at Sharp Park (i.e., water level management or construction of a low berm or levee bordering the upland side of the lagoon's wetland-upland transition zone). The Draft EIR concludes that there are no significant and unavoidable effects associated with dredging at Sharp Park. As stated on Draft EIR p. 371, dredging would be regulated by the SWRCB and SFBRWQCB through Section 401 of the Clean Water Act. The intent of this regulation is to prevent any degradation of water quality that would impair beneficial uses of the receiving waterbodies. Draft EIR p. 371 goes on to say that, as part of the Laguna Salada restoration project, Laguna Salada and Horse Stable Pond would be drained before the dredging and deepening begin. Dredging would be conducted during the dry season from April 15 through October 15, which is also the non-breeding season for sensitive species, when inflow to Laguna Salada is lowest. As a result, the SFRPD does not propose to discharge water from Laguna Salada or Horse Stable Pond to the Pacific Ocean during restoration. Draft EIR p. 372 concludes that impacts on water quality from disturbance of sediment during dredging would be less than significant by avoiding discharges during construction or ensuring that sediment-laden water is discharged in compliance with the permits issued for the project and by monitoring water quality to demonstrate that it is suitable for aquatic species (M-BI-12b). As further explained in Response BI-7, RTC p. 4-365, in order to ensure potential impacts are mitigated to a less-than-significant level, in the unlikely event that anoxic conditions materialize (resulting in acid soil sulfate conditions), Draft EIR Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, has been revised to include a sediment core sampling and monitoring process to address the potential presence of anoxic conditions. In addition, Mitigation Measure M-BI-6a was revised to be consistent with Pumphouse FMND Mitigation Measure M-BIO-2b, which was subject to previous public review and comment. The full text of Mitigation measure M-BI-6a, as revised, is provided in Response BI-7, RTC. p. 4-365, and Chapter 5, Draft EIR Revisions, RTC p. 5-1.

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[172] Passive recreation – Recreation that occurs in a natural setting and that requires minimal site development or facilities. Under passive recreation, the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

Finally, with respect to an analysis of sedimentation, a sediment yield analysis[173] was prepared to: (1) provide an estimate of the volume of sediment that moves through the watershed above Laguna Salada under various conditions; (2) provide a baseline estimate for designing sediment catch basins; and (3) prepare a qualitative estimate of the degree to which sediment from the watershed affects bottom elevations in the lagoon. Annual sediment delivery rates (or sediment yields) were estimated in order to support design of sediment detention and removal facilities. The approach to the sediment yield analysis includes a first-cut level of analysis based on the Revised Universal Soil Loss methodology to estimate the long-term average annual soil loss from the tributary areas. Additionally, the Modified Universal Soil Loss Equation was used to predict soil erosion from the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. The study concluded that sediment deposition has occurred since 1931, and the rate of sediment yield is calculated to be 1.02 tons/acre/year, which is within the range of the other sediment yield rates for other studies in nearby areas.

In summary, the nondredging alternatives did not provide any benefits for the following reasons: (1) a nondredging alternative would eliminate more areas of the golf course, which would create additional impacts related to historic resources and recreation; (2) increasing the system's storage capacity through dredging would not result in diminished water levels or compromised water quality (including salinity) levels, providing no benefits associated with a nondredging alternative; (3) there are no significant hydrologic, water quality, or biological resource impacts (or any other impacts, for that matter) associated with dredging that would be offset by a nondredging alternative; and (4) the SWRCB and SFBRWQCB would regulate the dredging activities pursuant to Section 401 of the Clean Water Act to further ensure that all activities are undertaken in accordance with the requirements of the issued permits and prevailing laws. The proposed project was determined to be the best option to restore the Laguna Salada wetland complex for the benefit of special-status species, which is one of the six basic project objectives. Further, and as previously mentioned, the alternatives analysis presented in the Draft EIR provides a wide range of alternatives to satisfy the requirements of CEQA.

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173 Tetra Tech, Inc., *Draft Sediment Yield Report, Laguna Salada Wetland Restoration and Habitat Recovery Project*, September 2012.

Comment AL-12	**Choosing feasible alternatives over the proposed project**

The response to Comment AL-12 addresses all or part of the following individual comment:

PH-Rotter-P-02

- Second thing about that is that this proposal is a violation of CEQA. CEQA says that public agencies should not approve projects proposed if there are feasible alternatives or feasible mitigation measures available. There are – from what they propose is the maintenance intervention of into the environment.

  There are alternatives, and it is says so in this EIR. [PH-Rotter-P-02]

Response AL-12

This comment indicates that public agencies should not approve projects if there are feasible alternatives or mitigation measures.

This comment does not raise any specific environmental issues about the adequacy or accuracy of the Draft EIR's coverage of environmental impacts that require a response in this RTC document under CEQA Guidelines Section 15088. However, a response is provided to clarify the CEQA requirements for approving a project with significant environmental impacts. CEQA Section 21081 states that a public agency shall not approve a project if there are feasible alternatives or mitigation measures available unless: (1) The lead agency makes specific findings regarding each significant environmental effect stating that changes have been incorporated into the project to mitigate or avoid a significant effect, those changes are within the jurisdiction of another public agency and can be or should be adopted by that agency, or specific economic, legal, social, technological, or other considerations make infeasible mitigation measures or alternatives identified in the EIR; and (2) with respect to mitigation measures or alternatives found to be infeasible, a specific finding be made that other benefits of the project outweigh the significant effects on the environment. Therefore, it is possible and common, for public agencies to approve a project that has significant environmental impacts if the benefits of the proposed project outweigh those impacts.

Comment AL-13	**Propose alternative of reducing, redirecting, or shutting down the Natural Areas Program**

The response to Comment AL-13 addresses all or part of the following individual comments:

Kessler-1-14	Kessler-2-14	Pittin-1-04
Rotter-P-1-03	Valente-1-11	Valente-1-13

- However, I and many others would like to see the NAP program actually cut back extensively. [Kessler-1-14] [Kessler-2-14]
- One alternative for San Francisco not proposed is shutting NAP down, or redirecting NAP in a direction of co-habitation, preserving 'native' plants in an evolving environment. [Rotter-P-1-03]

- The EIR, in its focus on expansion, also does not reflect the possibility of reducing the NAP program so that the San Franciscan population - people and wildlife - are no longer subject to the effects of NAP chemical warfare.

  I ask that the EIR be redone to reflect the realities of recreation and alternative uses of our shared open spaces, and to reduce the toxicity of our already all-too-polluted urban environment. A new, science-based EIR should be prepared for consideration. [Pittin-1-04]

- At best, the NAP should devote 5% of the park properties to Natural Areas; a figure proportionate to the population these areas bring pleasure to. That limited development should be put on hold until SFRPD can put its house in order; they must complete their audits, and set and reach standards for all existing park facilities before NAP is even brought up again for implementation in no more than 5% of the SFRPD's undeveloped or underdeveloped park properties. [Valente-1-11]

- Is There A Preferred Alternative? Yes, but this EIR does not include it. This EIR is designed only to promote NAP which for the reasons outlined above is unconscionable.

  Our Preferred Alternative would set aside 50 acres scattered about the City where conversion to natural areas is not overly destructive. This would:

  > minimize loss of recreational facilities in our crowded urban environment

  > recognize preferences of native plant advocates

  > still provide areas to protect all species endangered or otherwise

  > provide an educational forum for native plant advocates

  > save lots of taxpayer money

  > minimally impact air quality by saving approximately 100,000 trees

  > preserve the landscape the way the vast majority of San Franciscans like it [Valente-1-13]

Response AL–13

These comments suggest eliminating or significantly reducing the NAP as an alternative to the proposed project. A commenter suggests an alternative that would provide 50 acres scattered throughout the city where conversion to natural areas is not overly destructive and identifies benefits of this alternative.

As more fully discussed in Response G-2, RTC p. 4-15, the Recreation and Open Space Element (ROSE) of the City's General Plan (updated in April 2014) requires the City to protect and enhance the biodiversity, habitat value, and ecological integrity of open spaces and encourage sustainable practices in the design and management of the City's open space system (Objective 4). In addition, the San Francisco Department of the Environment's Biodiversity Program also supports the protection and maintenance of biodiversity within the Natural Areas. The SFRPD's NAP supports the goals of the ROSE and the Biodiversity Program, with a mission to preserve, restore, and enhance remnant Natural Areas, and to develop and support community-based site stewardship of

these areas. The SNRAMP is a management plan to protect and enhance those Natural Areas. Accordingly, as listed on Draft EIR p. 82, the CEQA project objectives are:

1. To identify issues and impacts adversely affecting ecosystem functions and biological diversity;
2. To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including maintenance and enhancement of native biodiversity;
3. To identify and prioritize monitoring of natural resources to support an adaptive management approach;
4. To provide guidelines for passive recreation compatible with San Francisco's natural resources;
5. To provide guidelines for education, research and stewardship programs; and
6. To Restore the Laguna Salada wetland complex for the benefit of special status species.

In compliance with CEQA Guidelines Section 105126.6 (f), "[o]f those alternatives, the EIR need examine in detail only those that the Lead Agency determines could feasibly attain most of the project objectives." An alternative as suggested by the commenter to eliminate the NAP altogether or to substantially reduce the size of the Natural Areas would not meet the primary CEQA project objectives listed above, and, therefore, need not be analyzed in the EIR.

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CHAPTER 5 **Draft EIR Revisions**

5.A CHANGES IN RESPONSE TO COMMENTS

The following revisions or clarifications to the text of the Draft EIR are made in response to public comments received on the Draft EIR or as initiated by City staff. Deleted text is shown in ~~strikethrough~~, and new text is double underlined. These changes are organized in the order of the Draft EIR table of contents, and all text changes are provided by Draft EIR page number.

While revisions to the Draft EIR text have been proposed, none of the revisions change any of the conclusions in the Draft EIR and do not constitute significant new information, which is defined in CEQA Guidelines Section 15088.5 as a new significant environmental impact; a substantial increase in the severity of an environmental impact; a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it; or the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043) Thus, recirculation pursuant to CEQA (California PRC Section 21092.1) and the CEQA Guidelines (14 CCR Section 15088.5) is not required.

5.A.1 Glossary

As discussed in Response BI-27, RTC p. 4-431, Draft EIR pp. ix to xiii has been changed, as follows:

> **Basal Area** – A measure, typically in square feet per acre, of the area covered by trees at breast height, or 4 ½ feet above the ground ~~urban forest~~. Basal area is a standard form of measurement that is used as an index of tree production.
>
> …
>
> **Forest** – A dense growth of trees and underbrush covering a large tract.
>
> …
>
> **Invasive species** –A species that is nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.
>
> …
>
> **Recreation** – Activity done for enjoyment when one is not working. Within the Natural Areas, typical recreational activities include, but are not necessarily limited to, walking, hiking, running, nature watching, dog walking, picnicking, other passive recreational activities, and volunteering.
>
> **Riparian** – ~~l~~Land next to a natural watercourse, such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat, as well as important fish habitat when it overhangs the bank. The SNRAMP goes on to define riparian as "relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater."
>
> …

Scrub – Low ~~trees or shrubs collectively.~~ growing or stunted vegetation on poor soil or in semiarid regions, which sometimes form impenetrable masses.

…

Urban forest – A significant stand of mostly nonindigenous trees.

5.A.2 Chapter I: Summary

As discussed in Response G-10, RTC p. 4-50, Response AL-4, RTC p. 4-566, and Response AL-10, RTC p. 4-595, Draft EIR p. 2, line 8, has been changed as follows:

The ~~Maximum Restoration~~ Maintenance Alternative is the Environmentally Superior Alternative.

As discussed in Response CP-5, RTC p. 4-259, Draft EIR p. 11, Mitigation Measure M-CP-1, has been changed as follows:

M-CP-1: Consultation with the San Francisco Planning Department

The SFRPD would coordinate with the San Francisco Planning Department's Historic Preservation ~~Specialists~~ Planners and would submit plans before constructing stabilizing and erosion control measures that require installation of structures, such as gabions, near ~~any~~ potentially eligible resources. Should it be determined that a Historic Resource Evaluation is required, that evaluation shall be completed by a qualified professional landscape architectural historian. The Planning Department would assist in determining if any proposed construction or other activities would impact identified historic resources under CEQA on a site-by-site basis; if such impacts may occur, the project would be required to be redesigned to avoid significant impacts to historic architectural resources. The Planning Department would also assess potential impacts on any historic landscapes that are present.

As discussed in Response CP-5, RTC p. 4-259, Draft EIR p. 13, Mitigation Measure M-CP-7, Documentation of the Sharp Park Golf Course, on p. 222, has been changed as follows:

M-CP-7: Documentation of the Sharp Park Golf Course

The SFRPD ~~would document, or~~ would retain a consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie to document~~,~~ and preserve the historic character-defining features of the Sharp Park Golf Course before wetland restoration activities take place. The National Park Service has published guidance for preserving cultural landscapes in Preservation Brief 36: Protecting Cultural Landscapes, Planning, Treatment, and Management of Historic Landscapes and in the more complete Secretary of the Interior's Standards for the Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes. The appropriate level of documentation would be selected by a qualified professional landscape architectural historian who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation would consist of the following:

- Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course;
- Digital photographs of the Sharp Park Golf Course;
- A written history and description of the Sharp Park Golf Course and its alterations.

> The professional landscape architectural historian would prepare the documentation and submit it for review and approval by a San Francisco Planning Department Preservation Specialist. The documentation would be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.

As discussed in Response CP-4, RTC p. 4-255, Draft EIR p. 28, M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, has been changed as follows:

> Mitigation Measure M-RE-6~~1~~ would require SFRPD to coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf course while documenting and preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources. However, if any reconfiguration of the course resulted in additional holes east of Highway 1, this would result in a significant impact on the historical significance of Sharp Park Golf Course, further contributing to significant cumulative impacts. Reconfiguration of the golf course holes to resemble its original layout (replacement holes west of Highway 1) would reduce cumulative impacts on the golf course. This reconfiguration would result in a total of 15 holes on the west side of Highway 1 and three holes on the east side. Mitigation Measure M-RE-6~~1~~ would be beneficial to the Sharp Park Golf Course because it would restore some of the elements in the original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where holes were situated in the original design, and would be in keeping with the historic boundaries of the golf course. While impacts to cultural resources were determined to be significant and unavoidable in terms of modifying Holes 10 and 13 and closing or replacing Hole 12, recreation impacts would be reduced to a less-than-significant level by retaining the golf course as an 18-hole course, as required by Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, Draft EIR p. 264.

As discussed in Response BI-7, RTC p. 4-365, Draft EIR p. 40, Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, has been changed as follows:

> **M-BI-6a: Protection of Protected Species during Implementation of the Sharp Park Restoration Project**
>
> The SFRPD shall implement the following, subject to modification during the required regulatory approval processes:
>
> **Avoidance Measures:**
>
> - The number of access routes, the size of staging areas, and the total area of activity would be the minimum necessary to achieve the project goals and to the extent feasible access routes shall be located in upland areas;
> - Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project;
> - The construction documents for the Sharp Park restoration project would identify construction staging areas, access corridors, and work zones that are least impactful to biological resources, as well as golf play and operations. Avoidance of wetlands and other biological resource areas, however, would take precedence over avoidance of golf play areas, such that golf play and operations would be impacted rather than biological resources;

- After surveying the construction site for special-status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no San Francisco garter snakes, California red-legged frogs, or western pond turtles enter the area; fencing will meet CDFG specifications so as to avoid impacts to species potentially getting trapped in the fence.
- No restoration and construction shall occur between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows, although shrubs and willow posts may be planted by hand after the first rains, and weeds may be removed within 15 feet of aquatic areas during these times;
- Before moving any vehicles that remain stationary for longer than 30 minutes, the biological monitor would inspect those vehicles to ensure that no animals had crawled beneath them for cover;
- During project activities, all trash that could attract nonnative predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

Pre-Construction and Construction Activities:

- Prior to commencement of any on-site work related to the proposed removal of sediment and emergent vegetation in the Laguna Salada wetland complex, which includes the Horse Stable Pond and the connecting channel and culverts that link Horse Stable Pond and Laguna Salada, additional sediment core sampling tests shall be conducted, as necessary, in the manner specified in this mitigation measure to determine whether there are elevated concentrations of sulfides or other soil characteristics that would render the soils unsuitable for supporting the desired vegetation.

  The results of the sediment core sampling tests shall be submitted to the USFWS and CDFW for review prior to commencement of any on-site remediation work or sediment/vegetation removal work at Horse Stable Pond or the connecting channel and culverts.

  If remediation measures are required based on the results of the sediment core sampling tests, the SFRPD shall submit a remediation and monitoring plan (prepared by a qualified biological/hydrological consultant) to all applicable resource agencies for review prior to implementation of the remediation measures. Alternatively, the soils could be placed in a nonsensitive location. Copies of all correspondence with the resource agencies shall be submitted to the ERO. The sediment core sampling tests shall include the following elements:

  1. Work Plan

     A Work Plan for sediment core sampling tests shall be prepared by a qualified SFRPD biological/hydrological consultant and submitted to the USFWS and CDFW for review. The Work Plan shall describe, at a minimum, compliance with Tasks 2 through 5 of this part of the mitigation measure, as well as the "During and Post-Construction pH Monitoring" requirement (see following section). Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

2. Sampling of Sediment Cores

The locations of any additional sampling shall be determined pursuant to the work plan developed in accordance with Task 1, above. Sample sediment cores shall include the soils between the current surface sediment level and approximately two to three feet below the current surface. This depth shall be at least one foot below the proposed depth of the future sediment-water interface.

3. Analysis of Sediment Cores and Estimation of the Potential for Formation of Acid Sulfate Soils

The sediment cores shall be analyzed every five centimeters over the first 20 centimeters of core depth and then every 10 centimeters, or as appropriate based on field conditions, for the remainder of the core length for the following components: Total Organic Carbon (TOC), carbonate/bicarbonate, sulfate, sulfide, sulfites, pH, calcium, sodium, iron, aluminum, chloride, conductivity, redox potential, refractory organics, organic nitrogen, total phosphorus, ammonia, nitrate+nitrite nitrogen, soluble reactive phosphorus, organic phosphorus, loosely-sorbed phosphorus, iron-phosphorus, iron-phosphorus, aluminum-phosphorus, and calcium- phosphorus. Sediment core chemistry shall be analyzed to assess the potential reduction of sulfate to form hydrogen sulfate, iron sulfides, and reduction buffering capacity relative to acid-neutralizing capacity.

In addition, sediment oxygen demand (SOD) in the sediment cores shall be measured. Results shall be compared to the total oxidizable organic material, which would be estimated from the difference of TOC and refractory organic carbon (labile carbon). These results shall be used in the analysis of potential for formation of anoxic conditions within the Laguna Salada Wetlands Complex.

Sediment cores shall be analyzed based on Toxicity Reference Values (TRVs) from the USEPA and Screening Quick Reference Tables (SQuiRT) from the National Oceanic Atmospheric Administration.[174] A draft summary of potential toxics shall be provided to the USFW, CDFW, and ERO for review and, if needed, revision will be made to the toxicity ranges appropriate for use in analyzing the sediment cores.

The potential for formation of acid sulfate soils and anoxic conditions in the water column shall be estimated based on this analysis and in coordination with the USFWS and CDFW. If this analysis determines that acid sulfate soils could be present in this location, the SFRPD shall perform a toxic pathway analysis to determine the appropriate remediation measures. The analysis results and determination shall be submitted to the USFWS, CDFW, and ERO.

4. Toxics Pathway Analysis

Should the potential for acid sulfate soils and anoxic conditions be present, a toxics pathway analysis shall be conducted for potential risks and toxicities to

[174] NOAA, Office of Response and Restoration. SQuiRT Cards. This document is available online at: http://response.restoration.noaa.gov/cpr/sediment/squirt/squirt.html, accessed on July 17, 2013.

species that may be affected by localized increases in acidity, hypoxia, or dissolved metals concentration. During this Task, toxicity standards shall be established in coordination with the USFWS, CDFW, and ERO based on the results of Tasks 2 and 3 above, site-specific hydrologic conditions including water exchange and dissolved oxygen levels, the species that are known to be present, and literature review. The results of this task shall be submitted to the USFWS and CDFW and any applicable responsible agencies for review and comment. Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

Should the results of the sediment core tests reveal that there has been an appreciable increase in the amount of nitrogen and related compounds in the sediment cores, any necessary measures to remediate such compounds shall be undertaken in accordance with Task 5, below. The SFRPD shall hire a qualified biological/hydrological consultant to prepare a remediation and monitoring plan which shall be submitted to the USFWS and CDFW for review and approval. Copies of all correspondence with the resource agencies shall be submitted to the ERO for review.

5. Remediation

If results of the sediment core chemistry analysis reveal the potential for reduction of sulfate to form hydrogen sulfate, iron sulfides, and its reduction in buffering capacity relative to acid-neutralizing capacity, or if the toxics pathway analysis indicates that their presence could potentially result in substantial stress to special-status species, the SFRPD shall implement remediation measures.

Remediation measures could include, but are not limited to:

a. Addition of lime to neutralize any acid that exists or which may form during the sediment removal process;

b. Injection of sodium nitrate to oxidize the sediments, thereby satisfying the sediment oxygen demand; or

c. Use of suction hydraulic sediment removal that reduces re-suspension of any form of sediments.

Depending on the severity of the condition (e.g., hypoxia), the remediation measure selected for implementation would be the least intensive beginning with Item a, when signs of hypoxia are present, to the most intensive with Item c, when hypoxia is persistent and/or widespread. The SFRPD shall select the remediation measure in consultation with the USFWS and CDFW. The remediation measure shall be selected based on immediate threats to species and sensitive life stages present during occurrence of the hypoxic condition.

- A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and the proper protocol should a protected species be encountered. The training shall include a discussion of the importance of maintaining speed limits and respecting exclusion zones. The SFRPD and its construction contractor shall confirm that all workers have been trained appropriately.
- Two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is

suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the USFWS and/or CDFG to determine whether relocating any life stages is appropriate. Collection of California red-legged frogs, San Francisco garter snakes, and western pond turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat;

- Upland vegetation in all construction areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of protected species prior to disturbance and prior to construction equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake, western pond turtles, and California red-legged frogs will be conducted in the impact area.
- Prior to construction near wetlands or ponds, all rodent burrows in the construction area will be hand excavated until the burrows terminate or to a maximum depth of 30 centimeters in areas where soil or fill will be removed or placed.

Biological Monitor:

- A biological monitor familiar with the identification and life history of California red-legged frog, San Francisco garter snake, western pond turtle, and other potentially present protected species, and with the appropriate agency authorization, shall be designated to periodically inspect onsite compliance with all mitigation measures.
- The biological monitor shall perform a daily survey of the entire project area during construction activities. During these surveys, the monitor shall inspect the exclusion fencing for individuals trapped within the fence and determine the need for fence repair. Throughout the duration of the project, the monitor shall continue to perform daily fence surveys and compliance reviews at the project site. The monitor shall be designated prior to project implementation and shall have at least one specialty environmental monitor on call, with a valid 10(a)(1)(A) permit to handle listed species. The specialty monitor shall direct all personnel in regards to interactions with protected species, perform authorized species relocations, and supervise all reporting on such species.
- Bullfrog monitoring will occur and egg masses detected shall be removed.

During and Post Construction pH Monitoring:

During sediment and vegetation removal in the Laguna Salada Wetland Complex, pH levels immediately above the sediment shall be monitored by the SFRPD to ensure that implementation of the proposed project would not adversely affect special-status species.[175] To ensure that residual acid sulfates in the water column would not adversely impact special-status species, pH levels in Horse Stable Pond and the connecting channel shall be monitored by the SFRPD for a period of six weeks after the proposed sediment and vegetation removal is completed. A remediation measure, such as addition of lime or injection of sodium nitrate, shall be implemented if the monitoring warrants such a

[175] pH is an indicator of anoxic conditions at the sediment-surface water interface. Under anoxic conditions, hydrogen ion availability increases and binds with sulfides mobilized from sediments. Rates of transformation of sulfur are mediated by microorganisms in both the sediments and surface water. Suspension of hydrogen sulfide (H_2S) in the water column is oxidized in surface water to form sulfuric acid (H_2SO_4).

remediation measure to protect special-status species based on the toxicity standards that are established in accordance with Task 4 above.[176]

5.A.3 Chapter III: Project Description

As discussed in Response PD-13, RTC p. 4-175, beginning with the first paragraph on Draft EIR p. 77, the text has been changed as follows:

While San Francisco is by and large a densely developed urban area, fragments of unique plant and animal habitats, known as Significant Natural Resource Areas (Natural Areas), have been preserved within the parks of San Francisco and Pacifica that are managed by the SFRPD. In the late 1990s, the SFRPD developed a Natural Areas Program to protect and manage these Natural Areas for the natural and human values they provide. The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas. On January 19, 1995, the San Francisco Recreation ~~and~~& Park Commission approved the first Significant Natural Resource Areas Management Plan.

Since 1995, the SFRPD has embarked on an almost 10-year process that involved SFRPD, meetings with over 3,000 members of the public, task forces, advisory groups, independent technical advisers, consultants, and decision-making bodies to study, consider, and ultimately propose the 2006 Significant Natural Resource Areas Management Plan.

In June 2005, when the Draft SNRAMP was released for public review, three well-attended public workshops were held throughout the city. Outreach included sending fliers to neighborhood groups and residents within 300 feet of all Natural Areas, the Mayor's Office of Neighborhood Groups, SFRPD's list of neighborhood groups, and other interested parties. Announcements were also posted at all Natural Area sites. An online survey was available for individuals and members of the public that were unable to attend in person. Feedback was received from approximately 2,700 members of the public. Further, several task forces, committees, and working groups were convened as part of this process, including (1) the Natural Areas Program Citizen Advisory Committee, an ad hoc group that made recommendations on how to revise the plan, (2) a Science Round Table group that reviewed the Alternatives Report for Sharp Park, and (3) the Sharp Park Working Group. The Sharp Park Working Group, which was convened by SFRPD and facilitated by an independent party, consisted of land managers with an interest in the property, including San Mateo County, the City of Pacifica, the Golden Gate National Recreation Area, and the SFRPD. In addition, revisions to the Sharp Park Restoration Plan were also specifically made in response to input from scientists and regulatory agencies.

Three independent scientific reviews of the 2005 Draft SNRAMP were also conducted in August 2005. The goal of this independent review was to assess the scientific basis for the plan and evaluate the goals, issues, and recommendations. Additionally, the reviewers were asked to determine if the 2005 Draft SNRAMP was feasible to implement and if implementation of the proposed management activities would result in the desired outcome. The first review was conducted by Dr. Lynn Huntsinger and James W. Bartolome,[177] who provided a detailed report to

[176] David Munro, Tetra Tech, Inc., Email to Stacy Bradley, SFRPD, Sharp Park Appeal: M-BI-2b – Post Construction Monitoring, January 7, 2014.

[177] Review: Significant Natural Resource Areas Management Plan, Lynn Huntsinger and James W. Bartolome, Submitted to the San Francisco Recreation and Parks Department, August 2005.

the SFRPD (Huntsinger and Bartolome 2005). This review reached the following overall conclusions:

- The 2005 Draft SNRAMP was based on sound science and was a reasonable compromise between ideals, practicality, and competing uses.
- The management goals (conservation, restoration, education, stewardship, recreation, and monitoring) are consistently addressed throughout the Plan.
- The proposed actions and monitoring seemed generally feasible.

The review suggested revisions to the recommendations dealing with management of the urban forest understory, grasslands (see GR-3 in Section 5), and butterfly host plants (see GR-10). The general recommendations referenced by these comments have been revised and updated. The review also suggested minor changes to the Monitoring protocols (Section 7), which were implemented.

A second review was conducted by Roy A. Woodward, PhD. Dr. Woodward made comments on and suggested edits to the text, particularly as it related to the Monitoring Plan and Protocols. The 2005 Draft SNRAMP was revised per these edits as appropriate.[178]

A third review was conducted by Peggy Fiedler, PhD. Dr. Fiedler concluded that the 2005 Draft SNRAMP in general succeeded in its goals and "strikes a balance between natural resource protection and the needs of citizens in a highly urbanized, densely populated, highly ethnically diverse, overall well-educated area."[179]

~~Over the course of several years,~~ Ultimately, the SFRPD updated and expanded the level of detail in the 1995 plan, as well as incorporated the comments from the above scientific reviews on the 2005 Draft SNRAMP, ~~ultimately~~ resulting in ~~a new~~ the 2006 Final Draft Significant Natural Resource Areas Management Plan (SNRAMP, SFRPD 2006)~~, with a final draft plan~~. The San Francisco Recreation ~~and~~& Park Commission approved the final draft SNRAMP ~~plan~~ for CEQA evaluation in August 2006. In April 2009, the Board of Supervisors introduced legislation that required the SFRPD to develop and plan for restoring Sharp Park for the California red-legged frog and the San Francisco garter snake; in response to this, the SFRPD began to develop the Sharp Park Conceptual Restoration Alternative Report, which was completed in September 2009.

In December 2009, the Recreation & Park Commission agreed to proceed with the Laguna Salada Restoration while preserving the 18-hole golf course at Sharp Park. In August 2011, the SNRAMP Draft EIR was released for public comment and in September 2011, a Historic Preservation Commission Hearing was held (with split votes as to whether Sharp Park is a historic resource) and in October 2011, the Planning Commission Hearing on the Draft EIR was held.

This SNRAMP contains detailed information on the biology, geology, and trails within 32 Natural Areas, 31 in San Francisco and one (Sharp Park) in Pacifica. The SNRAMP is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is the SFRPD's implementation of the SNRAMP.

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178 Hand edits to 2005 SNRAMP text from Dr. Roy A. Woodward, Ph.D., Senior Environmental Scientist, Natural Resources Division, State of California, Department of Parks and Recreation, no date.

179 Peer review of the Public Draft Significant Natural Resource Areas Management Plan, June 2005, Peggy L. Fieldler, Ph.D., Senior Scientist II/Associate, BBL Ecosystem Science and Restoration Services to Ms. Lisa Wayne, San Francisco Recreation and Parks, September 29, 2005.

As discussed in Response HZ-1, RTC p. 4-550, the text on Draft EIR pp. 90 and 91 have been revised as follows:

IPM is a multistep ecologically based approach that enables staff to make decisions about where, when, and how resources should be best allocated to control pests. Conventional pest control methods attempt to control the symptoms of a pest problem, but IPM is a proactive strategy that focuses on identifying and reducing, or eliminating, the root cause of a pest problem. IPM implements effective, long-term management solutions through the use of a broad range of expertise, a combination of treatment methods, and comprehensive monitoring and evaluation.

In accordance with Chapter 39 of the San Francisco ~~Administrative~~ Environment Code, the Natural Areas Program employs IPM as its strategy for preventing new and managing existing pest infestations. Four general weed management strategies exist: prevention, containment, reduction, and eradication; each of these results in a different level of weed control and reflects available resources. The Natural Areas Program's policy is to use the least-toxic control methods whenever feasible and practical. In addition, to reduce the need for pesticides, manual pest control efforts are employed by a collaborative effort between SFRPD employees and volunteers. Apart from the 10 full-time staff that conduct management and maintenance actions within the Natural Areas, the Natural Areas Program also has a robust volunteer program, with individual groups that range in size from 10 to 50 people.

Factors that make manual and/or mechanical methods impractical include:

- Direct threats to human health and safety (e.g., steep, inaccessible, unstable slopes, significant poison oak infestations, etc.);
- Large infestations requiring ongoing repeated strenuous physical labor, such as picking and lifting, that may cause injury to staff, contract field crews, or volunteers; and
- Areas where access, human trampling, or soil disturbance may directly or indirectly damage native plant communities, affect wildlife, or cause soil erosion.

Management methods to be employed by the Natural Areas Program include:

- Physical control methods employed by Natural Areas Program staff and volunteers, which range from hand-pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
- ~~Biological~~Pest control,[180] which, in the case of the Natural Areas Program, involves revegetating cleared areas and introducing native plants in an area to encourage competition with weeds; and
- Chemical control, which involves the use of herbicides to suppress wildland weeds~~; and~~, in compliance with the San Francisco Pest Management Ordinance.
- ~~Public education and outreach.~~

Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies. The application of herbicides, including Garlon and Roundup, is not allowed within 15 feet of either side of established trails.

[180] Pest control generally involves the management of pests (insects, diseases, weeds) by manipulation of the environment or implementation of preventive practices including using plants that are resistant to pests, raising the mowing height of turf to shade out weeds, aerating turf to reduce compaction and plant stress, or dethatching to remove habitat, food sources and impediments to management.

As discussed in Response GE-1, RTC p. 4-491, the text on Draft EIR p. 94 has been changed to add the following paragraph after the second bullet on the page:

> Where alternative materials are available to achieve the intended erosion control objectives while also minimizing inadvertent impacts to wildlife and habitat, a preference would be given to the use of biodegradable, certified weed-free, and wheat-free erosion control materials. To help ensure that appropriate materials are used that are compatible with the materials and features present at the sites in which they are used, a qualified SFRPD biologist would be consulted during design of erosion control measures.

As discussed in Response PD-13, RTC p. 4-181, the beginning of the only full paragraph on Draft EIR p. 98 has been changed as follows:

> The Sharp Park Restoration project is a voluntary and discretionary action by the City, a primary purpose of which is to provide higher quality habitat for the San Francisco garter snake, a State and Federally endangered species, as well as a species identified as fully protected under the State Fish and Game Code, and the California red-legged frog, a State threatened species; further, it is an action that is consistent with the species recovery objectives of both the federal Endangered Species Act and the California Endangered Species Act. The improvements to protect and enhance the California red-legged frog and San Francisco garter snake at Laguna Salada under measure SP-4a are focused on restoring the marsh complex and associated uplands. …

As discussed in Response BI-7, RTC p. 4-378, after the first paragraph on Draft EIR p. 102, the following text is added:

> To facilitate the proposed sediment and emergent vegetation removal and to reduce potential impacts to California red-legged frog, suction hydraulic equipment may be used in consultation with the USFWS and CDFW to minimize the disturbance of sediments in the water. While generally resulting in a higher percentage of water in the excavated materials than a clamshell dredge, the use of suction hydraulic equipment generally results in less turbidity and overall disturbance at the point of use than a clamshell. In sensitive environments, the use of suction hydraulic equipment is often preferred, provided that the excavated materials and residual water are properly handled. If suction hydraulic equipment is to be used as part of this project, the slurry that is created by suction hydraulic equipment would go into a settling area until the sediments settle out and the decant water can be tested for its acidity. If the result of such testing indicates that the water is pH neutral, it would either be released into the Horse Stable Pond or pumped into the Pacific Ocean. No permit is required for discharges from the Laguna Salada Wetland Complex into the Pacific Ocean because both the Laguna Salada Wetland Complex and the Pacific Ocean are considered "waters of the United States" under the federal Clean Water Act. However, should any permit be required by SFBRWQCB or any other resource agency for the proposed SNRAMP project, SFRPD will seek such a permit and comply with any and all conditions that are attached to the permit, as already indicated by Table 3, Potentially Required Regulatory Approvals, p. 81.

As discussed in Response PD-13, RTC p. 4-181, the text on Draft EIR p. 103, lines 7 to 10, has been changed as follows:

> Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified (or identified as staging or storage areas for the next season's restoration activities) would be scarified, recontoured, and hydroseeded with native vegetation to approximate their pre-disturbance condition.

As discussed in Response BI-7, RTC p. 4-378, the fourth paragraph of Draft EIR p. 103 has been changed as follows:

> To protect the California red-legged frogs and San Francisco garter snakes during restoration work, the SFRPD anticipates conducting the restoration activities between May 1 and October 15 and would continue to coordinate the planning and undertaking of these activities with the USFWS and CDFG; this activity period avoids the breeding season for the California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows. …

As discussed in Response PD-12, RTC p. 4-173, the following paragraph has been added to Draft EIR p. 104 following Table 4, Laguna Salada Habitat Types within Restoration Footprint has been changed to clarify the changes to the Sharp Park Natural Area boundary resulting from completion of the Sharp Park Restoration Project, as follows:

> Following completion of the Laguna Salada Sharp Park Restoration Project, those areas that were previously designated as part of the golf course that have been restored to provide habitat for special-status species would become part of the Sharp Park Natural Area.

As discussed in Response BI-32, RTC p. 4-459, the text on Draft EIR p. 109, fourth bullet, has been changed as follows:

> GR-4c – If surveys indicate that parasitism by brown-headed cowbirds or predation by crows, European starlings, English house sparrows, or other bird species subsidized by human activities is a significant problem, consult with the CDFG and the USFWS to determine the proper ~~protocols~~ course of action, if any, to address population increases of these species and to minimize the ~~negative~~ effects of ~~this~~ these species on local breeding birds.

As discussed in Response AE-1, RTC p. 4-228, a footnote has been added to Table 5 on Draft EIR p. 114 to indicate that the replacement locations have not yet been determined, as follows:

> *The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.
>
> **The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.
>
> ***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.
>
> ****The acreage of the management areas within McLaren Park have been revised to reflect the exclusion of a portion of the Amazon Reservoir Tract that is under the jurisdiction of the SFPUC. Information regarding the number of trees, trails, or DPAs within the SFPUC Amazon Reservoir Tract and SFRPD McLaren Park is not available.

Note: All trees removed would be replaced, although not necessarily with the same species or within the same Natural Area.

As discussed in Response PD-35, RTC p. 4-219, the text on Draft EIR p. 143, line 14, has been changed as follows:

Mori Point, ~~recently~~ acquired by the GGNRA in 2004, borders the southwestern edge, and the Sweeny Ridge GGNRA borders the park on the southwestern and eastern edges.

As discussed in Response PD-29, RTC p. 4-212, the text on Draft EIR p. 144, seventh bullet, has been changed as follows:

- SP-3a – Preserve natural or biodegradable elements (branches, trees, and logs) during vegetation management and remove other materials. Elements that are contaminated with invasive species (such as invaded with ripe seeds, cape ivy, untreated [chemically] eucalyptus trees, etc.) would not be retained;

5.A.4 Chapter IV: Plans and Policies

As discussed in Response RE-1, RTC p. 4-311, Draft EIR p. 155, line 29, has been changed as follows:

The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off-leash in ~~19~~ over 30 existing designated ~~areas~~ DPAs totaling over 120 acres in San Francisco, seven of which are located in the Natural Areas.

5.A.5 Section V.C: Aesthetics

As discussed in Response AE-2, RTC p. 4-223, Draft EIR p. 191, line 14, has been changed as follows:

The proposed project would alter scenic resources within the Natural Areas. This would involve, for example, placement of brush piles and large woody debris, contouring the topography of an area differently and removing certain invasive vegetation to enhance habitat and establish native vegetation.

As discussed in Response AE-2, RTC p. 4-223, Draft EIR p. 197, last paragraph, has been changed as follows:

Routine maintenance activities involving invasive weed and tree removal, placement of brush piles and large woody debris, plantings, and maintenance of trails, catchment basins, and sediment dams are described in Section III.F.2.

As discussed in Response AE-3, RTC p. 4-224, Draft EIR p. 195, lines 7 to 8, has been changed as follows:

From close-range locations, the aesthetic experience for some visitors using trails in Natural Areas would change in some locations as some plants are removed and others planted. For example, areas where blue gum eucalyptus trees would be removed and replaced with smaller statured trees and shrubs would appear different over time. However, landscapes in the Natural Areas change over time, and the overall vegetated character of the areas would be retained.

As discussed in Response RE-10, RTC p. 4-339, Draft EIR p. 195, following the second full paragraph, has had new text added as follows:

> Three-foot-high post-and-rail fences would be installed in some Natural Areas as required to protect human health and safety, reduce soil loss, protect water quality, and conserve habitat.

5.A.6 Section V.D: Cultural and Paleontological Resources

As discussed in Response CP-2, RTC p. 4-246, Draft EIR p. 208 the following paragraph is added after the last paragraph:

> The Planning Department acknowledges that two of the seven members of the Historic Preservation Commission disagree with the EIR's conclusion that the Sharp Park Golf Course retains sufficient integrity to be designated a historic resource. While many comments were received on the EIR in support of the conclusion that the Golf Course is a historic resource, other comments suggest that the golf course does not retain sufficient integrity and question the identified period of significance (1910-1930). A disagreement among experts does not make an EIR inadequate, but these points of disagreement are discussed here in compliance with CEQA Guidelines Section 15151. In instances where a potential resource has strong evidence of historical significance, the San Francisco Planning Department takes a conservative approach to its determinations, thereby ensuring that preservation is appropriately administered. These points of disagreement do not change the conclusions in this EIR.

As discussed in Response CP-4, RTC p. 4-255, the text on Draft EIR p. 262 has been changed as follows:

> **M-RE-6: Restoration of the Sharp Park Golf Course to 18 Playable Holes**
>
> The SFRPD shall coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf Course, while documenting and preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources; this ~~which~~ would involve replacing Hole 12 either on the west (Option 1) or east (Option 2) side of Highway 1. Replacing the hole on the west side of Highway 1 may also require moving an additional hole west of the highway to retain playability and flow of the course, thereby increasing the number of holes west of the highway to 15 and decreasing to three the number of holes to the east. Creating a new hole east of Highway 1 would decrease the number of holes west of the highway to 13 and increase to five the number of holes to the east. The determination of where the replacement hole is constructed and whether additional holes need to be moved ~~would~~may require additional environmental review.

As discussed in Response CP-5, RTC p. 4-259, Draft EIR p. 219, Mitigation Measure M-CP-1, has been changed as follows:

> **M-CP-1: Consultation with the San Francisco Planning Department**
>
> The SFRPD would coordinate with the San Francisco Planning Department's Historic Preservation ~~Specialists~~ Planners and would submit plans before constructing stabilizing and erosion control measures that require installation of structures, such as gabions, near ~~any~~ potentially eligible resources. Should it be determined that a Historic Resource Evaluation is required, that evaluation shall be completed by a qualified professional landscape architectural historian. The Planning Department would assist in determining if any proposed construction or other activities would

impact identified historic resources under CEQA on a site-by-site basis; if such impacts may occur, the project would be required to be redesigned to avoid significant impacts to historic architectural resources. The Planning Department would also assess potential impacts on any historic landscapes that are present.

As discussed in Response CP-5, RTC p. 4-259, Draft EIR pp. 222 to 223, Mitigation Measure M-CP-7, Documentation of the Sharp Park Golf Course, has been changed as follows:

M-CP-7: Documentation of the Sharp Park Golf Course

The SFRPD ~~would document, or~~ would retain a consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie to document~~,~~ and preserve the historic character-defining features of the Sharp Park Golf Course before wetland restoration activities take place. The National Park Service has published guidance for preserving cultural landscapes in Preservation Brief 36: Protecting Cultural Landscapes, Planning, Treatment, and Management of Historic Landscapes and in the more complete Secretary of the Interior's Standards for the Treatment of Historic Properties Guidelines for the Treatment of Cultural Landscapes. The appropriate level of documentation would be selected by a qualified professional landscape architectural historian who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards, (36 CFR, Part 61). The documentation would consist of the following:

- Full sets of measured drawings depicting existing or historic conditions of the Sharp Park Golf Course;
- Digital photographs of the Sharp Park Golf Course;
- A written history and description of the Sharp Park Golf Course and its alterations.

The professional landscape architectural historian would prepare the documentation and submit it for review and approval by a San Francisco Planning Department Preservation Specialist. The documentation would be disseminated to the San Francisco Library History Room and the SFRPD Headquarters.

As discussed in Response CP-9, RTC p. 4-270, the text on Draft EIR pp. 219 and 220 has been changed as follows:

Impact CP-2. Invasive tree and vegetation removal and planting activities, as part of programmatic projects, would not result in a substantial adverse change in the significance of cultural ~~historic~~ landscapes or urban forests. (Less than Significant)

Several of the management activities proposed in the SNRAMP could adversely affect any present historical architectural resources. In addition to those discussed above, adverse effects could also result from vegetation changes within a Natural Area that may alter potential cultural ~~historic~~ landscapes.

There are four types of cultural landscapes according to the Cultural Landscape Foundation[181] (and a site can fall under more than one category):

- **Historic Site (or Historic Landscape):** a landscape significant for its association with a historic event, activity, or person.

[181] http://tclf.org/landscapes/what-are-cultural-landscapes, accessed on August 8, 2015.

- **Ethnographic Landscape:** a landscape containing a variety of natural and cultural resources that the associated people define as heritage resources.
- **Vernacular Landscape:** a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives.
- **Designed Landscape:** a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect or horticulturist according to design principles or an amateur gardener working in a recognized style or tradition.

Such changes include tree removal, which is proposed for 15 of the 32 Natural Areas and affects approximately 16 percent of the invasive trees in urban forests (San Francisco Park and Recreation Department 2006). As mentioned above, the Natural Areas that contain urban forest stands are Lake Merced, Glen Canyon Park, Bayview Park, McLaren Park, Mount Davidson, Interior Greenbelt, Dorothy Erskine Park, Corona Heights, and Sharp Park. These stands have not been evaluated for their historic significance; therefore, they are treated as potentially historic urban forests or historic landscapes.

Impact AE-1 in the Aesthetics section addresses the tree removal at Mount Davidson and Sharp Park and concludes that invasive tree and vegetation removal would not be noticeable at these Natural Areas and therefore it would not materially affect their significance as historic resources. Impacts to these potential historic resources through tree removal, which is detailed in Chapter III and in the Urban Forestry Statements in Appendix F of the SNRAMP, "could be beneficial to potential historic urban forests or historic landscapes because removing trees (through thinning and group selection) while maintaining the existing forest (which would occur in MA-3) would improve the health of the forest by relieving crowding and encouraging growth." Other Natural Areas would experience less tree removal than Sharp Park and Mount Davidson, and, as a result, would experience lower impacts.

An HRER was prepared for Mount Davidson, and it was determined that invasive tree and vegetation removal as well as planting activities will not result in any significant changes to the historic or ethnographic landscape at Mount Davidson (CCSF 2011a). Selective tree removal would help to restore the historic balance of tree species within the forest and preserve its historic character. The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. For the other San Francisco Natural Areas containing urban forest stands, there would be a relatively lower amount of tree removal than Mount Davidson, and, as a result, similar or lower impacts to potentially historic landscapes.

The HRER provides additional information supporting the conclusion that the site is potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape:

> Sutro, known for his Comstock Lode engineering and as a philanthropist, and specifically his conservationist activities, purchased the Mount Davidson (then known as Blue Mountain) property in 1881 and began planting the forest circa 1885. This activity occurred around the same time that Sutro was helping to organize the first California Arbor Day held in 1886. The original forest was planted with pine, cypress, and eucalyptus trees; however, over time the eucalyptus have begun to dominate and have occasionally been thinned to retain the diversity of the forest. The property was transferred to A.S. Baldwin in 1909. During this time the mountain was given the name 'Mount Davidson', and the

first public trails were established on the property. In 1923 the first Easter ceremony was held at the top of the mountain, beginning the tradition which continues through today. The property was finally purchased by the City in 1927 and the land was dedicated as a city park in 1929. In the same year as the park dedication, a permanent cross was constructed at the mountaintop for the yearly Easter services. As noted above the park became the site of a WPA-era work project between 1936 and 1943. Based upon these facts, the period of significance for the potential historic landscape would appear to be 1885-1943, beginning with the forest planting and extending through to what appears to be the last major improvement project for the park.

In summary, the HRER identified and evaluated the urban forest at Mount Davidson as potentially eligible for listing on the California Register under Criteria 1 (Event) and 2 (Persons) as an ethnographic landscape and treated it as a historic urban forest or historic landscape. The fact that the forest has existed since approximately 1885 and has since taken on importance to the City and the local residents could also give it standing as a vernacular landscape.

According to NPS Preservation Brief 36, a historic vernacular landscape is "a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley." Several features or events could qualify Mount Davidson as a vernacular landscape: (1) the citizens' campaign to preserve Mount Davidson as a public park; (2) the site's home to the 1934 Mount Davidson Cross and the annual Easter sunrise service (that began in 1923); (3) the use of the Park as a place for recreation and contemplation; and (4) as a place that supports a rich biological community that would be enhanced through implementation of the SNRAMP. However, the essential function of Mount Davidson would not change with implementation of the SNRAMP. The cross would remain, the Easter services would be held, recreational activities would continue to be promoted, biological diversity would increase, the urban forest would be maintained according to SNRAMP principles and recommendations, and views of the site would not be materially altered. Further, if the site were classified as a vernacular landscape, it would be afforded no more or different protection than is offered by its classification as an ethnographic landscape or historic landscape or site.

Lastly, this site would likely not qualify as a designed landscape because there is insufficient evidence to demonstrate that it was consciously designed or laid out according to specific design principles or recognized landscape styles or traditions; however, the site's potential designation as a vernacular landscape is evaluated in this response.

Based on the above, invasive tree and vegetation removal would not result in a substantial adverse change in the significance of historic landscapes or historic forests and this impact would be ***less than significant***.

5.A.7 Section V.F: Recreation

As discussed in Response RE-1, RTC p. 4-311, Draft EIR p. 254, first paragraph, has been changed as follows:

There are ~~19~~ over 30 existing designated DPAs totaling over 120 acres that support off-leash dog use within San Francisco, seven of which are located in the Natural Areas. They are Bernal Hill,

Buena Vista Park, Corona Heights, Golden Gate Park Oak Woodlands, Lake Merced, McLaren Park, and Pine Lake.

As discussed in Response PD-13, RTC p. 4-175, Draft EIR p. 261, first partial paragraph, has been changed as follows:

… significantly affecting this recreation facility. However, with implementation of M-RE-6, which calls for retaining the golf course as an 18-hole course, this impact would be reduced to *less than significant*. It is anticipated that during construction, public access to some holes may be temporarily restricted in order to allow movement of heavy equipment and machinery; however, since construction impacts would be temporary and limited in extent and duration, these impacts would also be *less than significant*.

As discussed in Response RE-2, RTC p. 4-313, the cumulative impact analysis provided in Impact RE-7 on Draft EIR pp. 261 and 262 has been changed as follows:

Impact RE-7: The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to recreation. (Significant and Unavoidable)

The geographic scope of this analysis includes San Francisco and Pacifica. Cumulative projects that would have an impact on recreation resources include those that reduce the overall recreation experience provided by the Natural Areas. This includes projects that may result in a significant increase in the regional population resulting in overcrowding of the Natural Area, a decrease in currently available recreation opportunities, consequently putting increased pressure that is unable to be absorbed by other Natural Areas, or a physical or visual change in the landscape that adversely impacts the appeal of a Natural Area.

Implementation of the proposed GGNRA Dog Management Plan ~~may~~ would further restrict dog access and off-leash areas within GGNRA land holdings, including Fort Funston (near Lake Merced), Fort Mason, Crissy Field, Fort Point National Historic Site, Baker Beach, Lands End, Fort Miley, Sutro Heights Park (near Balboa), Ocean Beach (the north end near Balboa), Milagra Ridge (near Sharp Park), Mori Point (near Sharp Park), and Sweeney Ridge (near Sharp Park). At both Fort Funston and Milagra Ridge, as part of the GGNRA General Management Plan, recreational activities would be provided in a more natural setting to protect natural ecosystems and sensitive habitats.

The GGNRA Dog Management Plan[182] designates specific areas where dogs would be required to stay on leash, where dogs may be allowed off-leash, but only when under immediate voice and sight control, and where dog walking would be prohibited. In San Francisco, off-leash dog walking would be permitted in six areas: Fort Mason; Crissy Field (two areas); Ocean Beach; and Fort Funston (two areas).

The most popular locations for GGNRA dog use is Crissy Field and Fort Funston. At Fort Funston, of the total of 180 acres (excluding the 10-acre Bank Swallow Protection Area), approximately 95 acres are steep cliffs or dense vegetation and are not accessible for any use. Of the remaining 85 acres, 35 acres (or 41 percent) would be available for off-leash dog use. At Crissy Field, 30 percent of the airfield and 40 percent of the beach front mileage would be available for off-leash dog use. Overall, of the 8.7 miles of beaches within GGNRA jurisdiction, about 2.3 miles (over 26 percent) would be available for off-leash dog use. In addition, much of the remaining GGNRA lands would be open to dogs on-leash.

To collect current and detailed information regarding visitor use of the park by dog owners, NPS conducted a survey in 2012 to measure customer satisfaction related to dog walking at the GGNRA sites and to determine where visitors would go if they were not satisfied. This survey, the *GGNRA Dog Walking Satisfaction Visitor Study*, evaluated the perception of and satisfaction with the current on and off-leash GGNRA dog walking policies by both dog walkers and non-dog walkers, and the potential for redistribution of use based on the proposed access changes. Of the approximately 7,000 individuals contacted, 897 responded to the survey. Respondents included 662 dog walkers, 20 commercial dog walkers, and 212 individuals who do not walk dogs at the park. These same respondents were then asked where they would go (either inside or outside GGNRA) as an alternative site for dog walking. The five most popular alternative sites indicated in the survey for off-leash dog walking included Pine Lake/Stern Grove, Golden Gate Park (all areas), McLaren Park, Ocean Beach, and Alta Plaza.

~~In addition, t~~The SNRAMP proposes to close the Lake Merced DPA and reduce the size of the DPAs at Bernal Hill and McLaren Park. Of the DPAs impacted by the SNRAMP, only McLaren Park was identified by the GGNRA visitor study survey as a potential alternative off-leash dog-walking site. On-leash dog use would still be allowed at these and all other Natural Areas (except at Lake Merced). Nonetheless, ~~T~~the combined reductions in off-leash areas proposed by the GGNRA and the SFRPD could result in an increase in dog use at the remaining Natural Areas, including McLaren Park, which would be reduced by 8.3 acres, with 53.4 acres remaining.

[182] The GGNRA Draft Dog Management Plan/Supplemental Environmental Impact Statement (SEIS), which contained six alternatives, was released in September 2013. Subsequently, in February 2016, the Proposed Rule for Dog Management in the GGNRA was released for a 60-day comment period. On February 24, 2016, the Proposed Rule for Dog Management in the GGNRA opened for a 60-day public comment period on www.regulations.gov (RIN 1024-AE16). The comment period was later extended to 90 days and ended on May 25, 2016. All substantive comments on both the SEIS and Proposed Rule will be documented and responded to by NPS in a Final Environmental Impact Statement FEIS. These comments, along with relevant data, expert opinions, and other facts accumulated during the SEIS and Proposed Rule stages, will be evaluated by NPS to determine whether the proposed solution will help accomplish the goals and solve the problems identified in the SEIS before moving forward with a Final Environmental Impact Statement, Record of Decision, and Final Rule. While no specific alternative has been selected, it is reasonable to assume that the reduction in off-leash dog play areas would occur as a result of implementation of one of the Plan's alternatives.

Consistent with the conclusion of the cumulative analysis contained in the GGNRA Supplemental Environmental Impact Statement,[183] it is speculative to precisely identify the magnitude or location of redistribution of dog walkers related to the implementation of the SNRAMP in combination with the GGNRA Dog Management Plan. Numerous factors are difficult to predict, including human behavior, level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances.

While both the SNRAMP and GGNRA propose the reduction of off-leash DPAs, new or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts, although none are proposed or envisioned in the Natural Areas. However, for the purposes of this EIR, it is assumed that no new DPAs are reasonably foreseeable to provide a worst-case analysis. It is further assumed that ~~A~~an increase in dog use at the Natural Areas could accelerate the physical deterioration of those DPAs and the Natural Areas in general, and~~. Given the speculative nature of the increased level of use that could result from these proposals,~~ the impacts to recreation are conservatively determined to be significant from the combined cumulative projects. The contribution of the SNRAMP project to this potentially significant impact would be cumulatively considerable, specifically as a result of the closure of the Lake Merced DPA.

DPAs within the Natural Areas would continue to be evaluated in accordance with the SFRPD's Dog Policy~~.~~; and the SFRPD would monitor DPAs for their effects on the Natural Areas and develop solutions to any identified issues. ~~These established procedures are considered adequate, and further monitoring procedures would not be expected to reduce the impact.~~ The potentially significant impact to recreational resources as a result of increased use resulting from cumulative actions could be mitigated by adding a new DPA at a nearby Natural Area or other nearby property. However, as discussed above, adding a new DPA may not mitigate impacts from reducing or closing DPAs because it is speculative to precisely predict the magnitude or location of redistribution of dog walkers related to the implementation of the SNRAMP in combination with the GGNRA Dog Management Plan. Numerous factors are difficult to predict, including human behavior, level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances. Therefore, no feasible mitigation exists that would reduce this impact.~~ as discussed in this document, there is a current moratorium[184] on new DPAs, and the mitigation, therefore, would not be feasible.~~ As a result, this impact would be ***significant and unavoidable***.

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[183] National Park Service, Golden Gate National Recreation Area California, Draft Dog Management Plan/Supplemental Environmental Impact Statement, Fall 2013 (page 354).

[184] ~~There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

5.A.8 Section V.G: Biological Resources

As discussed in Response BI-1, RTC p. 4-351, Draft EIR p. 279, Table 9, State and Federally Listed Species That May Occur Within the Natural Areas, has been revised to add the following species:

Burrowing Owl	*Athene cunicularia*	--/CSC/--	Arid to semi-arid grasslands, with well-drained, level to gently sloping areas. Requires mammal burrow or natural hollow surrounded by sparse vegetation for breeding habitat.	P/ Observed near Hawk Hill and Corona Heights. The Golden Gate Audubon Society reports sightings at East Shore State Park, Cesar Chavez Park and the Tom Bates Sports Complex in Berkeley, at Martin Luther King, Jr. Shoreline Park in Alameda, and in some South Bay locations.
California clapper rail	*Rallus longirostris obsoletus*	FE/SFP/--	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes.	P/ Observed at Heron's Head Park near India Basin.

As discussed in Response BI-2, RTC p. 4-354, Draft EIR p. 293 has been changed as follows:

Before implementing the proposed Sharp Park restoration, the SFRPD would be required to undertake the following, consistent with state and federal laws:

- Apply for a Section 404 permit from USACE, which would require, prior to issuance of the Section 404 permit, consultation with the USFWS regarding the biological assessment and issuance of a Biological Opinion and incidental take permit.
- Request a Section 401 water quality certification from San Francisco Bay Regional Water Quality Control Board, or a waiver thereof.
- Prepare a Biological Assessment and consult with the USFWS, through the USACE permitting process, to obtain a Biological Opinion and incidental take permit in accordance with the ESA.
- Coordinate with CDFG for a consistency determination for federally and state protected species (San Francisco garter snake and California red legged frog)
- ~~Apply for a take permit for state-only listed species (western pond turtle) pursuant to Section 2081(b) of the CESA;~~
- ~~Obtain a permit from the US Army Corps of Engineers under Section 404 of the Clean Water Act;~~
- ~~Obtain a water quality certification from the SFBRWQCB under Section 401 of the Clean Water Act;~~
- Obtain a Streambed Alteration Agreement from the CDFG under Section 1602 of the California Fish and Game Code; and
- Obtain a Coastal Development Permit, as required by the CCC.

As discussed in Response BI-1, RTC p. 4-351, Section 1.a of M-BI-1a, Protection of Protected Species and Riparian and Wetland Habitat, Draft EIR p. 299, has been revised, as follows:

> For protected species and the fully protected California clapper rail, a qualified SFRPD biologist[185] shall survey for suitable habitat within the project area before the project begins, according to USFWS and CDFW protocol for the protected species having the potential to occur. If no protocol exists, surveys shall be conducted according to generally accepted survey methods. If individuals were found or if it is determined that the potential exists for protected species to be present, the SFRPD shall redesign the proposed project to avoid impacts on protected species. Avoidance/minimization measures shall include conducting project activities during periods of the species lifecycle when the species would not be affected or may be minimally affected by project activities. SFRPD shall not perform any activities that would result in take (as defined by California laws for fully protected species) of California clapper rails. If it is infeasible to avoid disturbance ~~of~~ to other protected species (besides the California clapper rail), the SFRPD will contact the USFWS or CDFW and undertake appropriate consultation according to the CESA or ESA (unless an existing Biological Opinion is already in place and the proposed activities fall under the actions of that Biological Opinion, as may be the case for impacts to the mission blue butterfly at Twin Peaks). Any additional requirements agreed to during consultation with the USFWS and CDFW, or other regulatory agencies, to protect the species would be implemented, including restoration and compensation, where required.

As discussed in Response BI-1, RTC p. 4-351, Draft EIR p. 303, second full paragraph, has been changed as follows:

> ~~State and federally listed bird species have been recorded nesting at Sharp Park and Lake Merced.~~ The double-crested cormorant (*Phalacrocorax auritus*) presently nests at Lake Merced and the salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) presently occurs at Lake Merced and Sharp Park. The yellow warbler (*Dendroica petechia*) and bank swallow (riparia) have also been observed at Lake Merced. The double-crested cormorant nests on coastal cliffs and in trees. The salt marsh common yellowthroat requires saltwater or freshwater marsh and dense vegetation for nesting. The yellow warbler requires riparian woodlands and the bank swallow requires vertical cliffs near water bodies. The California clapper rail (*Rallus longirostris obsoletus*) has been observed near India Basin Shoreline Park. According to the Golden Gate Audubon Society (as reflected in their comment later dated October 31, 2011), during the bird breeding season of 2011, California clapper rail young were observed on multiple occasions at Heron's Head Park (north of the wetlands at India Basin Park). The Golden Gate Audubon Society further stated that this was the first detection of (likely) breeding California clapper rail in a considerable period, and it is believed that the nesting pair derived from rail populations further south in the Bay. In addition, the burrowing owl (*Athene cunicularia*) has been observed near Hawk Hill and Corona Heights, and the Golden Gate Audubon Society reports sightings at East Shore State Park, Cesar Chavez Park, and the Tom Bates Sports Complex in Berkeley, at Martin Luther King, Jr. Shoreline Park in Alameda, and in some South Bay locations. Bird species protected by the MBTA may occur at these and other Natural Areas.

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185 A SFRPD biologist knowledgeable about protected species occurring within the area proposed for disturbance. If no SFRPD biologists are familiar with the protected species occurring in the area proposed for disturbance, the SFRPD would be required to obtain a qualified biologist to conduct protected species surveys.

As discussed in Response BI-1, RTC p. 4-351, Draft EIR p. 304, first paragraph, has been changed as follows:

> The yellow warbler and bank swallow have been observed foraging over Lake Merced, but have not been observed nesting there and would therefore not be impacted by invasive vegetation removal at Lake Merced. The California clapper rail breeds in salt marsh wetlands throughout the Bay. The activities in the SNRAMP at India Basin Shoreline Park that could affect California clapper rail include removal of invasive vegetation from the wetlands and planting. The burrowing owl could be affected by the removal of grasslands and other open spaces. However, ~~I~~in compliance with the MTBA, …

As discussed in Response BI-29, RTC p. 4-435, Draft EIR p. 319, the first bullet has been changed as follows:

- **Mission Blue Butterfly:** This species occurs at Twin Peaks and Sharp Park. The following measures shall apply to these Natural Areas:
  - To avoid impacts to this species, SFRPD shall adhere to the long-term management and monitoring guidelines as described in the Recovery Action Plan for the Mission ~~B~~blue ~~B~~butterfly at Twin Peaks Natural Area and the corresponding Biological Opinion ~~and as~~ that has been issued by ~~agreed to with~~ the US Fish and Wildlife Service. These guidelines include conducting vegetation removal by manual, mechanical, and chemical treatments that would be applied consistent with the SFRPD Integrated Pest Management program, such as hand pulling, cutting and grubbing. To avoid impacts from trampling of host plants by recreational users, the SFRPD shall continue to conduct regular maintenance on the existing trail network including trimming trailside vegetation and replacing trail base materials.

As discussed in Response BI-22, RTC p. 4-411, Draft EIR p. 320, second bullet, has been changed as follows:

- Converting about half an acre of wet meadow/freshwater marsh wetland to an upland refuge in the middle of the lagoon to provide snakes and frogs with refugia from feral cats and other nonnative predators; creating about an acre of replacement wet meadow wetland along the northern and western edges of the lagoon in place of coastal scrub habitat, achieving no net loss of wetland habitat; and

As discussed in Response BI-7, RTC p. 4-365, Draft EIR pp. 323 to 324, beginning with the last paragraph on Draft EIR p. 323, have been changed as follows:

> ***California Red-Legged Frog.*** During restoration, impacts to California red-legged frogs from the Sharp Park restoration project would be similar to those described above for San Francisco garter snakes. Temporary impacts from construction activities would result in the disturbance of feeding, breeding, and dispersal behaviors. The removal of encroaching vegetation may disturb California red-legged frogs sheltering within the plants. Project activities that may cause California red-legged frogs to move out of their resident habitat may cause injury or mortality due to lack of adequate forage or cover. Impacts also would occur from construction activities involving vehicle traffic and the use of heavy equipment which could result in direct mortality of individuals. Short-term impacts of construction activities that result in injury, mortality, and habitat disturbance would result in significant impacts on the frog. Implementing Mitigation Measure M-BI-6a includes pre-activity surveys, a worker education program, a biological monitor during

construction activities, in addition to an on-call specialty environmental monitor with a valid 10(a)(1)(A) permit to handle California red-legged frogs and relocate as needed, and additional avoidance and minimization measures which include vegetation being cleared by hand equipment to a height of 4 inches and checked for the presence of frogs prior to construction and vehicles entering the site. Any relocation efforts would be coordinated with the appropriate agency to minimize any adverse effects. These measures would reduce impacts to California red-legged frogs from restoration activities. As described above, Mitigation Measure M-BI-6a would ensure that measures are taken to effectively move individuals out of harm's way. This measure would reduce the impact to California red-legged frogs by avoiding and minimizing impacts sufficiently to ensure no injury or mortality of individual frogs to the maximum extent feasible.

Sedimentation. ~~Additionally,~~ California red-legged frogs may be adversely affected by increased sedimentation caused by runoff associated with the project activities. Erosion control measures such as straw mulch, sediment traps, and wattles would be installed to eliminate the potential for sediment discharge in to the wetlands during the construction process, as described under Mitigation Measure M-HY-1. Implementing Mitigation Measures M-HY-1 and M-BI-6a, which includes measures to install silt fencing would reduce impacts to California red-legged frogs from sedimentation during restoration by avoiding and minimizing impacts to the California red-legged frog and its habitat to sufficiently avoid injury or mortality of the frog. With implementation of M-BI-6a and M-HY-1, the short-term impacts of Sharp Park restoration activities on the California red-legged frog as a result of sedimentation would be ***less than significant***.

Acid Sulfate Soil Conditions. When exposed to dissolved or atmospheric oxygen, sulfides transform to sulfuric acid, which in turn results in the formation of acid sulfate soils. Environmental effects that could occur from excavating sediments in the presence of acid sulfate soils may include one or more of the following: (1) increase in sulfuric acid; (2) decline in pH; (3) increase in dissolved metal concentrations (aluminum, iron, and arsenic); and (4) increased incidence of hypoxia.[186] Any of the above effects could result in significant impacts (e.g., effects that could jeopardize the continued existence of a population of special-status species or effects to water quality beyond thresholds indicated in state or federal water quality standards).

A literature search indicates that very little research has been done on acid sulfate soils in the San Francisco Bay Area. One case in which acid sulfate soils have arisen as a concern is at the Bair Island tidal marsh restoration area, in Redwood City, California. In that case, the main concern was that sediments that had been excavated and stockpiled for re-use at the site contained sulfides that converted to sulfates as the sediments dried out. Re-use of these materials could result in acidic and hypoxic conditions. Aside from the case above, the literature search did not identify other studies where acid sulfate soils effects have occurred in Bay Area restoration sites.[187]

Removal of sediment in the connecting channel between Horse Stable Pond and Laguna Salada was reported to have occurred more than 10 years ago. While it was smaller in scale than what is proposed as part of the SNRAMP project, at that time, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified. Also, at the time of the previous removal, it was reported that the bottom of Horse Stable Pond was lined with gravel. The previous sediment removal activity removed sediments that had accumulated after the seawall was constructed. Because the sediment to be removed as part of the proposed project is likely to have only accumulated since the last removal activity, it is unlikely that acid sulfate soils would exist in the sediments to be excavated. Sources of these sediments

[186] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum.*

[187] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum.*

include input from the watershed during storms, as well as accumulated organic matter from dead and decaying vegetation in the watershed complex. This means that these sediments accumulated without the saline conditions that allow acid sulfate soils to form and can be eliminated as a contributor to acid sulfate soils conditions,[188] supporting the conclusion that the proposed sediment and vegetation removal would not likely result in the substantial disturbance of acid sulfate soils in the water column and would not, in turn, result in a significant impact to special-status species.

In the event the acidification is detected to a degree harmful to special-status species, to ensure that residual acid sulfates in the water column would not adversely impact special-status species, Mitigation Measure M-BI-6a requires monitoring of water quality for a period of six weeks after the proposed sediment and vegetation removal is completed; it also prescribes remediation measures if the monitoring determines that such activities are warranted based on the exceedance of toxicity standards. If acid sulfate soils are present, suction hydraulic equipment could also be used to minimize suspension of sediments relative to other sediment removal methods, allowing sulfides to settle out of the water column more quickly, as indicated in Draft EIR Chapter III, Project Description, page 102.

In summary, other reasons supporting the conclusion that it would be unlikely for hypoxic conditions to occur during the proposed sediment and emergent vegetation removal include the following: (1) when sediment was previously removed from the connecting channel approximately 10 years ago, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified; (2) the sediment to be removed as part of the proposed project has only accumulated since the last removal activity, which would have removed all the sediment that accumulated before the current seawall was constructed, and, therefore, has accumulated without the saline conditions that allow acid sulfate soils to form; (3) the Biological Opinion for the Pumphouse Project concluded that the project would not jeopardize the continued existence of California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; and (4) in compliance with the Pumphouse project, soil sampling was completed and no acid soil sulfates were found. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR.

Should any anoxic conditions materialize, they are expected to be localized and short-term. California red-legged frog larvae and juveniles are likely to escape these small, short-lived anoxic zones as the zones dissipate with settling of the sediment and dilution by the pond.[189,190] The Biological Opinion for the Pumphouse Project concluded that the implementation of Conservation Measures would minimize the likelihood that adult or juvenile California red-legged frog would be present and would reduce potential adverse effects on the California red-legged frog due to anoxic conditions to a less-than-significant level. Similar conservation measures are included in a mitigation measure in the SNRAMP Draft EIR, and the Draft EIR independently made the same less-than-significant conclusion regarding impacts to the California red-legged frog.

Construction Effects. The Biological Opinion for the Pumphouse Project noted that because California red-legged frog and San Francisco garter snake have been observed throughout the

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188 Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Acid Sulfate Soils Technical Memorandum*.

189 Robert Plotnikoff, Tetra Tech, Inc. Email to Stacy Bradley, SFRPD, Suggested Change to the MND, December 3, 2013.

190 Robert Plotnikoff, Tetra Tech, Inc. Email to Alexis Ward, SFRPD and David Munro, Tetra Tech, Inc., Sharp Park, December 30, 2013.

project site, the effects of the construction activities to wetland and upland habitat and to individual California red-legged frog and San Francisco garter snake will be throughout the construction footprint. Injury, exposure disorientation and disruption of normal behaviors will likely result from the removal and/or disturbance of vegetation, sediments, and cover sites, including animal burrows, boulders or rocks, or organic debris, such as downed trees or logs in the Horse Stable Pond and the connecting channel. Construction noise, vibration, and increased human activity during construction may interfere with normal behaviors such as feeding, sheltering, movement between refugia and foraging grounds, and other essential behaviors. This can result in avoidance of areas that have suitable habitat and can cause disturbance to the species. Direct effects may include injury or mortality from being crushed by earth moving equipment, construction debris, and worker foot traffic. Work activities, including noise and vibration, may result in adverse effects to California red-legged frog and San Francisco garter snake by causing them to leave the work area. This disturbance may increase the potential for predation and desiccation.

However, the Biological Opinion[191] issued by the USFWS for the Pumphouse project ultimately concluded that the project would not be likely to jeopardize the continued existence of the California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; relevant measures to the Sharp Park Restoration Project are also contained in SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a. These measures limit construction activities to May 1 through October 15 and also include measures to protect species, such as pre-construction avoidance and survey tasks, site monitoring by USFWS/CDFW-approved biologists during construction activities, limitations on vehicle speeds in the project area, erosion control measures, and others. These Conservation Measures are intended to minimize the likelihood for the potential take of individual California red-legged frog and San Francisco garter snake.

The Biological Opinion for the Pumphouse Project also discusses the possibility of California red-legged frog mortality through entrainment (individuals being pulled along with water and trapped against screening or pulled into the pumps) of egg masses and individual larvae at the pumps (see pages 33 and 34 in the Biological Opinion). The Biological Opinion discusses the restoration actions and conservation measures that the SFRPD will undertake in order to reduce these effects and protect the species. The same or similar these Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR (SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a), which would minimize the likelihood of the potential take of individual California red-legged frog through entrainment. The continued existence of California red-legged frog would not be jeopardized, and, therefore, SNRAMP construction impacts leading to frog mortality through entrainment at Sharp Park would be ***less than significant***.

Depletion of oxygen in the water column. Anoxic sediments containing sulfides have associated bacteria like *Thiobacillus* sp. that reduce sulfur. Bacterial respiration near the bottom of a waterbody can modify oxygen concentrations in overlying water, causing some level of anoxia. When this condition occurs, the pH of the water begins to decline, resulting in an acidic environment. Depletion of oxygen in the water column is mediated by the rate of photosynthesis during peak

[191] U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California*, October 2, 2012 ("Biological Opinion").

portions of a day. The degree to which water becomes acidified depends on the length of time that sulfides are suspended in the water column and the amount of sulfides in the water column. In general, the longer that sulfidic soils are suspended in the water column, the more chance there is for acidic conditions to occur. This could cause mortality of California red-legged frog larvae and juveniles.[192] However, the Biological Opinion[193] issued by the USFWS for the Pumphouse Project ultimately concluded that the project would not be likely to jeopardize the continued existence of the California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR (SNRAMP Mitigation Measures M-BI-1a, M-BI-6a, M-BI-6b, and M-BI-12a). A ***less-than-significant*** impact would occur with respect to depletion of oxygen in the water column as a result of implementation of the SNRAMP project at Sharp Park.

Over the long-term, the Laguna Salada restoration project would result in beneficial impacts to California red-legged frogs by converting freshwater marsh, where tadpoles are often unable to penetrate the dense vegetation and where female frogs may lay their eggs only to be left stranded above water, to open water habitat. The removal of dense emergent vegetation will allow for a higher quality of breeding habitat for the frogs which will result in an increased survival of egg masses and tadpoles. The conversion of freshwater marsh habitat to open water would discourage the growth of dense stands of bulrush and cattails that have overgrown the wetlands and reduced the quality of habitat for California red-legged frogs.

As discussed in Response BI-7, RTC p. 4-365, Draft EIR pp. 326 to 328, Mitigation Measure M-BI-6a, Protection of Protected Species during Implementation of the Sharp Park Restoration Project, p. 326, has been changed as follows:

M-BI-6a: Protection of Protected Species during Implementation of the Sharp Park Restoration Project

The SFRPD shall implement the following, subject to modification during the required regulatory approval processes:

Avoidance Measures:

- The number of access routes, the size of staging areas, and the total area of activity would be the minimum necessary to achieve the project goals and to the extent feasible access routes shall be located in upland areas;
- Vehicle and equipment operators would use existing access roads and would remain outside of wetlands and riparian areas that are not integral to the restoration project;
- The construction documents for the Sharp Park restoration project would identify construction staging areas, access corridors, and work zones that are least impactful to biological resources, as well as golf play and operations. Avoidance of wetlands and other biological resource areas, however, would take precedence over avoidance of

[192] Harry Gibbons and Robert Plotnikoff, Tetra Tech, Inc. *Technical Memorandum, Revised Review of Acid Sulfate Soils, Potential Release Mechanism, and Risk of Release in the Horse Stable Pond and Connecting Channel Sediment Removal Project*. August 27, 2013 ("Acid Sulfate Soils Technical Memorandum").

[193] U.S. Fish and Wildlife Service (USFWS), *In Reply Refer To: 08ESMF00-2012-F-0082-2, Formal Endangered Species Consultation on the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project in San Mateo County, California*, October 2, 2012 ("Biological Opinion").

golf play areas, such that golf play and operations would be impacted rather than biological resources;

- After surveying the construction site for special-status species in accordance with this mitigation measure, silt fencing or exclusion fencing would be placed around the project and staging areas to reduce the potential for animals to enter the construction site. Fencing will be monitored throughout construction to ensure no San Francisco garter snakes, California red-legged frogs, or western pond turtles enter the area; fencing will meet CDFG specifications so as to avoid impacts to species potentially getting trapped in the fence.
- No restoration and construction shall occur between November 15 and April 15, the breeding season for California red-legged frog and the season when San Francisco garter snakes are inactive in their winter burrows, although shrubs and willow posts may be planted by hand after the first rains, and weeds may be removed within 15 feet of aquatic areas during these times;
- Before moving any vehicles that remain stationary for longer than 30 minutes, the biological monitor would inspect those vehicles to ensure that no animals had crawled beneath them for cover;
- During project activities, all trash that could attract nonnative predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

Pre-Construction and Construction Activities:

- Prior to commencement of any on-site work related to the proposed removal of sediment and emergent vegetation in the Laguna Salada wetland complex, which includes the Horse Stable Pond and the connecting channel and culverts that link Horse Stable Pond and Laguna Salada, additional sediment core sampling tests shall be conducted, as necessary, in the manner specified in this mitigation measure to determine whether there are elevated concentrations of sulfides or other soil characteristics that would render the soils unsuitable for supporting the desired vegetation.

  The results of the sediment core sampling tests shall be submitted to the USFWS and CDFW for review prior to commencement of any on-site remediation work or sediment/vegetation removal work at Horse Stable Pond or the connecting channel and culverts.

  If remediation measures are required based on the results of the sediment core sampling tests, the SFRPD shall submit a remediation and monitoring plan (prepared by a qualified biological/hydrological consultant) to all applicable resource agencies for review prior to implementation of the remediation measures. Alternatively, the soils could be placed in a nonsensitive location. Copies of all correspondence with the resource agencies shall be submitted to the ERO. The sediment core sampling tests shall include the following elements:

  1. Work Plan

     A Work Plan for sediment core sampling tests shall be prepared by a qualified SFRPD biological/hydrological consultant and submitted to the USFWS and CDFW for review. The Work Plan shall describe, at a minimum, compliance with Tasks 2 through 5 of this part of the mitigation measure, as well as the "During and Post-Construction pH Monitoring" requirement (see

following section). Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

2. Sampling of Sediment Cores

The locations of any additional sampling shall be determined pursuant to the work plan developed in accordance with Task 1, above. Sample sediment cores shall include the soils between the current surface sediment level and approximately two to three feet below the current surface. This depth shall be at least one foot below the proposed depth of the future sediment-water interface.

3. Analysis of Sediment Cores and Estimation of the Potential for Formation of Acid Sulfate Soils

The sediment cores shall be analyzed every five centimeters over the first 20 centimeters of core depth and then every 10 centimeters, or as appropriate based on field conditions, for the remainder of the core length for the following components: Total Organic Carbon (TOC), carbonate/bicarbonate, sulfate, sulfide, sulfites, pH, calcium, sodium, iron, aluminum, chloride, conductivity, redox potential, refractory organics, organic nitrogen, total phosphorus, ammonia, nitrate+nitrite nitrogen, soluble reactive phosphorus, organic phosphorus, loosely-sorbed phosphorus, iron-phosphorus, iron-phosphorus, aluminum-phosphorus, and calcium- phosphorus. Sediment core chemistry shall be analyzed to assess the potential reduction of sulfate to form hydrogen sulfate, iron sulfides, and reduction buffering capacity relative to acid-neutralizing capacity.

In addition, sediment oxygen demand (SOD) in the sediment cores shall be measured. Results shall be compared to the total oxidizable organic material, which would be estimated from the difference of TOC and refractory organic carbon (labile carbon). These results shall be used in the analysis of potential for formation of anoxic conditions within the Laguna Salada Wetlands Complex.

Sediment cores shall be analyzed based on Toxicity Reference Values (TRVs) from the USEPA and Screening Quick Reference Tables (SQuiRT) from the National Oceanic Atmospheric Administration.[194] A draft summary of potential toxics shall be provided to the USFW, CDFW, and ERO for review and, if needed, revision will be made to the toxicity ranges appropriate for use in analyzing the sediment cores.

The potential for formation of acid sulfate soils and anoxic conditions in the water column shall be estimated based on this analysis and in coordination with the USFWS and CDFW. If this analysis determines that acid sulfate soils could be present in this location, the SFRPD shall perform a toxic pathway analysis to determine the appropriate remediation measures. The analysis results and determination shall be submitted to the USFWS, CDFW, and ERO.

[194] NOAA, Office of Response and Restoration. SQuiRT Cards. This document is available online at: http://response.restoration.noaa.gov/cpr/sediment/squirt/squirt.html, accessed on July 17, 2013.

4. Toxics Pathway Analysis

Should the potential for acid sulfate soils and anoxic conditions be present, a toxics pathway analysis shall be conducted for potential risks and toxicities to species that may be affected by localized increases in acidity, hypoxia, or dissolved metals concentration. During this Task, toxicity standards shall be established in coordination with the USFWS, CDFW, and ERO based on the results of Tasks 2 and 3 above, site-specific hydrologic conditions including water exchange and dissolved oxygen levels, the species that are known to be present, and literature review. The results of this task shall be submitted to the USFWS and CDFW and any applicable responsible agencies for review and comment. Copies of all correspondence with the responsible agencies shall be submitted to the ERO.

Should the results of the sediment core tests reveal that there has been an appreciable increase in the amount of nitrogen and related compounds in the sediment cores, any necessary measures to remediate such compounds shall be undertaken in accordance with Task 5, below. The SFRPD shall hire a qualified biological/hydrological consultant to prepare a remediation and monitoring plan which shall be submitted to the USFWS and CDFW for review and approval. Copies of all correspondence with the resource agencies shall be submitted to the ERO for review.

5. Remediation

If results of the sediment core chemistry analysis reveal the potential for reduction of sulfate to form hydrogen sulfate, iron sulfides, and its reduction in buffering capacity relative to acid-neutralizing capacity, or if the toxics pathway analysis indicates that their presence could potentially result in substantial stress to special-status species, the SFRPD shall implement remediation measures.

Remediation measures could include, but are not limited to:

a. Addition of lime to neutralize any acid that exists or which may form during the sediment removal process;

b. Injection of sodium nitrate to oxidize the sediments, thereby satisfying the sediment oxygen demand; or

c. Use of suction hydraulic sediment removal that reduces re-suspension of any form of sediments.

Depending on the severity of the condition (e.g., hypoxia), the remediation measure selected for implementation would be the least intensive beginning with Item a, when signs of hypoxia are present, to the most intensive with Item c, when hypoxia is persistent and/or widespread. The SFRPD shall select the remediation measure in consultation with the USFWS and CDFW. The remediation measure shall be selected based on immediate threats to species and sensitive life stages present during occurrence of the hypoxic condition.

- A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and the proper protocol should a protected species be encountered. The training shall include a discussion of the importance of maintaining speed limits and respecting

exclusion zones. The SFRPD and its construction contractor shall confirm that all workers have been trained appropriately.

- Two weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, San Francisco garter snake, and western pond turtle that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the USFWS and/or CDFG to determine whether relocating any life stages is appropriate. Collection of California red-legged frogs, San Francisco garter snakes, and western pond turtles would be done with hand nets, and shall be relocated to areas of appropriate habitat;
- Upland vegetation in all construction areas will be progressively cleared by hand equipment to a height of 4 inches and checked for the presence of protected species prior to disturbance and prior to construction equipment or vehicles entering the sites. Once vegetation is cleared, an additional pre-activity survey for the San Francisco garter snake, western pond turtles, and California red-legged frogs will be conducted in the impact area.
- Prior to construction near wetlands or ponds, all rodent burrows in the construction area will be hand excavated until the burrows terminate or to a maximum depth of 30 centimeters in areas where soil or fill will be removed or placed.

Biological Monitor:

- A biological monitor familiar with the identification and life history of California red-legged frog, San Francisco garter snake, western pond turtle, and other potentially present protected species, and with the appropriate agency authorization, shall be designated to periodically inspect onsite compliance with all mitigation measures.
- The biological monitor shall perform a daily survey of the entire project area during construction activities. During these surveys, the monitor shall inspect the exclusion fencing for individuals trapped within the fence and determine the need for fence repair. Throughout the duration of the project, the monitor shall continue to perform daily fence surveys and compliance reviews at the project site. The monitor shall be designated prior to project implementation and shall have at least one specialty environmental monitor on call, with a valid 10(a)(1)(A) permit to handle listed species. The specialty monitor shall direct all personnel in regards to interactions with protected species, perform authorized species relocations, and supervise all reporting on such species.
- Bullfrog monitoring will occur and egg masses detected shall be removed.

During and Post Construction pH Monitoring:

During sediment and vegetation removal in the Laguna Salada Wetland Complex, pH levels immediately above the sediment shall be monitored by the SFRPD to ensure that implementation of the proposed project would not adversely affect special-status species.[195] To ensure that residual acid sulfates in the water column would not adversely impact special-status species, pH levels in Horse Stable Pond and the connecting channel shall be monitored by the SFRPD for a period of six weeks after the proposed sediment

[195] pH is an indicator of anoxic conditions at the sediment-surface water interface. Under anoxic conditions, hydrogen ion availability increases and binds with sulfides mobilized from sediments. Rates of transformation of sulfur are mediated by microorganisms in both the sediments and surface water. Suspension of hydrogen sulfide (H_2S) in the water column is oxidized in surface water to form sulfuric acid (H_2SO_4).

and vegetation removal is completed. A remediation measure, such as addition of lime or injection of sodium nitrate, shall be implemented if the monitoring warrants such a remediation measure to protect special-status species based on the toxicity standards that are established in accordance with Task 4 above.[196]

As discussed in Response BI-22, RTC p. 4-411, Draft EIR p. 327, third bullet, is changed as follows:

- During project activities, all trash that could attract nonnative predators would be properly contained, removed from the work site, and disposed of regularly. Following project completion, all trash and construction debris would be removed from work areas.

5.A.9 Section V.H: Hydrology and Water Quality

As discussed in Response HZ-1, RTC p. 4-531, Draft EIR p. 365, second full paragraph, has been changed as follows:

The primary herbicides used by the SFRPD in the Natural Areas are glyphosate (under the trade names ~~Roundup,~~ Aquamaster~~, and Rodeo~~), imazapyr (Habitat and ~~Polaris~~Stalker), triclopyr (Garlon), and aminopyralid (Milestone). Glyphosate~~, the primary product used,~~ is a broad spectrum, nonselective systemic herbicide that is effective against weeds; it has low toxicity to wildlife but moderate toxicity to fish (Monsanto 2005). ~~Roundup~~Aquamaster binds tightly to soil, which reduces the potential for migration to surface water or groundwater. Garlon is a selective systemic herbicide that controls broadleaf weeds without harming grasses. ~~It~~ Two forms of Garlon are currently available: Garlon 3 and Garlon 4 Ultra. The SFRPD has used Garlon 3 in the past and is currently using Garlon 4 Ultra. Each contains a different form of the active ingredient triclopyr. The form present in Garlon 3 degrades quickly in the environment and has low toxicity to aquatic species (Dow 2009). The active ingredient in Garlon 4 Ultra is triclopyr-2-butoxyethyl ester (BEE). BEE is considered to be highly toxic to fish and aquatic organisms and therefore is not recommended for use in aquatic environments or in proximity to aquatic environments. BEE degrades rapidly (within hours to several days) through exposure to sunlight and by microbial degradation in soils. If applied away from aquatic environments and during dry weather periods, BEE is not expected to pose a significant threat to the environment. Extensive literature is available regarding the use and effects of BEE. Sources include the EPA's Registration Eligibility Decision (RED) document (EPA 1998); the EPA's report on the risks of triclopyr use to red-legged frogs (EPA 2009), and the National Marine Fisheries Service biological opinion on effects of BEE on endangered species (NMFS 2011). A risk assessment for triclopyr prepared for the US Forest Service also contains a detailed literature review (Durkin 2003).

The SFRPD and the San Francisco Department of Environment are looking at alternatives to Garlon ~~is being phased out from~~ for use in the Natural Areas; however, ~~and is only used for invasive plants in biologically diverse grasslands due to its target specificity.~~ a~~A~~s described in Section III.E.5, only aquatic-specific herbicides, such as ~~Rodeo~~Aquamaster, ~~and Habitat~~ would be applied to wetlands and to areas next to water bodies.

[196] David Munro, Tetra Tech, Inc., Email to Stacy Bradley, SFRPD, Sharp Park Appeal: M-BI-2b – Post Construction Monitoring, January 7, 2014.

As discussed in Response BI-7, RTC p. 4-365, Draft EIR pp. 370 to 371, last paragraph, has been changed as follows:

> Dredged materials could result in potential impacts on water quality through conversion of the chemical characteristics of the soil after exposure to oxygen. Coastal lagoons, such as Laguna Salada and Horse Stable Pond, are sometimes favorable environments for the accumulation of sulfide minerals from biological decay and lack of oxygen. The sulfides can be converted to sulfuric acid when exposed to atmospheric oxygen by dredging them and placing them on the ground surface. Although not expected to significantly alter surface water pH, acidic soils could have undesirable localized effects on sensitive aquatic habitat. As described in Section III.F.2 (page 99), "Prior to on-site use of dredged material, the sediments to be removed as part of the wetland restoration project would be tested for elevated concentrations of sulfides and other characteristics to determine whether the sediments would serve as soils suitable for supporting desired vegetation. If the sediment proves unsuitable, it would be placed in a nonsensitive location or treated to render it capable of supporting the desired vegetation. Treatment may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils or adding lime to neutralize acidic soils." ~~sediments would be tested to determine if elevated concentrations of sulfides are present and if the sediments could serve as soils suitable for supporting desired vegetation. Treatment of acidic soils may include spreading and mixing the dredged material with native soil to avoid concentrating acidic soils, placing the dredged material in a nonsensitive location, or treating the dredged material with lime to neutralize the acid.~~
>
> Environmental effects that could occur from excavating sediments in the presence of acid sulfate soils may include one or more of the following: (1) increase in sulfuric acid; (2) decline in pH; (3) increase in dissolved metal concentrations (aluminum, iron, and arsenic); and (4) increased incidence of hypoxia. Any of the above effects could result in significant impacts (e.g., effects that could jeopardize the continued existence of a population of special-status species or effects to water quality beyond thresholds indicated in state or federal water quality standards).
>
> A literature search indicates that very little research has been done on acid sulfate soils in the San Francisco Bay Area. One case in which acid sulfate soils have arisen as a concern is at the Bair Island tidal marsh restoration area, in Redwood City, California. In that case, the main concern was that sediments that had been excavated and stockpiled for re-use at the site contained sulfides that converted to sulfates as the sediments dried out. Re-use of these materials could result in acidic and hypoxic conditions. Aside from the case above, the literature search did not identify other case studies where acid sulfate soils effects have occurred in Bay Area restoration sites.
>
> Removal of sediment in the connecting channel between Horse Stable Pond and Laguna Salada was reported to have occurred more than 10 years ago. While it was smaller in scale than what is proposed as part of the SNRAMP project, at that time, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified. Also, at the time of the previous removal, it was reported that the bottom of Horse Stable Pond was lined with gravel. The previous sediment removal activity removed sediments that had accumulated after the seawall was constructed. Because the sediment to be removed as part of the proposed project is likely to have only accumulated since the last removal activity, it is unlikely that acid sulfate soils would exist in the sediments to be excavated. Sources of these sediments include input from the watershed during storms, as well as accumulated organic matter from dead and decaying vegetation in the watershed complex. This means that these sediments accumulated without the saline conditions that allow acid sulfate soils to form and can be eliminated as a contributor to acid sulfate soils conditions, supporting the conclusion that the proposed sediment and vegetation removal would not likely result in the substantial disturbance of acid sulfate soils in the water column and would not, in turn, result in a significant impact to special-status species.

In summary, other reasons supporting the conclusion that it would be unlikely for hypoxic conditions to occur during the proposed sediment and emergent vegetation removal include the following: (1) when sediment was previously removed from the connecting channel approximately 10 years ago, no effects that would normally be associated with acid sulfate soils, including acidification of waters and sediment surfaces, were identified; (2) the sediment to be removed as part of the proposed project has only accumulated since the last removal activity, which would have removed all the sediment that accumulated before the current seawall was constructed, and, therefore, has accumulated without the saline conditions that allow acid sulfate soils to form; (3) the Biological Opinion for the Pumphouse Project concluded that the project would not jeopardize the continued existence of California red-legged frog or San Francisco garter snake with the implementation of the Conservation Measures included in the Biological Opinion; and (4) in compliance with the Pumphouse project, soil sampling was completed and no acid soil sulfates were found. The same or similar Conservation Measures included in the Pumphouse project Biological Opinion would likely be included in the SNRAMP Biological Opinion as well, or have already been incorporated into the project mitigation measures identified in this EIR.

As discussed in Response BI-7, RTC p. 4-365, Draft EIR p. 372, the following text is added after the third paragraph:

In order to ensure that hypoxic conditions do not materialize and to mitigate such conditions in the unlikely event that they do occur, Mitigation Measure M-BI-6a would be implemented by the SFRPD to reduce the potential for adverse impacts to special-status species as a result of acid sulfate soils and other components by prescribing avoidance measures, pre-construction activities (e.g., worker education program, aquatic habitat surveys, hand-clearing of vegetation, and hand excavation of burrows, sediment core sampling tests, and toxic pathways analysis), remediation activities (if the results of the sediment core chemistry analysis reveals the potential for the reduction of sulfate or if the toxics pathway analysis indicates that their presence could potentially result in substantial stress to special-status species), and monitoring (e.g., biological and pH). Therefore, with implementation of Mitigation Measure M-BI-6a, a ***less-than-significant*** impact to special-status species (as a result of acid sulfate soil conditions) would occur.

As discussed in Response HY-1, RTC p. 4-486, Draft EIR p. 376, the Impact HY-10 discussion has been changed as follows:

There are no activities included in the project that would significantly alter the drainage pattern of the sites or that would substantially increase runoff such that flooding would occur, with the possible exception of ~~modifying the wetland complex in~~ the proposed restoration activities at Sharp Park, as discussed below.

Approximately 15,000 of the 54,000 existing eucalyptus trees in the Sharp Park MA-1 and MA-2 areas would be removed from select areas over time, during the 20-year lifetime of the SNRAMP, to restore native scrub habitats. The proposed tree removals are located on the east side of Highway 101 and are not located near, or part of, the Sharp Park Wetland Complex. Approximately 39,000 invasive trees, including scattered large individual trees, would remain in order to minimize large-scale disturbance and to promote a gradual conversion to native scrub habitat. No trees would be removed from the MA-3 areas at Sharp Park. Large-scale tree removal activities are described on EIR pages 92 to 93 and 96. As described, large-scale tree removal activities are defined as exceeding 0.5 acre or more on average, or including removal of 20 or more trees at a time. Such removal activities would be conducted in accordance with the practices identified in SNRAMP Appendix F, Urban Forestry Statements. Accordingly, tree removal would either be done in groups or by selective thinning of specific trees. Group selection would remove a

number of trees within a relatively small area ranging from 0.25 to 0.5 acre in size. Thinning could be conducted over a much larger area (several acres) and would include removal of smaller trees and saplings with some overstory. Group selection is intended to open up the overstory, while thinning would tend to keep most of the overstory intact, opening up the forest understory. As stated on EIR page 92, trees would be removed limb-by-limb, rather than by felling whole trees (unless tree removal presents a safety concern, which would require felling of the tree). Further, SFRPD would cut the trunk into individual sections, leaving the tree stump and rootball intact to hold the soil and minimize subsurface disturbance. SFRPD would spread tree removal across targeted portions of the Natural Areas and would not concentrate it in any one particular location. The SNRAMP is a 20-year management plan for San Francisco's Natural Areas and, as such, the proposed activities would not occur all at once, but rather over time through the SNRAMP's 20-year management framework.

In addition, as described on EIR page 93, the SNRAMP proposes to use erosion control best management practices (BMPs), which would include use of the following techniques: straw mulch, rolled erosion control products, wood mulch, silt fences, fiber rolls, and straw bales. These erosion control measures would be employed until native vegetation was sufficiently established.

In Sharp Park, removing eucalyptus trees in the upland area would increase incidental rainfall that reaches the ground and could increase the rate of runoff into Sanchez Creek, the main drainage for this watershed. However, the increase is not expected to be substantial in comparison to the size of the drainage area and considering the normal range of runoff volume; additionally, SFRPD would employ low-impact tree removal techniques, remove trees gradually over the 20-year lifetime of the SNRAMP, employ erosion control BMPs and ~~the area would be revegetated~~ revegetate the area following tree removal. Over time, the proposed project would reduce surface runoff by dispersing water more widely over the ground surface and slowing runoff velocities, thereby increasing infiltration.

The rate of runoff from the watershed into Sanchez Creek involves several variables, including the capacity of soils to retain moisture, which is in turn a function of antecedent conditions, the permeability and thickness of the soils, the capacity of the bedrock aquifer to retain water, the slope of the area, the duration and intensity of the storm, the location of the rainfall within the watershed, and other geologic factors. The longer that the rainfall is retained in the upper portions of the watershed, and the more slowly it reaches the creek, the longer the creek can remain at a lower level without flooding. Vegetation cover can slow the rate of runoff, by capturing and retaining some of the rainfall on leaves and in the canopy, and by obstructing overland flow. Vegetation also helps to reduce erosion and retain soils, which in turn retain moisture. Slowing the rate of overland flow allows more time for infiltration of the rainfall into the soil and underlying aquifer. Groundwater flow is many times slower than overland flow.

In a large or intense storm event, however, the ability of water to percolate through soils and fractures in the underlying bedrock is quickly overcome and overland flow becomes the dominant mode of transport of the incident precipitation. The frequency of flooding events can be reduced through improved management of vegetation cover, but in a small, steep watershed such as that of Sanchez Creek, there is limited capacity for retention and large storm events will inevitably lead to downstream flooding despite improvements in vegetation management upstream. The proposed vegetation replacement and management program would be implemented gradually and is designed to retain ground cover with minimal impact on soil erosion, as described above. Unlike a commercial logging operation, which is designed to remove trees quickly at minimum cost, the vegetation replacement program would establish new vegetation cover to minimize the impact of tree removal.

Much of the flooding that occurs at the Sharp Park Golf Course is not the result of overland flow directly from upland areas, but is caused by waters rising in Laguna Salada because of limits on the pumping rate from Horse Stable Pond. Only larger, longer duration storms cause flooding in Laguna Salada, and because the watershed that drains into Sanchez Creek is much larger than the area affected by the project, the project is not expected to have any significant effect, either beneficial or adverse, on the frequency of flooding in Laguna Salada.

It should be noted that one of the functions of a stream is to transport sediment, and the gradient of a stream adjusts naturally to perform this function. Coastal streams in San Mateo County drain watersheds underlain by weathered and relatively soft and erodible deposits. The coastal hills are steep, and geologically recent, and normal erosion rates are high. The sediments that are carried from these watersheds supply a percentage of the sand that forms the many beaches that are found along the San Mateo County coast. This sediment transport is a natural process that has been impeded by the seawall at Sanchez Creek. Sediment that enters Horse Stable Pond has an opportunity to precipitate rather than be carried out to the ocean by the force of the stream. If an excessive amount of sediment were to be carried into Horse Stable Pond, it would reduce the capacity of the pond, but would not greatly impact the capacity of Laguna Salada.

In addition, to further address the potential reduction of capacity of the pond, the sediment basins would be regularly maintained, which would involve the periodic removal of accumulated sediment. Surveys would be coordinated with the USFWS and CDFG to ensure compliance with endangered species laws and regulations, and wetland functionality would be assessed using ecologically based criteria to determine success of the project objectives.

The SNRAMP includes erosion and sediment control BMPs to be implemented as part of the proposed tree removal and vegetation management activities, and the Sharp Park Restoration Project would be undertaken in compliance with required permits from SFBRWQCB, the CCC, and USACE, which would include additional requirements to protect water quality, special-status species and sensitive habitats from impacts due to erosion and sedimentation. As part of the Sharp Park restoration plan, SFRPD would remove accumulated sediment from Laguna Salada. SFRPD would also construct sediment basins to reduce sediment transport into Laguna Salada and Horse Stable Pond. Therefore, the flooding impacts of the programmatic projects would be ***less than significant***. Accordingly, in compliance with CEQA Guidelines Section 15126.4, no mitigation measures are required to address flooding.

As discussed in Response HY-2, RTC p. 4-493, the text on Draft EIR p. 382 (beginning with the first full paragraph) has been changed to reflect the most current guidance relative to sea level rise analysis, as follows (the preceding paragraph, which starts on Draft EIR p. 381, is included for context):

During the 20-year project planning period for the project, the sea level is expected to rise less than one foot. Although sea level rise may continue over time, a sea level rise at India Basin Shoreline Park of less than one foot during the project's 20-year planning period is unlikely to result in significant flooding or salt water intrusion impacts. Similarly, a small rise in sea level is not expected to impact Balboa, which lies inland of the Ocean Beach seawall. An increase in sea level may lead to a rise in regional groundwater levels in the coastal aquifer. The elevation of Lake Merced would need to rise proportionally to maintain the existing hydraulic balance and barrier to salt water intrusion into the aquifer. There is adequate freeboard above the current lake elevation of Lake Merced to accommodate the anticipated rise in sea level without inducing flooding or increasing potential for salt water intrusion. At Sharp Park, sea level rise would increase the base level elevations of Laguna Salada and Horse Stable Pond. Fresh water must continue to discharge

to the ocean underground, and in order for this to happen, the elevation of the water table would rise in proportion to the rise in sea level. The freshwater/saltwater interface, which is a zone of mixing, would move inland somewhat. Salinity in Laguna Salada may increase, especially during dry periods when outflow of fresh groundwater from the watershed above Sharp Park is lowest. The magnitude of sea level rise during the project planning period would probably be too small to result in significant erosion of the sea wall, but the effects are difficult to predict. Higher sea levels will result in faster erosion of the rocky headlands and would probably change the beach profile in front of the sea wall, which in turn may lead to erosion of the foot of the seawall, especially during the winter, when wave runup is greatest and beach sand is normally depleted.

Over a longer term, sea level rise is expected to continue, and could rise to levels that would cause significant impacts. The State of California Sea-Level Rise Guidance Document (most recently updated in March 2013)[197] provides the most current scientific data and guidance for agencies to consider and use during planning and decision making for projects in California. The document was prepared with the understanding that agencies will use the information in a flexible manner, taking into consideration risk tolerances, timeframes, economic considerations, adaptive capacities, legal requirements, and other relevant efforts. For projects in the City and County of San Francisco, sea level rise (or future flood risk) is evaluated on a project-by-project basis considering many of the factors affirmed in the Sea-Level Rise Guidance Document, such as the location of the project, the type of project being proposed, the potential risks to life or property, and adaptive design opportunities or constraints. ~~Because these impacts would be experienced on a regional scale, the efforts to mitigate these impacts would be addressed through future projects on the regional scale.~~

Among the cumulative effects on water resources of sea level rise are increased frequency of flooding of low-lying areas, increased salt water intrusion in coastal wetlands, increased coastal erosion, and increased potential for contamination of receiving waters because of inundation of areas containing hazardous substances. One approach to mitigating these and similar long-term cumulative effects is to move vulnerable development and activities out of low-lying coastal areas and to encourage coastal and shoreline uses, such as open space, that can accommodate sea level rise. In general, Natural Areas are expected to have ~~low~~ ***less-than-significant*** impacts on water resources and therefore are not expected to contribute to the cumulative impacts on water quality that may result from sea level rise, resulting in a less than cumulatively considerable (less than significant) contribution to sea level rise impacts.

5.A.10 Section V.I: Hazards and Hazardous Materials

As discussed in Response HZ-1, RTC p. 4-531 and Response HZ-2, RTC p. 4-544, Draft EIR p. 386, after the first full paragraph, the following text is added:

San Francisco's IPM Program maintains a Reduced Risk Pesticide List that is updated annually. It is a list of the only pesticides approved for use on City-owned property without an approved

[197] Coastal and Ocean Working Group of the California Action Team with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust, State of California Sea-Level Rise Guidance Document, March 2013 Update. This document is available online at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwiN7JLh15bNAhVJ02MKHdcID_IQFggfMAA&url=http%3A%2F%2Fwww.opc.ca.gov%2Fwebmaster%2Fftp%2Fpdf%2Fdocs%2F2013_SLR_Guidance_Update_FINAL1.pdf&usg=AFQjCNEf_tyvfPAk598V6HaLMAkH0WC0MA&sig2=-MzpJagnGF89COfkEvk1xQ&bvm=bv.124088155,d.cGc, accessed on June 7, 2016.

exemption. In addition to an initial screening by the EPA, each pesticide on the list goes through a four-step screening process prior to being added to the list:

1. First, it is screened using the San Francisco Pesticide Hazard Screening Protocol, which is available on the San Francisco Department of the Environment's website at http://sfenvironment.org/article/pest-management/managing-pests-on-City-properties. This screening includes a hazard assessment and an exposure assessment.
2. Second, it is reviewed by the San Francisco IPM Technical Advisory Committee, which is composed of City IPM Coordinators, contractors, IPM specialists from non-City agencies, and other interested parties. Each year, the committee considers product hazards, potential for exposure, data gaps, and existence of safer alternatives before placing products on the Reduced Risk Pesticide List.
3. Third, it is presented at a public hearing, where the public is invited to comment.
4. Finally, the Commission on the Environment approves or rejects its inclusion on the Reduced Risk Pesticide List.

City Departments must request a temporary exemption in order to use a pesticide that is not on the San Francisco Department of the Environment's current Reduced Risk Pesticide List. Each request for exemption must contain a written justification that is thoroughly reviewed by the San Francisco Department of the Environment, which will only grant exemptions when there is a well-documented need for the pesticide and when all other alternatives have been tried and deemed impractical or for the trial use of new reduced risk products. If the exemption is approved, any limitations necessary to protect public health and safety and the environment are detailed. Typical limitations include the date range, location, and methods of application that are approved. Pesticide applications covered by an approved exemption are not considered violations of the IPM Ordinance.

As discussed in Response HZ-1, RTC p. 4-531, and to further clarify the intent of the SNRAMP with respect to the use chemical control methods, the text on Draft EIR p. 91 (after the third bullet), has been changed, as follows:

Management methods to be employed by the Natural Areas Program include:

- Physical control methods employed by Natural Areas Program staff and volunteers, which range from hand-pulling weeds to the use of hand and mechanical tools to uproot, girdle, or cut plants;
- ~~Biological~~Pest control,[198] which, in the case of the Natural Areas Program, involves revegetating cleared areas and introducing native plants in an area to encourage competition with weeds; and
- Chemical control, which involves the use of herbicides to suppress wildland weeds~~; and~~, in compliance with the San Francisco Pest Management Ordinance.
- ~~Public education and outreach.~~

[198] Pest control generally involves the management of pests (insects, diseases, weeds) by manipulation of the environment or implementation of preventive practices including using plants that are resistant to pests, raising the mowing height of turf to shade out weeds, aerating turf to reduce compaction and plant stress, or dethatching to remove habitat, food sources and impediments to management.

> Only aquatic-specific herbicides (those determined safe for aquatic life) would be applied to wetlands and to areas next to water bodies. The application of herbicides, including Garlon and Roundup, is not allowed within 15 feet of either side of established trails.

As discussed in Response BI-5, RTC p. 4-358 and Response HZ-3, RTC p. 4-545, Draft EIR p. 387, last paragraph, has been changed as follows:

> The SFRPD used to maintain a rifle range in Sharp Park. This facility has been closed for over 13 years. Located near the archery club, this facility is outside of the Natural Areas at Sharp Park. A soil and groundwater investigation identified the presence of lead, polycyclic aromatic hydrocarbons, antimony, and arsenic in soil in an area covering approximately 4 acres; groundwater was not impacted (DTSC 2009). The Department of Toxic Substances Control issued a Notice of Exemption on August 5, 2009, for the removal action work plan for consolidation of lead-contaminated soil at the former Sharp Park Rifle Range. Implementation of the work plan involves the excavation of approximately 12,000 to 16,000 cubic yards of contaminated soil, which would be placed on-site and covered with imported clean soil (DTSC 2009). These cleanup and remediation activities ~~have been~~ were completed in January 2011. Contaminated soil in the area was excavated, consolidated onto a 1.35-acre portion of the site, and covered with 2 feet of clean soil to prevent exposure to contaminants. SFRPD will continue to monitor and periodically report to the Department of Toxic Substances Control on the effectiveness of this corrective action.

As discussed in Response HZ-3, RTC p. 4-545, Draft EIR p. 387, following the last paragraph, the following text is added:

> The San Francisco Public Utilities Commission (SFPUC) has completed the Pacific Rod and Gun Club Upland Soil Remedial Action Project, which included the remediation of upland[199] soil contamination at the former Pacific Rod and Gun Club (PRGC) site in compliance with RWQCB Order No. R2-2013-0023. The site is located on the southwest side of Lake Merced. The City and County of San Francisco own the approximately 10-acre property, which is managed by SFPUC. SFPUC had leased the site to the PRGC, which had built and operated skeet and trap shooting facilities there since 1934.
>
> On March 4, 2016, final site inspections were conducted with respect to the completion of the remediation project; however, the Contractor is still maintaining the newly planted vegetation, and restored wetlands and is also required to ensure that the site is stable with respect to stormwater management before the project is deemed entirely complete.
>
> In completing the remediation aspects of the project, the following objectives have been achieved:
>
> - Achieve the highest cleanup standards to minimize the risk of human exposure to elevated concentrations of lead, PAHs, and arsenic in site soils; this would avoid restrictions on site use and additional ongoing monitoring and maintenance requirements
> - Reduce the potential for leaching of contaminants into Lake Merced
>
> A Final Mitigation Negative Declaration (Case No. 2013.1220E) was published on October 23, 2014, which indicated that all impacts would be less than significant or mitigated to a less-than-significant level.

[199] Upland refers to the elevated areas lying above the level where water flows or where flooding occurs.

As discussed in Response HZ-1, RTC p. 4-531, Draft EIR p. 391, before the last paragraph, the following text is added:

> The amount and frequency of pesticide applications as a result of implementation of the SNRAMP would be similar to what currently occurs within the NAP areas and what has occurred over the past 10 years. Although it will sometimes be necessary to treat vegetation with pesticides containing active ingredients such as glyphosate, triclopyr, imazapyr, and aminopyralid after removal, vegetation removal activities would occur gradually over time (over 20 years). Pesticide use would fluctuate from year to year, as it does now, for multiple reasons, including the vegetation to be removed, the timeframe of those projects, weather, and the number and types of pests present.

As discussed in Response HZ-1, RTC p. 4-531, Draft EIR p. 392, lines 26 to 29, has been changed as follows:

> Further, the Natural Areas Program would use pesticides that are the least toxic option that effectively controls the weeds. Because the application of herbicides are applied following IPM guidance, as well as the fact that staff remain onsite until the application has dried and it is safe to re-enter the area, dogs that are walked on leash as required by SFRPD rules would not risk an unsafe level of exposure to herbicides.
>
> ~~Therefore,~~ For the reasons stated above, impacts from applying herbicides as part of the IPM for programmatic projects under the SNRAMP would be ***less than significant***.

As discussed in Response HZ-4, RTC p. 4-557, Draft EIR p. 396, line 28, to Draft EIR p. 397, line 1, has been changed as follows:

> Also, implementing recommendation GR-13a would reduce the presence of vegetation with high fire hazard ratings~~, such as dense and aging French broom and eucalyptus.~~ adjacent to homes and other structures. Recommendation GR-13a further states that, when possible, minimum fire reduction zones of 30 feet should be maintained. Also, no brush piles shall be created within fire reduction zones. Trees determined to be hazardous to adjacent homes by the SFRPD Arborist should be removed. Tree and invasive weed removal ~~would~~ could reduce the amount of available fuel for fires. More important, timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread in some instances.

As discussed in Response HZ-4, RTC p. 4-557, Draft EIR p. 397, the sentence beginning on line 7 has been changed as follows:

> As Sharp Park and a few Natural Areas within San Francisco are classified as moderate to high fire hazard zones, tree and invasive weed removal as part of the programmatic projects would reduce the available fuel loads and ~~would~~ could reduce the potential of fire hazards within these areas.

As discussed in Response HZ-4, RTC p. 4-557, Draft EIR p. 397, lines 18 to 21, has been changed as follows:

> Similar to the impacts described under the programmatic projects, routine maintenance activities that remove fuel loads ~~would~~ could reduce the presence of vegetation with high fire hazard ratings~~, such as dense and aging French broom and eucalyptus~~. Therefore, tree and invasive weed removal ~~would~~ could reduce the amount of available fuel for fires.

5.A.11 Section V.J: Agriculture and Forest Resources

As discussed in Response HZ-4, RTC p. 4-557, Draft EIR p. 410, beginning with line 15, has been changed as follows:

> Among the objectives of the recommended actions at Mount Sutro are replacing ~~highly flammable~~ eucalyptus trees with more fire resistant species, increasing age diversity of trees, and improving the health and safety of the remaining trees.

As discussed in Response LU-4, RTC p. 4-216, Draft EIR p. 410, line 20, has been changed as follows:

> Further, San Francisco landmark, significant, and street trees are protected by the San Francisco Urban Forestry Ordinance, which requires the replacement of removed trees on a one-to-one basis.

5.A.12 Chapter VI: Other CEQA Issues

As discussed in Response G-15, RTC p. 4-65, Draft EIR p. 444, line 6, has been changed as follows:

> Fort Funston, located approximately 8,000 feet (about 1.5 miles) from the existing Lake Merced DPA has approximately ~~200~~ 160 acres open for off-leash dog use.

As discussed in Response NO-1, RTC p. 4-281, Draft EIR p. 445, first full paragraph, has been changed as follows:

> Tree removal at Mount Davidson would be to the west and south of Juanita Way and would not increase the noise exposure of the residences along Juanita Way from Portola Drive. The existing noise levels within the interior of the park, where most tree removal activities would be conducted, are generally below 55 L_{dn}.[200, 201] According to the *San Francisco General Plan*'s Land Use Compatibility Chart, noise levels below 70 L_{dn} are acceptable for parks and playgrounds.[202] Alterations to the forest canopy would not be sufficient to substantially increase permanent ambient noise levels within Mount Davidson, and would not result in unacceptable noise levels for park users. Therefore, removal of the trees at Mount Davidson would not expose ~~the nearby residences~~ noise sensitive receptors to new, long-term noise sources.

As discussed in Response GG-1, RTC p. 4-297, Draft EIR p. 455, starting on line 11, has been changed as follows:

> Increased GHG emissions occur as a result of increased heavy-duty vehicle and equipment associated with construction activities. During the 5.5-month construction period, the Sharp Park wetland restoration project would emit 21,777 lbs per day of CO_2e, which is equivalent to a total of 1,630 metric tons of CO_2e. ~~Because~~ BAAQMD's 2011 *CEQA Air Quality Guidelines* do not define a project-level GHG threshold for construction-related emissions, ~~there is no applicable significance threshold to which to compare this estimate~~ but these emissions are commonly addressed in a

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200 Average noise exposure over a 24-hour period is often presented as a day-night average sound level (L_{dn}).

201 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element, Map 1, Background Noise Levels. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

202 San Francisco Planning Department, *San Francisco General Plan*, Environmental Protection Element. This document is available online at: www.sfplanning.org, accessed on January 18, 2013.

CEQA analysis by amortizing them over the lifetime of a project and adding them to operational emissions. Using the 20-year window of the Management Plan as the lifetime of the proposed project, annualized emissions from construction would be approximately 81.5 metric tons of CO_2e per year.[203] When these emissions are added to those of the sequestration change, the proposed project would still have a less-than-significant impact with regard to GHG emissions. Thus, GHG emissions of the Sharp Park restoration would result in a less than significant impact. When the annual 81.5 metric tons of CO_2 emissions from construction are subtracted from the net sequestration gain resulting from the tree plantings with the project (202 MT of CO_2 per year), the project still results in a net sequestration gain. The Sharp Park restoration is considered the largest of the programmatic projects. Therefore, GHG emissions resulting from other individual programmatic projects in the Sharp Park Natural Area are expected to be less than those resulting from the restoration project.

As discussed in Response GG-1, RTC p. 4-297, Draft EIR pp. 456 to 457, starting with the last paragraph, have been changed as follows:

As trees die and decay, they release much of the stored carbon to the atmosphere. Thus, carbon storage is an indication of the amount of carbon that can be lost if trees are allowed to die and decompose. Of all the species in San Francisco, eucalyptus trees store and sequester the most carbon (approximately 24.4 percent of the total carbon stored and 16.3 percent of all sequestered carbon). Trees removed in the Natural Areas in San Francisco would be replaced at a one-to-one ratio, although not necessarily in the same location. Eucalyptus trees would be replaced with native trees. ~~Although the net effect on carbon sequestration capacity is unknown for the proposed replacement of mature eucalyptus with native saplings, replacing dying trees with healthy trees typically enhances the carbon sequestration process. In fact, one of the urban forest management strategies to help improve air quality is to increase the number of healthy trees. Further, among mitigation measures recommended by the Intergovernmental Panel on Climate Change is forest management, and particularly selection of tree species that sequester the most carbon (IPCC 2007). As such, tree replacement is expected to result in a net increase in the amount of carbon sequestered within the Natural Areas. The total number of trees would not change within the Natural Areas of San Francisco and the amount of carbon sequestered would increase in the long term from replacing dead, dying, or diseased trees. According to the California Registry, dead trees must be replaced within one year of removal. This timeframe allows for planting to occur at the appropriate time of the year. Therefore, the project would not conflict with San Francisco's~~

[203] The proposed activities for the Sharp Park restoration include the use of heavy equipment for creating shallow pools within the existing wetlands, dredging excess sediments, and grading to prevent flooding. GHG emissions resulting from the Sharp Park restoration were calculated using URBEMIS. The URBEMIS model was populated with assumptions regarding timing of restoration activities and the number, type, and operating hours of equipment as specified by the project sponsor. The model returns the CO_2 emission rates for all equipment, deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use. Other GHGs, such as methane and nitrous oxide rates, are assumed to comprise 95 percent of CO_2e emissions. In addition, this analysis assumed that all heavy duty construction equipment is diesel or gasoline powered and no substantial electrically powered pieces of construction equipment would be used, based on the project description. The results indicate that approximately 21,777 pounds per day of CO_2e would be emitted during the implementation of these activities. During the 5.5-month construction period, the Sharp Park wetland restoration project would emit 21,777 lbs per day of CO_2e, which is equivalent to a total of 1,630 metric tons of CO_2e. These emissions were annualized over the 20 year implementation period of the SNRAMP to come up with 81.5 metric tons of CO_2e per year, calculated as 1,630 metric tons of CO_2e divided by 20 years.

~~Greenhouse Gas Ordinance. Further, the project would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB32[204]. Therefore, the proposed project would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.~~ An analysis drawing from a number of resources to quantify anticipated CO_2 sequestration gains and losses was prepared for the SNRAMP Project. These sources include the Urban Forestry Carbon Sequestration Workbook published by the U.S. Department of Energy,[205] the Center for Urban Forest Research Tree Carbon Calculator published by the U.S. Forest Service (USFS),[206] the *Good Practice Guidance for Land Use, Land Use Change and Forestry* published by the International Panel on Climate Change (IPCC),[207] and the CalEEMod supporting calculations.[208]

Trees have a relatively high rate of CO_2 sequestration potential. However, while the sequestration rate increases over a period of time (assumed to be approximately 20 years, based on professional practice), after that point the accumulation of carbon in biomass slows with age, and eventually is completely offset by losses associated with tree clipping, pruning, and occasional death (IPCC 2003). Sequestration rates for grasslands and herbaceous plants, which grow quickly, were assumed to be static. This analysis applied tree age for Blue Gum (eucalyptus trees would be the predominant species removed, and all are assumed to be blue gum) provided by the SFRPD to determine increases and losses in CO_2. The Urban Forestry Carbon Sequestration Workbook was used to estimate increasing carbon sequestration of new tree plantings over a 20-year period. The Tree Carbon Calculator from the USFS was used as a source of sequestration rates for specific tree types to be removed as provided by the SFRPD.[209] The CalEEMod supporting documentation provided the sequestration rates for grasslands.

The following discussion shows sequestration losses and gains from implementation of two distinct activities: (1) implementation of a tree replacement program in San Francisco (Table 19A); and (2) replacing existing trees with native grasses in Sharp Park in Pacifica (Table 19B).

While these tables represent distinct activities, the total project beneficial impact would be the sum of these two contributions, which shows a net sequestration gain at the end of the 20-year program of 202 metrics tons of CO_2e per year (calculated as 138 metric tons of CO_2e per year [Table 19A] plus 64 metric tons of CO_2e per year [Table 19B]).

~~204 In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).~~

205 U.S. Department of Energy, Urban Forestry Carbon Sequestration Workbook, 2007.

206 U.S. Forest Service, Urban Forest Research Tree Carbon Calculator, 2005. This document is available online at: http://www.fs.usda.gov/ccrc/tools/tree-carbon-calculator-ctcc, accessed on June 7, 2016.

207 International Panel on Climate Control, National greenhouse Gas Inventories Programme, *Good Practice Guidance for Land Use, Land Use Change and Forestry*, 2003. This document is available online at: http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/GPG_LULUCF_FULL.pdf, accessed on June 7, 2016.

208 SCAQMD, CalEEMod Appendix A, 2011.

209 San Francisco Recreation and Park Department, Memorandum to Jessica Range of San Francisco Environmental Planning, November 27, 2012.

Sequestration Losses and Gains from Tree Replacement in San Francisco

Data provided indicate that 3,448 trees would be removed from the Natural Areas in San Francisco (not including Sharp Park) over a 20-year period. While six species of trees were identified for removal, species-specific sequestration rates could not be identified for four of these species. However, the remaining two species (eucalyptus and pine) comprise over 96 percent of the trees to be removed. Consequently, sequestration rates for the remaining species were assigned to the known sequestration rates equally. Based on field data estimates provided by Hort Science,[210] approximately 2,942 of these trees to be removed are Blue Gum trees greater than 20 years of age for which sequestration has been slowed and is assumed by IPCC Good Practice[211] to be offset by maintenance and mortality. Loss of sequestration from trees to be removed in San Francisco is presented in Table 19A.

Over the same 20-year period that trees would be removed, new tree plantings would occur. These trees were assumed, based on data provided, to largely consist of California Live Oak. Consequently, these trees were assigned to the "medium hardwood" category in the Urban Forestry Carbon Sequestration Workbook. Carbon sequestration increases over time from replanting 3,448 trees are also presented in Table 19A.

Table 19A
CO_2 Sequestration Losses and Gains from Tree Removal and Planting in San Francisco

Tree Removal – San Francisco	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration loss (over 20 years)	- 54 Metric Tons (MT) CO_2/year
Tree Plantings – San Francisco	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration gain (year 20)	+ 192 MT CO_2/year
Net sequestration gain at end of 20-year program	**+ 138 MT CO_2/year**

Sequestration Losses and Gains from Tree Removal and Grassland and Scrub placement in Sharp Park

Data provided indicate that 15,000 trees would be removed in Sharp Park (separate from the 3,448 removed in the San Francisco Natural Areas) over a 20-year period. These tree species are almost entirely eucalyptus. Based on field data estimates provided by Hort Science,[212] approximately 13,500 of these trees to be removed are Blue Gum trees greater than 20 years of age for which sequestration has been slowed and is assumed by IPCC Good Practice to be offset by maintenance and mortality. Loss of sequestration from trees to be removed at Sharp Park is presented in Table 19B.

Over the same 20-year period that trees would be removed from Sharp Park, trees would be replaced with native grassland and coastal scrub. Replacement vegetation was assigned a grassland sequestration rate as provided by CalEEMod. A specific sequestration rate for coastal scrub was not available; thus, all 56 acres of replaced vegetation were assumed to be grassland for

210 Hort Science, Memorandum to Jessica Range, January 17, 2013.

211 International Panel on Climate Control, National greenhouse Gas Inventories Programme, *Good Practice Guidance for Land Use, Land Use Change and Forestry*, 2003.

212 Hort Science, Memorandum to Jessica Range, January 17, 2013.

purposes of calculation. Carbon sequestration associated with planting approximately 56 acres of grasslands is also presented in Table 19B.

Table 19B
CO_2 Sequestration Losses and Gains from Tree Removal and Grassland Planting in Sharp Park (in Pacifica)

Tree Removal – Sharp Park	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration loss (over 20 years)	- 177 MT CO_2/year
Grassland Plantings – Sharp Park	***Estimated CO_2 Losses (-) and Gains (+)***
Annual sequestration gain (year 20)	+ 241 MT CO_2/year
Net sequestration gain (after 20 years)	**+ 64 MT CO_2/year**

Net Sequestration Changes Associated with the Implementation of the SNRAMP

At the end of the 20-year horizon window of the SNRAMP, there would be a calculated total net sequestration gain of approximately 202 MT of CO_2 per year, as indicated in Tables 19A and 19B. The primary contributing factor to this sequestration gain would be the removal of an aging eucalyptus tree population which would be replaced with much more efficiently sequestering tree and plant growth.

~~Trees removed in Sharp Park would be replaced with native grassland and scrub species. The California Registry is developing flexible mechanisms to address reversals if removed trees are not compensated by planting replacement trees. According to a study presented at the American Geophysical Union's meeting, grasslands above 50 degrees latitude reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius (Jha 2006). However, in the tropics, forests cool the planet by an average of 0.7 degree Celsius (Jha 2006). Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink (Hu et al. 2001; Conant et al. 2001). Therefore, replacing the trees to be removed in Sharp Park with grassland and scrub habitat would not result in a substantial increase in GHG emissions from the loss of CO_2 sequestration, and impacts from GHG emissions would be less than significant.~~

Consequently, using standard practice methodologies for assessing GHG impacts relative to CEQA, the proposed project would have a net GHG benefit and would not conflict with California's goal of reducing GHG emissions set forth by the timetable established in AB 32.[213] Therefore, the proposed project would result in less than significant individual and cumulative impacts from GHG emissions and the associated carbon sequestration impacts.

As discussed in Response GE-2, RTC p. 4-474, Draft EIR p. 460, last paragraph, has been changed as follows:

In addition to these BMPs, ~~additional~~ practices outlined in the SNRAMP specifically designed to minimize erosion include removing only small areas of vegetation at any one time (GR-1c), and, to

[213] In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

the extent possible, performing work that involves exposure of large areas of soil during the dry season (GR-12b). As further described in the SNRAMP, the Natural Areas at Grandview Park, Rock Outcrop, Golden Gate Heights Park, and Hawk Hill belong to a remnant ridge-top sand dune system in the western portion of San Francisco. Areas of exposed sand in these parks are subject to erosion due to wind, runoff, and foot traffic on social trails established on steep slopes. The proposed management actions in these Natural Areas, including removal of iceplant and other nonnative vegetation, would be undertaken in a manner to reduce and control erosion. For example, Recommendation GGRH-1f specifies that: "[i]n areas where large-scale removal of invasive vegetation could lead to increased soil erosion (removal of iceplant at Hawk Hill, for example), the vegetation removal shall only occur in small, non-adjacent patches. Currently, herbicides are being applied in this manner to small patches of iceplant at Hawk Hill. Once the iceplant dies it shall be left in place to retain the sandy soils while native species recolonize the area." Removal of nonnative trees would be limited in these natural areas to approximately five trees from the upper slope at Grandview Park. Implementation of Recommendation GGRH-1e would help to stabilize sandy soils and prevent and control erosion due to wind and runoff by maintaining and enhancing native dune scrub vegetation at each of these four Natural Areas. Revegetation following removal of invasive plant species along with the installation of erosion control measures in the BMPs described above would help control erosion.

The SNRAMP also includes proposed management actions to reduce erosion in these natural areas due to foot traffic on social trails. The proposed actions include the use of signage and fencing to discourage use of social trails on steep erodible slopes at each of these Natural Areas, installation of timber steps (similar to the "sand ladder" at Baker Beach) at Hawk Hill, and installation of soil retaining boxes on the downhill side of the landings to minimize erosion at Grandview Park. None of the geology and soils effects were found to be significant.

As discussed in Response BI-17, RTC p. 4-406, Draft EIR p. 466, eleventh bullet, has been changed as follows:

- Cooperate with other agencies to address issues of such species as feral cats, domestic dogs, and ~~feral~~ geese[214]

5.A.13 Chapter VII: Alternatives

As discussed in Response AL-7, RTC p. 4-572, Draft EIR p. 498, beginning with line 11, has been changed as follows:

However, under this alternative, Natural Areas Program staff would continue routine maintenance, which would ensure that the physical deterioration of recreation facilities (trails, DPAs, and other facilities) would ~~not be substantially degraded~~ be avoided."

As discussed in Response G-13, RTC p. 4-62, Draft EIR p. 527, first paragraph, has been changed as follows:

As part of the Sharp Park Conceptual Restoration Alternatives Report, the SFRPD ~~proposed~~ identified restoration alternatives that would be compatible with either a nine-hole layout at the Sharp Park Golf Course or with removal of the golf course entirely. These alternatives have been

[214] Geese in San Francisco are not feral; however, they were incorrectly identified as feral in the 1995 SNRAMP.

rejected because they are not compatible with the existing and ~~planned~~ continued 18-hole layout of the historic golf course.

5.B STAFF-INITIATED CHANGES

The following changes to the text of the Draft EIR are those required beyond the changes made in RTC Section 5.A, Changes in Response to Comments. Formatting of these changes has been done in the same manner described in Section 5.A.

5.B.1 Global Changes

On the cover and throughout the document, "Case No. 2005.1912E" has been changed to "Case No. 2005.0912E."

5.B.2 Section V.A: Introduction

The text on Draft EIR p. 167, last paragraph, has been changed as follows:

> For the purposes of this EIR, the analysis of the potential for the project's incremental effects to be cumulatively considerable is based on a list of related projects identified by San Francisco and neighboring jurisdictions, as provided in Appendix G of this EIR. This list includes those San Francisco Planning Department projects within a quarter mile of a Natural Area that are active or that were closed on or after January 1, 2009. The list also includes General Plan area plans within a quarter mile of each Natural Area. The analysis is also based on reasonably anticipated buildout of the San Francisco General Plan or other planning documents, depending on the specific impact being analyzed. The list of cumulative projects provided in Appendix G was updated in the summer of 2016 to include those past, present, or reasonably foreseeable projects identified since 2009. The updated list is provided in Section 5.B.9, RTC p. 5-58, which will augment Appendix G of the Draft EIR. None of the projects identified since 2009 result in a change in the analysis or conclusions of the cumulative impact analysis provided in the Draft EIR.

5.B.3 Section V.B: Project Description

The text provided in the last bullet on Draft EIR p. 105 has been changed as follows:

- While General Recommendation GR-8b of the SNRAMP mentions consideration of new dog play areas (DPAs), no new DPAs are proposed as part of the project~~, due to the current moratorium on new DPAs;~~.[215]

The text provided in the fifth bullet on Draft EIR p. 110 has been changed as follows:

- GR-8b—Match on-leash and off-leash dog use with the sensitivity of the habitat when considering new DPAs within or next to Natural Areas;

  (Note: ~~An underlying assumption of this EIR is that there would be no new DPAs because there is~~ The Draft EIR conservatively characterized the direction from the Recreation ~~&~~and Park Commission concerning establishment of new DPAs as ~~not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered~~ a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas~~ in that no new DPAs are reasonably foreseeable~~. This direction was ~~announced~~ presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. ~~Should new DPAs be proposed at some point, the appropriate level of CEQA analysis would be undertaken, and applicable permits and other regulatory agency approvals would be obtained.~~)

As discussed in Response AE-1, RTC p. 4-220, a footnote has been added to Table 5 on Draft EIR p. 114 to indicate that the replacement locations have not yet been determined. In addition, Table 5 has also been revised to indicate the reduction in the size of the McLaren Park Natural Area:

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[215] The Draft EIR conservatively characterized the ~~There is~~ direction from the Recreation ~~&~~and Park Commission ~~not to~~ concerning establishment of ~~establish~~ new DPAs as ~~until systemwide DPA planning is completed. For the purposes of this EIR, this is considered~~ a moratorium for the purpose of analyzing cumulative impacts in the Natural Areas.~~ in that no new DPAs are reasonably foreseeable.~~ This direction was ~~announced~~ presented at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee; addressed in a July 19, 2007, SFRPD memorandum on the Status of the Dog Advisory Committee Work Plan; and discussed during the August 16, 2007, meeting of the San Francisco Recreation & Park Commission. New or improved DPAs may be pursued in San Francisco by the SFRPD and/or through community-driven efforts; however, none are proposed or envisioned in the Natural Areas. For the purposes of this EIR, it is assumed that no new DPAs are reasonably foreseeable to provide a worst-case analysis.

Table 5
Summary of Natural Areas Management Plan

Natural Area Site	Park Acreage	Natural Area Acreage*	Management Area (acres)				Invasive Trees			Trails (feet)				Dog Play Areas (acres)			
			MA-1	MA-2	MA-3	Total MA[1]	Existing	To Remove	To Remain	Existing	To Close/ Relocate	To Create	Resulting	Existing	To Remove	To Remain	Monitor**
Balboa	1.8	1.8	1.1	0.7	0	1.8	0	0	0	637	90	0	547				
Bayview Park	43.9	43.9	8.2	15.8	19.7	43.7	6,000	511	5,489	8,496	1,439	1,020	8,077				
Bernal Hill	24.3	24.3	7.6	5.8	10.7	24.1	100	0	100	12,239	4,544	464	8,159	21.0	6.0	15.0	No
Billy Goat Hill	3.5	3.5	0.6	1.1	1.6	3.3	20	0	20	2,600	745	0	1,855				
Brooks Park	3.5	2.0	0.8	0.9	0.3	2.0	20	3	17	1,340	456	0	884				
Buena Vista Park	36.1	6.1	0	6.1	0	6.1	140	10	130	3,741	0	0	3,741	1.0	0	1.0	Yes
Corona Heights	12.6	9.6	2.9	2.5	4.2	9.6	200	15	185	6,701	1,845	0	4,856	0.4	0	0.4	No
Dorothy Erskine Park	1.5	1.5	0.2	0.3	1.0	1.5	100	14	86	771	0	0	771				
Duncan-Castro	0.5	0.5	0.3	0.1	0.1	0.5	0	0	0	333	0	0	333				
Edgehill Mountain	2.3	2.3	0	0.9	1.4	2.3	300	0	300	747	0	438	1,185				
Everson/Digby	1.2	1.2	0.9	0.1	0.2	1.2	0	0	0	0	0	0	0				
Fairmount Park	0.7	0.7	0	0	0.7	0.7	100	0	100	187	0	0	187				
Glen Canyon Park and O'Shaughnessy Hollow***	72.6	63.8	8.1	33.0	22.4	63.5	6,000	120	5,880	23,242	3,653	0	19,589				
Golden Gate Heights	6.0	0.8	0.2	0.5	0.1	0.8	30	0	30	559	390	188	357				
Golden Gate Park Oak Woodlands	1,021.0	26.2	0.7	25.5	0	26.2	900	82	818	24,844	12,381	0	12,463	2.8	0	2.8	Yes
Grandview Park	4.0	4.0	0.9	2.4	0.7	4.0	25	5	20	1,722	409	0	1,313				
Hawk Hill	4.5	4.5	1.4	3.0	0	4.4	10	0	10	1,609	692	0	917				
India Basin Shoreline Park	11.8	6.2	3.2	2.8	0	6.0	0	0	0	1,885	0	0	1,885				
Interior Greenbelt	19.4	16.5	0	1.8	14.7	16.5	5,800	140	5,660	935	0	620	1,555				
Kite Hill	2.7	2.7	0.6	0.5	1.6	2.7	10	0	10	1,957	398	0	1,559				
Lake Merced	614.0	395.0	60.8	101.8	231.5	394.1	12,000	134	11,866	11,106	3,319	365	8,152	5.0	5.0	0	
Lakeview/Ashton Mini Park	0.5	0.5	0.1	0.2	0.2	0.5	0	0	0	651	0	0	651				
McLaren Park****	306.3 ~~312.6~~	159.0 ~~165.3~~	31.7 ~~34.9~~	66.0 ~~68.3~~	60.6 ~~61.4~~	158.3 ~~164.6~~	19,500	809	18,691	59,185	15,681	0	43,504	61.7	8.3	53.4	Yes
Mount Davidson	40.2	40.2	8.8	11.0	20.1	39.9	11,000	1,600	9,400	15,456	2,867	0	12,589				
Palou-Phelps	2.5	2.1	0.8	0.4	0.8	2.0	40	2	38	1,049	527	496	1,018				
Pine Lake	30.3	8.4	1.0	3.8	3.6	8.4	1,000	0	1,000	3,157	608	13	2,562	3.3	0	3.3	No
Rock Outcrop	1.6	1.6	0.8	0.7	0	1.5	0	0	0	0	0	0	0				
Tank Hill	2.9	2.9	1.5	0.6	0.7	2.8	50	0	50	2,672	1,411	0	1,261				
Twin Peaks	34.1	31.1	12.6	14.3	3.8	30.7	88	3	85	8,741	2,303	501	6,939				
15th Avenue Steps	0.3	0.3	0	0.2	0	0.2	0	0	0	0	0	0	0				
San Francisco Subtotal	**2,312.9**	**869.5**	**159.0**	**305.1**	**401.5**	**865.6**	**63,433**	**3,448**	**59,985**	**196,562**	**53,758**	**4,105**	**146,909**	**95.2**	**19.3**	**75.9**	
Sharp Park (Pacifica)	411.0	237.2	35.0	125.1	76.5	236.6	54,000	15,000	39,000	14,741	653	1,792	15,880				
Total	**2,723.9**	**1,106.7**	**194.0**	**430.2**	**478.0**	**1,102.2**	**117,433**	**18,448**	**98,985**	**211,303**	**54,411**	**5,897**	**162,789**	**95.2**	**19.3**	**75.9**	

*The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.

**The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.

***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas; they are grouped together in this table, as they are in the SNRAMP.

****The acreage of the management areas within McLaren Park have been revised to reflect the exclusion of a portion of the Amazon Reservoir Tract that is under the jurisdiction of the SFPUC. Information regarding the number of trees, trails, or DPAs within the SFPUC Amazon Reservoir Tract and SFRPD McLaren Park is not available.

Note: All trees removed would be replaced, although not necessarily with the same species or within the same Natural Area.

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The text provided in the ninth bullet on Draft EIR p. 136 has been changed as follows:

> LM-7a—Relocate the DPA to a different area to avoid disturbing breeding birds in the current location; (Note: The SFRPD determined following completion of the final draft SNRAMP that, due to ongoing disturbance of breeding birds, this DPA should be closed, rather than monitored. This DPA would be closed in accordance with the SFRPD Final Dog Policy (SFRPD 2002) and SFPUC's Lake Merced Watershed Report (SFPUC 2011). ~~Due to the San Francisco moratorium on new DPAs, the Lake Merced DPA couldn't be relocated to a new location, so it would only be removed.~~ Restoration of the site would continue, following removal of the DPA.)

A second full paragraph has been added to Draft EIR p. 137 in Section III.I.19:

> McLaren Park covers 312.6 acres near the southeast corner of San Francisco and is bisected by Mansell Street. Sunnydale and Visitacion Avenues cross the southern half of the park, while John F. Shelley Drive crosses the northern half. Recreational facilities within the park include over 11 miles of trails, tennis courts, ball fields, a golf course, picnic areas, and an amphitheater. Three designated DPAs are within the park, two within and one next to the Natural Area. The Natural Area covers 165.3 acres and is made up of grassland, scrub, and tree-dominated vegetation series.
>
> Since publication of the SNRAMP, the SFRPD noted that the SNRAMP identified the McLaren Park Natural Area as entirely within SFRPD jurisdiction; however, a 12-acre portion of McLaren Park known as the Amazon Reservoir Tract is under the jurisdiction of the SFPUC. The SFPUC has recently indicated their desire to regain management of 6.32 acres of the Amazon Reservoir Tract and have requested that it is removed from the SNRAMP and SNRAMP Draft EIR. Consequently, as the SNRAMP would no longer apply to a portion of the Amazon Reservoir Tract, the Draft EIR has been revised to reflect removal of this area from the SNRAMP. Table 5 of this EIR reflects this change, further describing which management areas would be reduced in size.

A graphical representation of the 6.32-acre portion of the Amazon Reservoir Tract relative to the rest of McLaren Park is provided as Figure RTC-1, p. 2-11.

5.B.4 Section V.D: Cultural and Paleontological Resources

The text on Draft EIR p. 237, last paragraph (under Impact CP-21), which addresses cumulative cultural resources impacts, has been changed as follows:

> Impact CP-21: The proposed project, in combination with other planned and foreseeable future projects, would have a cumulatively considerable significant impact related to cultural and paleontological resources. (Significant and Unavoidable)
>
> Cumulative projects, such as the Sharp Park Recycled Water project, the San Andreas Pipeline Number 3 project, the Water System Improvement Program and its associated facility improvement projects (e.g., Groundwater Project B and the San Francisco Groundwater Project), the SFPUC Sunset Supply Pipeline Vegetation project, the Pacific Rod and Gun Club Upland Soil Remedial Action Project, and the ground disturbing projects at McLaren Park, involve construction and development at Sharp Park, McLaren Park, and Lake Merced. All three Natural Areas were determined to have high archaeological sensitivity (King 2010), and Sharp Park also includes historic architectural and potential historic landscape resources, including the Sharp Park Golf Course (a historic resource) and urban forests. The cumulative projects also involve construction and development in the vicinity of Natural Areas, such as the 15th Avenue Steps….

Section IV.D, Cultural and Paleontological Resources, contained an incorrect reference to Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, p. 264, as M-RE-1, which doesn't exist in the Draft EIR. Accordingly, the text on Draft EIR p. 238 and 239 has been changed as follows:

> Mitigation Measure M-RE-6~~1~~ would require SFRPD to coordinate with a golf course consultant with expertise in historic golf course renovation and with specific expertise, if possible, in golf courses designed by Alister MacKenzie, to restore the playability of the Sharp Park Golf course while documenting and preserving the historic character-defining features of the course and avoiding impacts to sensitive biological resources. However, if any reconfiguration of the course resulted in additional holes east of Highway 1, this would result in a significant impact on the historical significance of Sharp Park Golf Course, further contributing to significant cumulative impacts. Reconfiguration of the golf course holes to resemble its original layout (replacement holes west of Highway 1) would reduce cumulative impacts on the golf course. This reconfiguration would result in a total of 15 holes on the west side of Highway 1 and three holes on the east side. Mitigation Measure M-RE-6~~1~~ would be beneficial to the Sharp Park Golf Course because it would restore some of the elements in the original design of this course, such as coast side holes. This mitigation measure would change the layout of the holes, but the new holes would be in areas of the course where holes were situated in the original design, and would be in keeping with the historic boundaries of the golf course. While impacts to cultural resources were determined to be significant and unavoidable in terms of modifying Holes 10 and 13 and closing or replacing Hole 12, recreation impacts would be reduced to a less-than-significant level by retaining the golf course as an 18-hole course, as required by Draft EIR Mitigation Measure M-RE-6, Restoration of the Sharp Park Golf Course to 18 Playable Holes, Draft EIR p. 264.

5.B.5 Section V.G: Biological Resources

The text of Draft EIR p. 289 (fourth paragraph) has been changed as follows:

> Among the Natural Areas, India Basin is the only one that borders San Francisco Bay and provides the only habitat for migratory shorebirds. There are ten species of birds that are considered locally sensitive that have been observed at India Basin, and several of these are not found at other Natural Areas: black oystercatcher (*Haematopus bachmani*), pelagic cormorant (*Phalacrocorax pelagicus*), Brandt's cormorant (*P. penicillatus*), and pigeon guillemot (*Cepphus columba*). None of the locally significant species that have been observed are known to breed at India Basin. The restored wetlands and mudflats support nesting American avocet (*Recurvirostra americana*) and killdeer (*Charadrius vociferus*). According to the Golden Gate Audubon Society (as reflected in their comment later dated October 31, 2011), during the bird breeding season of 2011, California clapper rail young were observed on multiple occasions at Heron's Head Park (north of the wetlands at India Basin Park). The Golden Gate Audubon Society further stated that this was the first detection of (likely) breeding California clapper rail in a considerable period, and it is believed that the nesting pair derived from rail populations further south in the Bay. If restored, the more extensive saltgrass/pickleweed area could provide habitat for California black rail (*Laterallus jamaicensis coturniculus*) and California clapper rail (*Rallus longirostris obsoletus*), both protected under the state and federal Endangered Species Acts.

The text on Draft EIR pp. 345 and 346 (Impact BI-19), which addresses cumulative biological resource impacts, has been changed as follows:

Impact BI-19: The proposed project, in combination with other planned and foreseeable future projects, would result in a cumulatively considerable significant impact related to biological resources. (Significant and Unavoidable)

Projects that temporarily disturb or permanently remove open space and wildlife habitat include the Candlestick Point-Hunters Point Shipyard Phase II Development and 150 acres of proposed residential development and 85,000 square feet of proposed commercial development in Pacifica. These projects may remove and fragment habitat, possibly resulting in increased use of the Natural Areas by common and special status wildlife, making those areas more critical for biological conservation efforts. Additional recreation facilities also are proposed at McLaren Park and Oak Woodlands in Golden Gate Park. The cumulative projects also include construction and development in the vicinity of such Natural Areas as the 15th Avenue Steps, Corona Heights, and the San Francisco Botanical Garden (Lily Pond and Buena Vista Park). As with all projects that include ground disturbance, development, or vegetation removal, there is potential to adversely impact biological resources. An increase in pedestrian traffic in the Natural Areas over time may result in impacts to special status plant species and sensitive natural communities due to trampling; however, improved trail systems, fencing, and signs would reduce any such impacts. In combination with the SNRAMP, the cumulative regional projects proposed to occur within the vicinity of several Natural Areas would have potentially significant adverse impacts on biological resources over both the short-term and the long-term. The goal of the SNRAMP is to preserve and maintain open space in the region and the mitigation measures identified previously in this section would be implemented to protect biological resources; as a result, the SNRAMP would not result in a cumulatively considerable adverse impact on biological resources.

Implementation of the proposed GGNRA Dog Management Plan may further restrict dog access and off-leash areas within GGNRA land holdings. In addition, the SNRAMP proposes to close the Lake Merced DPA and reduce the size of the DPAs at Bernal Hill and McLaren Park; however, on-leash dog use would still be allowed at these and all other Natural Areas.

The reductions in off-leash areas proposed by the GGNRA could result in an increase in both on-leash and off-leash dog use at the Natural Areas. The actions proposed by the GGNRA and the SNRAMP could result in concentrated dog use within the remaining off-leash areas, as further described in Impact RE-7. Increased use may result in impacts to biological resources within the Natural Areas DPAs, including disturbance of breeding birds and damage to special status plants. The cumulative combination of proposed dog management for the Natural Areas and the GGNRA project could result in indirect significant impacts on biological resources in the Natural Areas. The comparative contributions of ~~the~~ each project to this potentially significant cumulative impact cannot be determined based on the speculative nature of the behavioral and physical factors contributing to that determination, such as where an individual chooses to travel on a particular day, the level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances. The potentially significant impact to biological resources as a result of increased use resulting from cumulative actions could be mitigated by adding a new DPA at a nearby Natural Area or other nearby property. However, ~~there is a current~~

~~moratorium~~[216] ~~on new DPAs~~ this EIR assumed that no new nearby DPAs are under construction, and adding a new DPA may not mitigate impacts from reducing or closing DPAs because it is speculative to predict precisely the magnitude or location of redistribution of dog walkers related to the implementation of the SNRAMP in combination with the GGNRA Dog Management Plan. Numerous factors are difficult to predict, including human behavior, level of future restrictions within and outside of the Natural Areas and GGNRA lands, and physical factors, such as driving distances. Therefore, no feasible mitigation exists that would reduce this impact ~~the mitigation, therefore would not be feasible~~. As a result, it is conservatively concluded that the proposed project's contribution would be potentially ***significant and unavoidable***.

Overall, potential net cumulative long-term impacts on biological resources associated with the SNRAMP are expected to be beneficial. Implementing the plan's measures would increase the amount of wildlife habitat, would preserve and augment special status species and sensitive habitats, would improve habitat connectivity and biodiversity, would reduce nonnative and invasive vegetation, and would increase native vegetative cover. Other existing and future foreseeable cumulative projects in the area that would add to these beneficial effects include the SFRPD trails program, which would improve trails to protect natural resources and sensitive habitats, ~~and~~ the SFRPD forestry program, which would focus on native tree planting and restoration; the Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project, which would include construction of a 1,600 sf perennial pond and removal of sediment and emergent vegetation from Horse Stable Pond; and the USF Mount Sutro Management Project, which would include activities to reduce the risk of wildfires, improve forest health, and promote native plant restoration and enhancement.

5.B.6 Section V.H: Hydrology and Water Quality

The text on Draft EIR p. 380, third full paragraph (under Impact HY-16), which addresses cumulative hydrology and water quality impacts, has been changed as follows:

A number of projects have been implemented, are planned, or are being conducted on a pilot scale that could impact groundwater elevations and quality in the North Westside Basin in San Francisco, such as the San Francisco Groundwater Supply Project and the proposed Vista Grande Drainage Basin Improvement Project.[217] These projects also could affect water elevations and water quality in Pine Lake and Lake Merced. Conjunctive use of groundwater in the North Westside Basin could alter water levels in the lakes, likely making lake levels more stable, which is consistent with the goals of the project. Continued or expanded use of stormwater to recharge Lake Merced may also help to stabilize the lake level. Recycled treated wastewater recharging the North Westside Basin aquifer could also help to maintain and stabilize lake levels, reducing reliance on natural recharge to replenish the aquifer. Lake elevations might be maintained at ~~higher~~ different elevations than in previous years, resulting in the need to alter or adapt operation and maintenance of the lakes and shorelines to future conditions that differ from current conditions. Further, with respect to Lake Merced, the San Francisco Groundwater Supply Project includes a mitigation measure (Mitigation Measure M-HY-9) that requires corrective action if project-related lake levels

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[216] ~~There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

[217] As of June 2016, the Draft EIR for the Vista Grande Drainage Basin Improvement Project was in public review.

decline below trigger levels identified in the mitigation measure. These corrective actions include adding supplemental water and/or altering or redistributing pumping patterns. Implementation of this mitigation measure would ensure that any lake-level decline resulting from the project would be temporary, and the project would not result in long-term changes in water quality that would affect the potential beneficial uses of Lake Merced. The Vista Grande Drainage Improvement Project[218] also has implications for Impound Lake and the water levels around Lake Merced, which will be evaluated in the EIR from the perspective of project-related and cumulative impacts. The proposed project would not contribute to any groundwater effects associated with these projects.

5.B.7 Section V.I: Hazards and Hazardous Materials

The text on Draft EIR p. 398 has been changed as follows:

Impact HZ-19: The proposed project, in combination with other planned and foreseeable future projects, would not result in a cumulatively considerable significant impact related to hazards and hazardous materials. (Less than Significant)

Risks from hazardous materials impacts, including the use of pesticides, are generally localized and site specific, with the exception of those resulting from the transportation of hazardous materials. These risks are generally site specific, so the geographic context for the analysis of the use of hazardous materials and fire hazards is limited to the area surrounding the project site, while cumulative impacts from transporting hazardous materials are analyzed for projects along the transportation routes. As a result, relevant cumulative projects typically involve demolition and construction activities, such as the Hunters Point Shipyard/Candlestick Point Redevelopment project. In the case of the Rod and Gun Club Upland Soil Remedial Action Project, the project itself was specifically intended to clean up existing soil contamination, thereby creating a beneficial effect with respect to the presence of hazardous materials in the vicinity of the Lake Merced Natural Area.

5.B.8 Chapter VII: Alternatives

The text provided in the last paragraph on Draft EIR p. 461 has been changed as follows:

Table 20 provides a general description of the project alternatives compared to the proposed SNRAMP. They are alternatives to the proposed project's programmatic actions, as well as alternatives to the Sharp Park project, covered at the project-level in this EIR. These differences would be articulated in modifications to the SNRAMP if an alternative was selected. Routine maintenance was found to result in less than significant impacts, or less than significant with mitigation, so the alternatives do not include different maintenance level activities. Additionally, dead, diseased, and hazardous trees removed under all alternatives would be consistent with tree maintenance health and safety goals of the Natural Areas Program. No new DPAs would be created under any of the project alternatives~~, consistent with the SFRPD's current moratorium on new DPAs~~.

[218] As of June 2016, the Draft EIR for the Vista Grande Drainage Basin Improvement Project was in public review.

The text provided in the second row of Table 20 on Draft EIR p. 463 has been changed as follows:

DPA reductions	The proposed project includes a 20 percent reduction in DPA acreage.	The No Project Alternative would not close or reduce the acreage of existing DPAs.	The Maximum Restoration Alternative includes moderately greater reduction in DPA acreage, focusing on reducing DPA acreage in MA-1 and MA-2 areas.	The Maximum Recreation Alternative would not close or reduce the acreage of existing DPAs. There would be no new DPAs~~, in accordance with the City's moratorium on new DPAs~~.	The Maintenance Alternative would not close or reduce the acreage of existing DPAs.

The text on Draft EIR p. 467, first full paragraph, has been changed as follows:

> Compared to the proposed project, the No Project Alternative would involve moderately less invasive tree and vegetation removal and closure of fewer trails. The No Project Alternative would not result in new trails because routine maintenance would be limited to that described in Section III.F.2. ~~Consistent with the SFRPD moratorium,[219] t~~The No Project Alternative would not create any new DPAs.

The text on Draft EIR pp. 480 (last paragraph) and 481 (first paragraph) has been changed as follows:

> The Maximum Restoration Alternative would further reduce the amount of DPA acreage, as compared to the proposed project, focusing on closing or reducing the DPA acreage in MA-1 and MA-2 areas. ~~Consistent with the SFRPD moratorium[220] on new DPAs, t~~This alternative would not add any new DPAs to the Natural Areas.

The text on Draft EIR p. 482, second paragraph, has been changed as follows:

> The Maximum Restoration Alternative would have aesthetic impacts similar to those under the proposed project but with moderately more invasive vegetation and tree removal projects. Therefore, although the types of aesthetic impacts are similar to those of the proposed project, the magnitude of those impacts on scenic resources in the Natural Areas and on the visual character or quality of the Natural Areas would be greater than under the proposed project because the Maximum ~~Recreation~~Restoration Alternative would result in more changes to vegetation. However, invasive tree and vegetation removal would be followed by revegetation with native plants, so, overall, the Natural Areas would continue to be characterized as relatively undeveloped landscapes that allow for recreation. As evidenced in the visual simulations under the proposed project at Sharp Park and Mount Davidson, tree removal would not result in noticeable changes to the visual character or quality of the Natural Areas and would not have a substantial adverse effect on a scenic vista. Even with a moderately greater number of trees removed, as proposed under the Maximum Restoration Alternative, tree removal, which would be followed by revegetation with native trees and other native plants, would not significantly affect scenic views or vistas and would not result in a substantial demonstrable impact on the visual character or quality of the Natural

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~~[219] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

~~[220] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

Areas. Similar to the proposed project, under the Maximum Restoration Alternative, new trees would be placed in the Natural Areas to preserve important viewsheds and vistas. As such, the Maximum Restoration Alternative would have less than significant aesthetics impacts."

The text on Draft EIR p. 487, last paragraph, has been changed as follows:

Sensitive Natural Communities and Wetlands. The greater amount of programmatic vegetation removal and replacement under this alternative would increase short-term disturbance of sensitive natural communities and wetlands, compared to the proposed project. While these impacts would be temporary, implementing Mitigation Measure M-BI-1 would reduce temporary impacts on riparian and wetlands by requiring ~~avoidancee~~ avoidance and minimization measures.

The text on Draft EIR pp. 493 (last paragraph) and 494 (first paragraph) has been changed as follows:

The Maximum Recreation Alternative would close informal and social trails in MA-1 areas but not all informal and social trails in MA-2 and MA-3 areas. This alternative includes moderately more trail creation in MA-2 and MA-3 areas than the proposed project and would also allow mountain biking and horseback riding where those uses would not conflict with special status species and their habitats (both protected species and locally significant species). Over time, the Maximum Recreation Alternative would result in Natural Areas with a greater amount of trail coverage, less native plant and animal habitat, and a greater amount of nonnative urban forest coverage. The Maximum Recreation Alternative would not close or reduce DPAs, but no new DPAs would be created in the Natural Areas~~, consistent with the SFRPD moratorium[221] on new DPAs~~. Large-scale programmatic projects would occur under this alternative, but most of those projects would be to provide new trails or other recreation facilities in the Natural Areas.

The text on Draft EIR p. 512 (first full paragraph) has been changed as follows:

As the Maintenance Alternative would preserve the current trail system, it would not close trails or create new trails. The Maintenance Alternative would not close or reduce DPAs; however, no new DPAs would be created in the Natural Areas~~, consistent with the SFRPD moratorium[222] on new DPAs~~. Large-scale programmatic projects would occur under this alternative, but most of those projects would be directed at erosion control, with some invasive vegetation removal and no trail modifications.

~~[221] There is direction from the Recreation and Park Commission not to establish new DPAs until systemwide DPA planning is completed. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

~~[222] There is direction from the Recreation & Park Commission not to establish new DPAs until systemwide DPA planning is~~ completed~~. For the purposes of this EIR, this is considered a moratorium in that no new DPAs are reasonably foreseeable. This direction was announced at the October 10, 2006, meeting of the San Francisco Dog Advisory Committee.~~

5.B.9 Draft EIR Appendix G

The following list of additional cumulative projects is added to the EIR to include those past, present, or reasonably foreseeable projects identified since 2009.

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
Planning Cases			
BALBOA NATURAL AREAS	2011.1075E	RPD-Sutro Dunes @ Great Highway/Balboa Ave	RPD-Sutro Dunes @ Great Highway/Balboa Ave installation at 4 new benches along existing pathway.
BAY VIEW PARK	2014-000835ENV	RPD Ralph D. House Park Improvements (845 Meade Ave)	Add pathway improvements, irrigation, and site furnishings to existing park.
BAY VIEW PARK	2010.1124E	RPD-Bay View Park	RPD-Bay View Park trail restoration.
BAY VIEW PARK	2009.0311E_3	SUNNYDALE SEWER IMPROVEMENT	SFPUC auxiliary sewer project to alleviate flooding in the Visitation Valley/Sunnydale neighborhood, with new main alignment N along county line to SF Bay; previous main tunnel alignment (1998.123E) Negative Declaration.
BAY VIEW PARK	2009.0311E	SUNNYDALE SEWER IMPROVEMENT	SFPUC auxiliary sewer project to alleviate flooding in the Visitation Valley/Sunnydale neighborhood, with new main alignment N along county line to SF Bay; previous main tunnel alignment (1998.123E) Negative Declaration.
BERNAL HEIGHTS PARK	2011.1042E	RPD-Precita Park Improvements (296 PRECITA AV)	Improvements to Precita's park playground including a kiosk installation.
BERNAL HEIGHTS PARK	2010.1126E	RPD-Bernal Heights Park	RPD-Bernal Heights Park trail restoration.
BERNAL HEIGHTS PARK	2012.1340E	RPD-Brewster Community Garden	RPD-Brewster Community Garden
BERNAL HEIGHTS PARK	2013.0678E	RPD-BERNAL HEIGHTS PARK LIGHT POLL INSTALLATION	RPD-BERNAL HEIGHTS PARK LIGHT POLL INSTALLATION
BERNAL HEIGHTS PARK	2009.0276E	CESAR CHAVEZ AUXILIARY SEWER	New 1.2mi auxiliary sewer to address localized flooding, Cesar Chavez Street Area. Alignment from east: off Napoleon, Jerrold, Precita, Cesar Chavez west to Valencia, Duncan, Guerrero, Fair, Coleridge, Coso. Replaces existing brick sewer in Cesar Chavez
BILLY GOAT HILL	2010.0446E	RPD-Billy Goat Hill	Repair and replace landscaping at park.

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
BILLY GOAT HILL	2015-003999ENV	RPD Walter Haas Connector Trail	Construct 580' long, 3-4' wide connector trail with box steps between Walter Haas Playground Park and Beacon Street/Billy Goat Hill Park. Enact erosion control measures and install protective fencing. Remove hazardous trees and restore native plants in t
BUENA VISTA PARK	2012.0198E	RPD-Buena Vista Park Rehab Project	Rehab and replace deteriorating wooden structures and prevent erosion. Replace wooden retaining wall and steps. Soil installation for stabilization. Erosion control measures.
BUENA VISTA PARK	2013.0006E	RPD-Buena Vista Park Erosion Control Project	Rehab and replace deteriorating wooden structures and prevent erosion. Replace wooden retaining wall and steps. Soil installation for stabilization.
BUENA VISTA PARK	2009.0269E	RPD-Buena Vista Park Improvement	Trail extension, clearing and grubbing, erosion control measures, small retaining walls, and native plantings.
CORONA HEIGHTS	2010.0445E	RPD-Corona Heights (199 Museum Way)	Repair and replace existing landscaping.
DUNCAN/CASTRO OPEN SPACE	2012.0994E	SFPUC-Arastradero Rd Encroachment Permit	SFPUC-Arastradero Rd Encroachment Permit
GLEN CANYON PARK	2011.1141E	RPD-Glen Canyon Park Improvements	RPD-Glen Canyon Park Improvements
GLEN CANYON PARK	2012.0483E	RPD-Douglass Park Dog Park	RPD-Douglass Park Dog Park
GOLDEN GATE HEIGHTS PARK	2013.0026E	430 SAN MARCOS AV-Hawk Hill Park	Hawk Hill Park upgrades
GOLDEN GATE HEIGHTS PARK	2010.0930E	PUC-Forest Hill Pump Station Upgrades Project	Demolition of the existing pump station and replacement with a new potable water pump station to meet current Building Code standards as an essential utility facility.
GOLDEN GATE PARK	2010.1068E	RPD-Haight Ashbury-HANC Recycling Center	Remove recycling center and replace with community garden.
GOLDEN GATE PARK	2012.1380E	RPD-GGP Community Garden	Improve paved portion of parkland into a community garden.
GOLDEN GATE PARK	2012.0996E	RPD-Lily Pond Frog Removal	RPD-Lily Pond Frog Removal
GOLDEN GATE PARK	2011.1343E	RPD-GGP Forestry Program Tree Abatement & Pruning	RPD-GGP Forestry Program Tree Abatement & Pruning
GOLDEN GATE PARK	2010.0016E	RPD-Golden Gate Park Beach Chalet Soccer Fields	Replace four existing turf fields with new artificial turf and add new park amenities such as benches, bleachers, picnic tables, bbq pits, new maintenance shed, new pedestrian pathways, etc.
GOLDEN GATE PARK	2009.0419E	Japanese Tea Garden	Alterations to the Tea House and Gift Shop repair and rehabilitation of exterior finishes of tea house and gift shop, kitchen remodel, lighting modifications tea sipping and preparation, retail concession

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
GOLDEN GATE PARK	2014.0811E	RPD KEZAR TRACK REPLACEMENT & IMPROVEMENTS	Replace track in kind; install new furnishings (e.g., slot drain, fountains, goal posts, sand catchers, take off boards, shot put sand fines).
GOLDEN GATE PARK	2013.0983E	RPD-KEZAR TRIANGLE	Landscaping improvements, including new plantings, pedestrian pathways, irrigation, seating, a kiosk, signage, and temporary art displays.
GOLDEN GATE PARK	2014.1427E	RDP STERN GROVE (TROCADERO) CLUBHOUSE IMPROVEMENTS	Replace deck, ramp, and guardrails for ADA compliance
GOLDEN GATE PARK	2012.0149E	RPD-Bowling Green GGP	RPD-Bowling Green GGP
GOLDEN GATE PARK	2012.0634E	RPD-Rossi Playground annex Restroom replacement	Rossi PG/Edward Street Restroom-The replacement of a free-standing, public restroom structure at Rossi Playground Annex
JOHN MCLAREN PARK	2014.1488E	RPD MCLAREN PARK BASKETBALL COURT IMPROVEMENTS	Resurface existing half-size basketball court.
JOHN MCLAREN PARK	2011.1092E	RPD-John McLaren Park New Signage/Message Boards	RPD-John McLaren Park New Signage/Message Boards
JOHN MCLAREN PARK	2011.1247E	RPD-McLaren Park Playground Improvements	RPD-McLaren Park Playground Improvements
JOHN MCLAREN PARK	2011.0281E	RPD-Crocker Amazon Bocce Ball Courts	RPD-Crocker Amazon Bocce Ball Courts
JOHN MCLAREN PARK	2015-004546ENV	SFPUC-Upper Yosemite Creek Daylighting Project	Construct an open channel and associated improvements along the streetscape right-of-way in the northeast corner of McLaren Park and along the edge of the University Mound Reservoir parcel. Construct subsurface detention/retention tanks under Louis Sutte
JOHN MCLAREN PARK	2013.0354E	RPD-McLaren Park	RPD-Persia Ave McLaren Park-Bike Park
JOHN MCLAREN PARK	2013.1888E	RPD-Crocker Amazon Park Upgrades	Trail improvements and stairway and bench replacement for ADA compliance
JOHN MCLAREN PARK	2012.0519E	RPD-Crocker Amazon Park Light Replacement	RPD-Crocker Amazon Park Light Replacement
JOHN MCLAREN PARK	2010.1129E	RPD-John Mclaren Park Trail Restoration	RPD-John Mclaren Park Trail Restoration

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
LAKE MERCED	2010.0099E	PUC-Sunset Supply Pipeline Vegetation Clearing	Remove trees and vegetation around the Sunset Supply Pipeline.
LAKE MERCED	2012.1100E	1 ZOO RD	Replace existing playground equipment and surfacing within the current Elinor Friend Playground
LAKE MERCED	2012.0232E	RPD/PUC-Park Merced Boat House	Park Merced Boat House restaurant remodel
LAKE MERCED	2012.0232E_3	RPD/PUC-Park Merced Boat House	Park Merced Boat House restaurant remodel
LAKE MERCED	2013.1220E	SFPUC-Pacific Rod & Gun Club Site Remediation	Remedial excavation of contaminated soils from 0.5 to 4 feet below ground surface. Preliminary estimated total volume of soil to be excavated at the site is 30,600 cubic yards.
LAKE MERCED	2013.1335E	RPD-Harding Park Golf Course Maintenance	Harding Park Golf Course Maintenance
LAKE MERCED	2012.0476E	SFPUC-Sunset Pipeline ROW Vegetation Mgmt.	SFPUC-Sunset Pipeline ROW Vegetation Mgmt.
LAKE MERCED	2013.0260E	SFPUC-Lake Merced Pump Station	SFPUC-Lake Merced Pump Station
MT. DAVIDSON PARK	2010.1125E	RPD-Mt. Davidson Park	RPD-Mt. Davidson Park trail restoration
MT. DAVIDSON PARK	2012.1441E	RPD-Brush removal/trail access at four natural areas	Remove nonnative invasive plant material at Mt. Davidson trails and ROW near Dalewood and La Bica Ways; Corona Heights steep north slopes; Twin Peaks Blvd. southeast side; and Bayview Hill Key Ave. extension.
PALOU/PHELPS MINI PARK	2011.0148E	RPD-Minnie Lovie Playfield Renovation	The proposed project is the renovation and field improvements to the Minnie-Lovie Park. Renovations include: replacement of fences, replacement of bleachers, modify the retaining walls, install new drinking fountains, upgrade the irrigation system, and other minor improvements.
PINE LAKE PARK	2011.0378E	RPD-Stern Grove/Pine Lake/Parkside Tree Abatement	RPD-Stern Grove/Pine Lake/Parkside Tree Abatement and Pruning
PINE LAKE PARK	2012.0011E	RPD-Park Side Square Restroom Replacement	RPD-Park Side Square Restroom Replacement
ROCK OUTCROPPING	2010.0264E	RPD-Grandview Park Restoration Work	Repair existing retaining walls, restore trail, provide new protective fencing, provide soil erosion control measures, and native plant restoration.
TWIN PEAKS	2014-002827ENV	Twin Peaks Radio Tower Replacement	Replace Tower #3 with new tower (#6) adjacent to #3. Tower #3 would be demolished within six months of the successful transfer of service to #6.

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
TWIN PEAKS	2013.1712E	RPD-GG Park Replanting Project	Replanting project at GG Park-EEA dated 11/05/13
VARIOUS	2011.1359E	RPD-GO Bond Addendum $160 Million	Various improvement park projects throughout SF.
Other SF Projects			
AT SHARP PARK		Sharp Park Safety, Infrastructure Improvement, and Habitat Enhancement Project	The project consists of construction of a 1,600 sf perennial pond located approximately 500 feet southeast of Horse Stable Pond (HSP); realignment of a portion of an existing golf cart path located west of the fairway for golf course hold number 15; removal of sediment and emergent vegetation within HSP and the connecting channel that links HSP with Laguna Salada; construction of steps and a maintenance walkway at the existing HSP pumphouse; and replacement of a wooden retaining wall with a concrete retaining wall at the existing HSP pumphouse. The proposed project is being constructed consistent with a Biological Opinion issued by the U.S. Fish and Wildlife Service and is separate and independent from the proposed SNRAMP project, which is the subject of this EIR. The Final MND was adopted in January 2014.
AT LAKE MERCED		Vista Grande Drainage Improvement Project	Daly City is proposing the Vista Grande project to address storm-related flooding that currently occurs in the Vista Grande Drainage Basin and to provide other environmental benefits, including restoration and management of water levels within Lake Merced. Lake Merced is made up of four individual but connected lakes (East, North, South, and Impound Lakes) and is owned by the City and County of San Francisco. The design of this project has implications for Impound Lake and the water levels around Lake Merced, which will be evaluated in the EIR from the perspective of project-related and cumulative impacts. The SFPUC maintains the lake as a non-potable emergency water supply for the San Francisco. An NOP/NOI was issued in February 2013, but the Draft EIR/EIS has not yet been released.
AT LAKE MERCED		San Francisco Groundwater Supply Project	The San Francisco Groundwater Supply Project would diversify San Francisco's water supply sources by building or converting up to six deep-water wells and associated treatment facilities around San Francisco, including a well at Lake Merced. Groundwater pumped from these wells would be blended with Hetch Hetchy water at the Sunset and Sutro reservoirs and then distributed throughout the city using existing infrastructure. The project includes construction and operation of a well facility at the Lake Merced Pump Station, to the east of the project site, and five additional well facilities and distribution pipelines to the north of the project site. The purpose of the project is to provide an average of up to 4 million gallons per day (mgd) of groundwater to augment San Francisco's municipal water supply. The Final EIR was certified in December 2013 and adopted by the SFPUC in January 2014.

San Francisco Related Cumulative Projects List (Since 2009)			
Natural Area	***Case No.***	***Project Name***	***Description***
AT LAKE MERCED		Pacific Rod and Gun Club Upland Soil Remedial Action Project	The San Francisco Public Utilities Commission (SEPUC) implemented the Pacific Rod and Gun Club Upland Soil Remedial Action Plan, which cleaned up soil contamination at the Pacific Rod and Gun Club (PRGC), located on the southwest side of Lake Merced in San Francisco, California. Soil contamination was the result of the former use of lead shot and clay targets made with asphaltic materials at the skeet and trap shooting ranges. The SFPUC prepared the PRGC Remedial Action Plan in response to a Cleanup Order issued by the California Regional Water quality Control Board, San Francisco Bay Region. The project consisted of excavation and appropriate off-site disposal of up to 46,500 cubic yards of soil containing elevated concentrations of lead and polycyclic aromatic hydrocarbons and backfilling of excavation areas with clean fill material. The Final MND was adopted in June 2014.
NEAR SHARP PARK AND LAKE MERCED		Golden Gate National Recreation Area General Management Plan	The plan creates the vision and framework to guide management of the park for the next 20 years, including land use policies. Plan activities near Fort Funston and Milagra Ridge, which are the two GGNRA areas within 1/4 mile of the SNRAMP (at Lake Merced and Sharp Park, respectively). At Fort Funston, the majority of the site would be managed to provide recreational activities in a more natural setting with limited support facilities. Access and parking would be at the edge of the site, allowing restoration of the natural dune ecosystem and providing trail access. Nonhistoric structures would be removed; existing park operation functions and the environmental education program would be relocated to suitable locations elsewhere in the park. The historic Battery Davis would be preserved within the context of the natural setting. The coastal bluffs would be preserved for their unique geology and to allow natural processes to continue unimpeded. At Milagra Ridge, the land would be managed to preserve the wild character of the area and protect endangered species habitat. Disturbed areas would be restored. Coordinating with other land managers, the National Park Service would also make trail improvements that could include connections to Oceana Boulevard, the Pacific coast, Skyline boulevard, and Sweeney Ridge. The ROD for the EIS was signed in April 2014. This project is different than the GGNRA Dog Management Plan, which focuses on the manner and extent of dog walking in appropriate areas of the park.

5.B.10 Draft EIR New Appendix K

A new Appendix K is added to the EIR to include visitor use data collected in 2009 and 2011 at various DPAs, including those in the Bernal Heights, McLaren Park, and Lake Merced Natural Areas.

Dog Play Area Counts

Name of DPA	*Date of Visit*	*Time Visit Began*	*Time Visit Ended*	*Dogs*	*Owners*	*Dog Walkers*	*Notes*
Alamo Square	6/11/2009	11:45 AM	12:00 PM	22	10	unclear how many are walkers	no indication if owners or walkers
Alamo Square	6/11/2009	12:30 PM	12:45 PM	12	0	14	
Alta Plaza	6/9/2009	9:58 AM	10:13 AM	12	6	1	
Alta Plaza	6/9/2009	10:45 AM	11:00 AM	11	6	1	
Bernal Heights	6/24/2009	1:00 PM	1:15 PM	9	3	2	
Bernal Heights	6/24/2009	1:30 PM	1:45 PM	21	6	1	
Brotherhood Mini Park	7/1/2009	2:37 PM	2:52 PM	6	2	0	
Buena Vista	6/11/2009	1:15 PM	1:30 PM	12	6	1	
Buena Vista	6/11/2009	1:45 PM	2:00 PM	13	4	1	
Buena Vista	6/24/2009	6:00 PM	6:15 PM	6	7	0	
Corona Heights	6/11/2009	2:30 PM	2:45 PM	17	5	2	
Corona Heights	6/11/2009	3:00 PM	3:15 PM	3	3	0	
Corona Heights	6/24/2009	6:25 PM	6:40 PM	12	13	0	
Crocker Amazon	7/2/2009	4:15 PM	4:30 PM	12	8	0	
Crocker Amazon	7/2/2009	4:45 PM	5:00 PM	3	3	0	
Crocker Amazon	7/30/2009	5:15 PM	5:30 PM	1	1	0	
Douglass	7/7/2009	2:37 PM	2:52 PM	39	4	6	
Douglass Playground	7/7/2009	3:15 PM	3:30 PM	16	10	0	
Douglass Playground	6/24/2009	5:20 PM	5:35 PM	18	18	0	
Duboce Park	6/11/2009	2:10 PM	2:25 PM	17	15	0	
Duboce Park	6/11/2009	2:45 PM	3:00 PM	21	12	0	
Duboce Park	unknown date in 2009	7:00 PM	7:15 PM	19	18	0	
Eureka Valley	6/24/2009	4:05 PM	4:20 PM	12	11	unclear how many were walkers	no indication if owners or walkers

Name of DPA	*Date of Visit*	*Time Visit Began*	*Time Visit Ended*	*Dogs*	*Owners*	*Dog Walkers*	*Notes*
Eureka Valley	6/24/2009	4:30 PM	4:45 PM	10	14	unclear how many were walkers	no indication if owners or walkers
Eureka Valley	6/24/2009	7:05 PM	7:20 PM	4	6	0	
GGP A	7/6/2009	12:18 PM	12:33 PM	0	0	0	
GGP A	7/6/2009	1:00 PM	1:15 PM	1	2	0	
GGP B SE	7/13/2009	5:00 PM	5:15 PM	4	3	0	
GGP Big Rec	7/8/2009	11:00 AM	11:15 AM	1	1	0	
GGP Big Rec	7/8/2009	11:45 AM	12:00 PM	6	6	0	
GGP Big Rec	7/13/2009	5:15 PM	5:30 PM	18	17	0	
GGP D SW	7/6/2009	1:37 PM	1:52 PM	0	0	0	
GGP D SW	7/6/2009	1:53 PM	2:08 PM	1	2	0	
GGP D SW	7/8/2009	1:00 PM	1:15 PM	1	1		
GGP D SW	7/8/2009	1:45 PM	2:00 PM	0	0		
GGP Dog Training	7/9/2009	1:45 PM	2:00 PM	45	7	6	
GGP Dog Training	7/9/2009	2:30 PM	2:45 PM	30	4	4	
Jefferson Square	6/9/2009	2:20 PM	2:35 PM	6	4	0	
Jefferson Square	6/9/2009	2:35 PM	2:50 PM	0	0	0	
Jefferson Square	6/10/2009	6:35 PM	6:50 PM	6	5	0	
John McLaren	7/2/2009	3:25 PM	3:40 PM	10	2	1	
John McLaren	7/2/2009	3:45 PM	4:00 PM	0	0	0	
John McLaren	7/30/2009	4:50 PM	5:05 PM	9	5	0	
Lafayette Park	6/9/2009	12:30 PM	12:45 PM	6	6	0	
Lafayette Park	6/9/2009	1:25 PM	1:40 PM	0	0	0	
Lake Merced	9/7/2011	1:15 PM	2:15 PM	1	1	0	
Lake Merced	11/11/2011	7:45 AM	8:15 AM	0	0	0	
Lake Merced	11/10/2011	8:45 AM	9:45 AM	0	0	0	
Mission Dolores	6/24/2009	3:00 PM	3:15 PM	17	15	0	
Mission Dolores	6/24/2009	3:30 PM	3:45 PM	23	16	0	
Mountain Lake	6/9/2009	8:08 AM	8:23 AM	11	10	0	
Mountain Lake	6/9/2009	9:00 AM	9:15 AM	9	10	unclear how many are walkers	unclear how many are walkers

Name of DPA	Date of Visit	Time Visit Began	Time Visit Ended	Dogs	Owners	Dog Walkers	Notes
Pine Lake	6/26/2009	3:10 PM	3:25 PM	41	30	1	
Pine Lake	6/26/2009	4:25 PM	4:40 PM	43	21	4	
Pine Lake	7/1/2009	5:00 PM	5:15 PM	38	32	0	
St. Mary's Playground	6/29/2009	1:30 PM	1:45 PM	2	1	0	
St. Mary's Playground	6/29/2009	2:00 PM	2:15 PM	18	6	2	
Stern Grove	6/26/2009	2:30 PM	2:45 PM	3	2	0	
Stern Grove	6/26/2009	3:54 PM	4:04 PM	3	3	0	
Stern Grove	7/1/2009	5:30 PM	5:45 PM	1	1	0	
Upper Noe Valley	6/9/2009	3:46 PM	4:01 PM	8	7		
Upper Noe Valley	6/9/2009	4:30 PM	4:45 PM	12	8	0	
Walter Haas	7/7/2009	1:20 PM	1:35 PM	22	3	4	
Walter Haas	7/7/2009	2:00 PM	2:15 PM	13	3	2	

Natural Area DPAs with Proposed Changes

	Average 15 minutes		*Total Recorded*			*Estimated Hourly*	
	Dogs	*Walkers*	*Dogs*	*Owners*	*Time*	*Dogs*	*Owners*
Bernal Heights	15	5	30	9	30 min	60	18
John McLaren	6	2	19	7	45 min	25	9
Lake Merced	0	0	1	1	45 min	1	1

Natural Area DPAs with No Changes

	Average 15 minutes		*Total Recorded*			*Estimated Hourly*	
	Dogs	*Walkers*	*Dogs*	*Owners*	*Time*	*Dogs*	*Owners*
Buena Vista	10	6	31	17	45 min	41	23
Corona Heights	11	7	32	21	45 min	43	28
Mountain Lake	10	10	20	20	30 min	40	40
Pine Lake	41	28	122	83	45 min	162	110
Stern Grove	2	2	7	6	45 min	9	8



ATTACHMENTS

Significant Natural Resource Areas Management Plan (Volume IV)

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT
CASE NO. **2005.0912E**

STATE CLEARINGHOUSE NO. 2009042102

SAN FRANCISCO PLANNING DEPARTMENT

	Draft EIR Publication Date:	**AUGUST 31, 2011**
	Draft EIR Public Hearing Date:	**OCTOBER 6, 2011**
	Draft EIR Public Comment Period:	**AUGUST 31, 2011, to OCTOBER 17, 2011, and APRIL 27, 2012, TO JUNE 11, 2012**
	Final EIR Certification Hearing Date:	**DECEMBER 15, 2016**

ATTACHMENTS

Significant Natural Resource Areas Management Plan (Volume IV)

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	Final EIR Certification Hearing Date:	**DECEMBER 15, 2016**

SAN FRANCISCO PLANNING DEPARTMENT

ENVIRONMENTAL PLANNING DIVISION | SAN FRANCISCO PLANNING DEPARTMENT

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Attachment C Draft EIR Public Hearing Transcript

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Attachment A Responses by Commenter

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
NPS-1	Frank Dean	National Park Service	NPS-1-01	PD-26
NPS-1	Frank Dean	National Park Service	NPS-1-02	AL-7
NPS-1	Frank Dean	National Park Service	NPS-1-03	GE-1
NPS-1	Frank Dean	National Park Service	NPS-1-04	G-22
NPS-1	Frank Dean	National Park Service	NPS-1-05	G-23
NPS-1	Frank Dean	National Park Service	NPS-1-06	G-24
NPS-1	Frank Dean	National Park Service	NPS-1-07	G-1
NPS-1	Frank Dean	National Park Service	NPS-1-08	RE-13
NPS-1	Frank Dean	National Park Service	NPS-1-09	TR-2
NPS-1	Frank Dean	National Park Service	NPS-1-10	G-15
NPS-1	Frank Dean	National Park Service	NPS-1-11	G-15
NPS-1	Frank Dean	National Park Service	NPS-1-12	PD-13
NPS-1	Frank Dean	National Park Service	NPS-1-13	PD-1
NPS-1	Frank Dean	National Park Service	NPS-1-14	PD-28
NPS-1	Frank Dean	National Park Service	NPS-1-15	PD-35
NPS-1	Frank Dean	National Park Service	NPS-1-16	PD-13
NPS-1	Frank Dean	National Park Service	NPS-1-17	PD-29
NPS-1	Frank Dean	National Park Service	NPS-1-18	PD-13
NPS-1	Frank Dean	National Park Service	NPS-1-19	PD-13
CCC-1	Renee Ananda	California Coastal Commission	CCC-1-01	BI-26
CCC-1	Renee Ananda	California Coastal Commission	CCC-1-02	BI-19
CCC-1	Renee Ananda	California Coastal Commission	CCC-1-03	HY-3
CCC-1	Renee Ananda	California Coastal Commission	CCC-1-04	BI-19
NAHC-1	Katy Sanchez	Native American Heritage Commission	NAHC-1-01	CP-6
OPR-1	Scott Morgan	Office of Planning and Research	OPR-1-01	G-10
BAAQMD-1	Christine Holmes	Bay Area Air Quality Management District	BAAQMD-1-01	PD-1
City of Pacifica-1	Mary Ann Nihart	City of Pacifica	City of Pacifica-1-01	G-11
HPC-1	Charles Chase	San Francisco Historic Preservation Commission	HPC-1-01	CP-2
HPC-1	Charles Chase	San Francisco Historic Preservation Commission	HPC-1-02	CP-5
HPC-1	Charles Chase	San Francisco Historic Preservation Commission	HPC-1-03	CP-5
HPC-1	Charles Chase	San Francisco Historic Preservation Commission	HPC-1-04	CP-4
HPC-1	Charles Chase	San Francisco Historic Preservation Commission	HPC-1-05	G-14
BAGCNC-1	Nathaniel Jackson	Bay Area Golf Club of Northern California	BAGCNC-1-01	PD-14
BDunes-1	Michael Keiser	Bandon Dunes	BDunes-1-01	CP-1
CAAONC-1	Charles Pakerian	Council of Armenian American Organizations of Northern California	CAAONC-1-01	G-11
CAAONC-1	Charles Pakerian	Council of Armenian American Organizations of Northern California	CAAONC-1-02	PD-1
CBD-1	Jeff Miller	Center for Biological Diversity	CBD-1-01	PD-1
CBD-1	Jeff Miller	Center for Biological Diversity	CBD-1-02	PD-12
CBD-1	Jeff Miller	Center for Biological Diversity	CBD-1-03	PD-15
CBD-1	Jeff Miller	Center for Biological Diversity	CBD-1-04	AL-10
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-01	G-25
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-02	G-25
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-03	G-25
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-04	G-17
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-05	RE-13
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-06	RE-3
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-07	TR-1
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-08	TR-1
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-09	HZ-1
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-10	G-26

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-11	PD-23
CFDG-1	Martha Walters	Crissy Field Dog Group	CFDG-1-12	G-26
CNPS-1	Jake Sigg	California Native Plant Society	CNPS-1-01	BI-27
CNPS-1	Jake Sigg	California Native Plant Society	CNPS-1-02	BI-15
CNPS-1	Jake Sigg	California Native Plant Society	CNPS-1-03	BI-22
CNPS-1	Jake Sigg	California Native Plant Society	CNPS-1-04	BI-18
CNPS-1	Jake Sigg	California Native Plant Society	CNPS-1-05	AL-10
DB-1	Janet Slissman	Doggie Business	DB-1-01	G-19
DB-1	Janet Slissman	Doggie Business	DB-1-02	AL-8
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-01	RE-3
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-02	HZ-1
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-03	G-25
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-04	G-25
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-05	G-17
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-06	RE-13
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-07	RE-3
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-08	RE-1
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-09	RE-2
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-10	G-23
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-11	RE-7
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-12	HZ-1
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-13	TR-1
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-14	G-26
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-15	PD-23
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-16	LU-3
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-17	G-26
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-18	RE-9
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-19	RE-8
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-20	G-6
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-21	AE-2
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-22	GG-1
DogPACSF-1	Bruce Wolfe	Dog PAC of SF	DogPACSF-1-23	GG-2
FOW-GGP-1	Robert Bakewell	Friends of Oak Woodlands - Golden Gate Park	FOW-GGP-1-01	G-11
FOW-GGP-1	Robert Bakewell	Friends of Oak Woodlands - Golden Gate Park	FOW-GGP-1-02	PD-1
GCSAA-1	J. Rhett Evans	Golf Course Superintendents Association of America	GCSAA-1-01	CP-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-01	PD-12
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-02	BI-23
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-03	PD-10
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-04	G-10
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-05	PD-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-06	PD-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-07	BI-32
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-08	PD-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-09	GG-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-10	GE-1
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-11	G-4
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-12	BI-32
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-13	PD-24
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-14	G-16
GGAS-1	Michael Lynes	Golden Gate Audubon Society	GGAS-1-15	G-16

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-16	G-25
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-17	BI-32
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-18	PD-17
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-19	PD-1
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-20	G-16
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-21	PD-2
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-22	PD-19
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-23	PD-1
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-24	PD-1
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-25	PD-25
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-26	PD-20
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-27	G-16
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-28	BI-1
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-29	BI-35
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-30	BI-13
GGAS-1	Michael Lynes	Golden Gate Audobon Society	GGAS-1-31	BI-6
GGHNA-1	Sally Stephens	Golden Gate Heights Neighborhood Association	GGHNA-1-01	GE-2
GGHNA-1	Sally Stephens	Golden Gate Heights Neighborhood Association	GGHNA-1-02	GE-2
GGHNA-1	Sally Stephens	Golden Gate Heights Neighborhood Association	GGHNA-1-03	AE-5
GGHNA-1	Sally Stephens	Golden Gate Heights Neighborhood Association	GGHNA-1-04	RE-9
GGHNA-1	Sally Stephens	Golden Gate Heights Neighborhood Association	GGHNA-1-05	G-6
GHCC-1	Paul Grech and Joseph Michelucci	Green Hills Country Club	GHCC-1-01	CP-1
GLS-1	Various Commentors	Gay and Lesbian Sierrans	GLS-1-01	PD-1
MGSG-1	Amber Hasselbring	Mission Greenbelt Sidewalk Gardens	MGSG-1-01	PD-1
MGSG-1	Amber Hasselbring	Mission Greenbelt Sidewalk Gardens	MGSG-1-02	G-11
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-01	AL-7
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-02	AL-5
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-03	BI-12
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-04	BI-12
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-05	CP-8
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-06	AE-1
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-07	BI-34
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-08	AL-6
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-09	AE-2
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-10	NO-1
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-11	WS-1
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-12	PD-20
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-13	RE-11
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-14	G-4
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-15	BI-14
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-16	PD-20
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-17	PD-20
MPIC-1	Dan Liberthson	Miraloma Park Improvement Club	MPIC-1-18	PD-30
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-01	AL-10
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-02	PD-3
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-03	PD-30
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-04	CP-8
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-05	CP-9
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-06	G-4
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-07	PD-10

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-08	WS-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-09	CP-8
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-10	LU-4
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-11	PD-20
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-12	BI-12
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-13	BI-24
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-14	GG-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-15	CP-9
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-16	GE-3
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-17	AE-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-18	PD-10
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-19	PD-20
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-20	PD-20
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-21	RE-12
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-22	NO-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-23	HZ-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-24	HZ-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-25	HZ-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-26	HZ-1
MPIC-2	Dan Liberthson	Miraloma Park Improvement Club	MPIC-2-27	BI-13
NGCOA-1	Michael K. Hughes	National Golf Course Owners Association	NGCOA-1-01	CP-1
NTC-1	Peter Brastow	Nature in the City	NTC-1-01	AL-2
NTC-1	Peter Brastow	Nature in the City	NTC-1-02	AL-10
NTC-1	Peter Brastow	Nature in the City	NTC-1-03	PD-12
NTC-2	Peter Brastow	Nature in the City	NTC-2-01	G-10
PGA-1	Allen Wronowski	Professional Golfers' Association of America	PGA-1-01	CP-1
PGA-1	Allen Wronowski	Professional Golfers' Association of America	PGA-1-02	PD-14
SCBC-1	Arthur Feinstein	Sierra Club Bay Chapter	SCBC-1-01	G-10
SFDOG-1	Sally Stephens	San Francisco Dog Owners Group	SFDOG-1-01	AL-8
SFDOG-1	Sally Stephens	San Francisco Dog Owners Group	SFDOG-1-02	RE-1
SFDOG-1	Sally Stephens	San Francisco Dog Owners Group	SFDOG-1-03	G-25
SFDOG-1	Sally Stephens	San Francisco Dog Owners Group	SFDOG-1-04	G-26
SFDOG-1	Sally Stephens	San Francisco Dog Owners Group	SFDOG-1-05	RE-13
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-01	G-10
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-02	G-10
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-03	G-25
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-04	G-19
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-05	G-25
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-06	G-17
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-07	RE-13
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-08	RE-3
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-09	RE-1
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-10	RE-2
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-11	G-23
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-12	RE-7
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-13	HZ-1
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-14	G-26
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-15	PD-23
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-16	G-26
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-17	G-26

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-18	RE-9
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-19	HZ-2
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-20	RE-8
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-21	G-6
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-22	AE-2
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-23	GG-1
SFDOG-2	Sally Stephens	San Francisco Dog Owners Group	SFDOG-2-24	GG-2
SFFA-1	Eric Miller	San Francisco Forest Alliance	SFFA-1-01	G-10
SFFA-2	Eric Miller	San Francisco Forest Alliance	SFFA-2-01	G-10
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-01	BI-33
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-02	BI-24
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-03	WS-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-04	GE-3
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-05	GG-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-06	AQ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-07	HZ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-08	HZ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-09	HZ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-10	HZ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-11	HZ-1
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-12	G-3
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-13	BI-29
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-14	BI-11
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-15	RE-10
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-16	RE-10
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-17	RE-11
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-18	RE-8
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-19	RE-9
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-20	RE-13
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-21	AE-6
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-22	AL-8
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-23	AL-10
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-24	G-10
SFFA-3	Eric Miller	San Francisco Forest Alliance	SFFA-3-25	HZ-4
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-01	CP-1
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-02	CP-3
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-03	CP-3
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-04	CP-3
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-05	CP-4
SFPGA-1	Richard Harris	San Francisco Public Golf Alliance	SFPGA-1-06	CP-4
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-01	CP-1
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-02	CP-1
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-03	CP-1
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-04	CP-1
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-05	PD-14
SFPGA-2	Richard Harris	San Francisco Public Golf Alliance	SFPGA-2-06	CP-1
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-01	HY-1
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-02	LU-1
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-03	HY-4
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-04	CP-3

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-05	CP-3
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-06	CP-3
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-07	CP-4
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-08	CP-4
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-09	CP-4
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-10	CP-4
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-11	G-3
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-12	BI-7
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-13	PD-13
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-14	BI-2
SFPGA-3	Richard Harris	San Francisco Public Golf Alliance	SFPGA-3-15	PD-13
SFSPCA-1	Jennifer Scarlett	San Francisco Society for the Prevention of Cruelty to Animals	SFSPCA-1-01	G-19
SFT-1	Jennifer Clary	San Francisco Tomorrow	SFT-1-01	BI-15
SFT-1	Jennifer Clary	San Francisco Tomorrow	SFT-1-02	PD-27
SFT-1	Jennifer Clary	San Francisco Tomorrow	SFT-1-03	AL-10
SFT-1	Jennifer Clary	San Francisco Tomorrow	SFT-1-04	AL-2
SFT-1	Jennifer Clary	San Francisco Tomorrow	SFT-1-05	PD-12
SF Tree-1	Carolyn Blair	San Francisco Tree Council	SF Tree-1-01	BI-33
SF Tree-1	Carolyn Blair	San Francisco Tree Council	SF Tree-1-02	BI-33
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-01	AL-3
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-02	PD-12
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-03	G-11
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-04	AL-10
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-05	PD-1
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-06	PD-1
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-07	PD-1
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-08	PD-13
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-09	CP-2
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-10	G-13
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-11	BI-4
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-12	BI-5
Sierra Club-1	Arthur Feinstein	Sierra Club San Francisco Bay Chapter	Sierra Club-1-13	HY-2
Tank Hill Neighbors-1	Various Commentors	Tank Hill Neighbors	Tank Hill Neighbors-1-01	BI-33
Tank Hill Neighbors-1	Various Commentors	Tank Hill Neighbors	Tank Hill Neighbors-1-02	BI-33
Tank Hill Neighbors-1	Various Commentors	Tank Hill Neighbors	Tank Hill Neighbors-1-03	AL-5
Tank Hill Neighbors-1	Various Commentors	Tank Hill Neighbors	Tank Hill Neighbors-1-04	AL-8
WEI-1	Brent Plater	Wild Equity Institute	WEI-1-01	PD-12
WEI-1	Brent Plater	Wild Equity Institute	WEI-1-02	PD-10
WEI-1	Brent Plater	Wild Equity Institute	WEI-1-03	CP-2
WEI-1	Brent Plater	Wild Equity Institute	WEI-1-04	G-13
WEI-1	Brent Plater	Wild Equity Institute	WEI-1-05	PD-13
WEI-2	Brent Plater	Wild Equity Institute	WEI-2-01	G-10
WGF-1	Stephen F. Mona	World Golf Foundation	WGF-1-01	CP-7
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-01	PD-3
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-02	BI-12
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-03	GG-1
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-04	HZ-1
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-05	HZ-1
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-06	HZ-1
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-07	RE-10

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-08	BI-20
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-09	G-3
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-10	G-10
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-11	G-10
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-12	PD-11
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-13	PD-3
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-14	G-4
WTPCC-1	Matt Chamberlain	West of Twin Peaks Central Council	WTPCC-1-15	BI-24
Adam-1	Adam	N/A	Adam-1-01	AL-4
Adams-L-1	Lile Adams	N/A	Adams-L-1-01	G-19
Adams-S-1	Susan Adams	N/A	Adams-S-1-01	PD-4
Ahlberg-1	Todd Ahlberg	N/A	Ahlberg-1-01	G-19
Anonymous-1	Anonymous	N/A	Anonymous-1-01	CP-2
Anonymous-2	Anonymous-2	N/A	Comments noted	No response required
Anonymous-3	Anonymous-3	N/A	Comments noted	No response required
Archer-1	Donna Archer	N/A	Archer-1-01	G-8
Archer-1	Donna Archer	N/A	Archer-1-02	PD-14
Armanini-1	Mark Armanini	N/A	Armanini-1-01	PD-3
Armanini-1	Mark Armanini	N/A	Armanini-1-02	PD-4
Armanini-1	Mark Armanini	N/A	Armanini-1-03	G-25
Art-1	Catherine Art	N/A	Art-1-01	AL-9
Art-1	Catherine Art	N/A	Art-1-02	PD-4
Art-1	Catherine Art	N/A	Art-1-03	BI-13
Art-1	Catherine Art	N/A	Art-1-04	BI-21
Art-1	Catherine Art	N/A	Art-1-05	BI-24
Art-1	Catherine Art	N/A	Art-1-06	G-4
Asher-1	Poe Asher	N/A	Asher-1-01	PD-4
Asher-1	Poe Asher	N/A	Asher-1-02	PD-3
Bachmanov-1	Eugene Bachmanov	N/A	Bachmanov-1-01	BI-33
Barnsdale-1	Mary Barnsdale	N/A	Barnsdale-1-01	PD-3
Bartley-1	Eddie Bartley	N/A	Bartley-1-01	PD-1
Bartley-1	Eddie Bartley	N/A	Bartley-1-02	PD-1
Bartley-1	Eddie Bartley	N/A	Bartley-1-03	BI-32
Bartley-1	Eddie Bartley	N/A	Bartley-1-04	G-4
Bartley-1	Eddie Bartley	N/A	Bartley-1-05	PD-12
Bartley-1	Eddie Bartley	N/A	Bartley-1-06	BI-23
Bartley-1	Eddie Bartley	N/A	Bartley-1-07	G-25
Bartley-1	Eddie Bartley	N/A	Bartley-1-08	G-16
Bartley-1	Eddie Bartley	N/A	Bartley-1-09	BI-23
Bartley-1	Eddie Bartley	N/A	Bartley-1-10	Hy-6
Bartley-1	Eddie Bartley	N/A	Bartley-1-11	G-7
Bartley-1	Eddie Bartley	N/A	Bartley-1-12	BI-36
Bartley-1	Eddie Bartley	N/A	Bartley-1-13	GG-1
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-01	G-25
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-02	G-25
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-03	G-25
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-04	G-25
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-05	G-17

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-06	RE-13
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-07	RE-3
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-08	RE-1
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-09	RE-2
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-10	RE-7
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-11	HZ-1
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-12	TR-1
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-13	G-26
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-14	PD-23
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-15	G-26
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-16	G-5
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-17	RE-9
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-18	RE-10
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-19	AE-6
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-20	AE-2
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-21	GG-1
Bartolotta-1	Victor Bartolotta	N/A	Bartolotta-1-22	GG-2
Baye-1	Peter Baye	N/A	Baye-1-01	BI-25
Baye-1	Peter Baye	N/A	Baye-1-02	BI-7
Baye-1	Peter Baye	N/A	Baye-1-03	HY-5
Baye-1	Peter Baye	N/A	Baye-1-04	BI-7
Baye-1	Peter Baye	N/A	Baye-1-05	AL-11
Baye-1	Peter Baye	N/A	Baye-1-06	BI-7
Baye-1	Peter Baye	N/A	Baye-1-07	G-9
Baye-1	Peter Baye	N/A	Baye-1-08	HY-2
Baye-1	Peter Baye	N/A	Baye-1-09	HY-2
Baye-1	Peter Baye	N/A	Baye-1-10	BI-8
Baye-1	Peter Baye	N/A	Baye-1-11	BI-7
Baye-1	Peter Baye	N/A	Baye-1-12	BI-10
Baye-1	Peter Baye	N/A	Baye-1-13	BI-7
Baye-1	Peter Baye	N/A	Baye-1-14	BI-7
Beberman-1	Gary Beberman	N/A	Beberman-1-01	G-19
Beemsterboer-1	Joni Beemsterboer	N/A	Beemsterboer-1-01	AL-8
Besser-1	Ken Besser	N/A	Besser-1-01	PD-3
Betcher-1	Peter Betcher	N/A	Betcher-1-01	PD-6
Bley-1	Andrew Bley	N/A	Bley-1-01	PD-4
Blum-1	Jan Blum	N/A	Blum-1-01	PD-12
Blum-1	Jan Blum	N/A	Blum-1-02	PD-12
Blum-1	Jan Blum	N/A	Blum-1-03	G-4
Blum-1	Jan Blum	N/A	Blum-1-04	HY-2
Blum-1	Jan Blum	N/A	Blum-1-05	PD-12
Blum-1	Jan Blum	N/A	Blum-1-06	PD-12
Borden-1	Tom Borden	N/A	Borden-1-01	PD-6
Borden-1	Tom Borden	N/A	Borden-1-02	AL-8
Borden-1	Tom Borden	N/A	Borden-1-03	RE-10
Borden-1	Tom Borden	N/A	Borden-1-04	LU-2
Borden-1	Tom Borden	N/A	Borden-1-05	RE-10
Borden-1	Tom Borden	N/A	Borden-1-06	WS-2
Borden-1	Tom Borden	N/A	Borden-1-07	HZ-5
Bors-1	Margo Bors	N/A	Bors-1-01	PD-1

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Bors-1	Margo Bors	N/A	Bors-1-02	PD-16
Bors-1	Margo Bors	N/A	Bors-1-03	PD-12
Bose-1	Rupa Bose	N/A	Bose-1-01	AL-10
Bose-1	Rupa Bose	N/A	Bose-1-02	BI-3
Bose-1	Rupa Bose	N/A	Bose-1-03	HZ-1
Bose-1	Rupa Bose	N/A	Bose-1-04	GG-1
Bose-1	Rupa Bose	N/A	Bose-1-05	GG-1
Bose-1	Rupa Bose	N/A	Bose-1-06	AE-3
Bose-1	Rupa Bose	N/A	Bose-1-07	BI-17
Bose-1	Rupa Bose	N/A	Bose-1-08	BI-24
Bose-1	Rupa Bose	N/A	Bose-1-09	BI-3
Bose-1	Rupa Bose	N/A	Bose-1-10	BI-33
Bose-1	Rupa Bose	N/A	Bose-1-11	BI-36
Bose-1	Rupa Bose	N/A	Bose-1-12	HZ-1
Bose-1	Rupa Bose	N/A	Bose-1-13	HZ-1
Bose-1	Rupa Bose	N/A	Bose-1-14	AL-8
Bose-2	Rupa Bose	N/A	Bose-2-01	BI-27
Bose-2	Rupa Bose	N/A	Bose-2-02	BI-34
Bowling-1	Alane Bowling	N/A	Bowling-1-01	G-11
Bowling-1	Alane Bowling	N/A	Bowling-1-02	PD-12
Bowman-1	Arnita Bowman	N/A	Bowman-1-01	AL-8
Bowman-1	Arnita Bowman	N/A	Bowman-1-02	PD-3
Bowman-1	Arnita Bowman	N/A	Bowman-1-03	HZ-1
Bowman-1	Arnita Bowman	N/A	Bowman-1-04	AE-4
Bowman-1	Arnita Bowman	N/A	Bowman-1-05	CP-1
Bowman-1	Arnita Bowman	N/A	Bowman-1-06	RE-13
Bowman-1	Arnita Bowman	N/A	Bowman-1-07	G-25
Bowman-1	Arnita Bowman	N/A	Bowman-1-08	G-25
Bowman-1	Arnita Bowman	N/A	Bowman-1-09	PD-5
Bowman-1	Arnita Bowman	N/A	Bowman-1-10	G-4
Bowman-1	Arnita Bowman	N/A	Bowman-1-11	HZ-1
Bowman-1	Arnita Bowman	N/A	Bowman-1-12	GG-1
Bowman-1	Arnita Bowman	N/A	Bowman-1-13	PD-31
Bowman-1	Arnita Bowman	N/A	Bowman-1-14	BI-28
Bowman-2	Arnita Bowman	N/A	Bowman-2-01	PD-9
Bowman-2	Arnita Bowman	N/A	Bowman-2-02	BI-33
Bowman-2	Arnita Bowman	N/A	Bowman-2-03	WS-1
Bowman-2	Arnita Bowman	N/A	Bowman-2-04	AE-3
Bowman-2	Arnita Bowman	N/A	Bowman-2-05	BI-30
Bowman-2	Arnita Bowman	N/A	Bowman-2-06	BI-34
Bowman-2	Arnita Bowman	N/A	Bowman-2-07	BI-33
Bowman-2	Arnita Bowman	N/A	Bowman-2-08	RE-10
Bowman-2	Arnita Bowman	N/A	Bowman-2-09	BI-16
Bowman-2	Arnita Bowman	N/A	Bowman-2-10	HZ-1
Bowman-2	Arnita Bowman	N/A	Bowman-2-11	G-5
Bowman-2	Arnita Bowman	N/A	Bowman-2-12	AQ-1
Bowman-2	Arnita Bowman	N/A	Bowman-2-13	PD-20
Bowman-2	Arnita Bowman	N/A	Bowman-2-14	PD-11
Bowman-2	Arnita Bowman	N/A	Bowman-2-15	G-12
Bowman-2	Arnita Bowman	N/A	Bowman-2-16	G-10

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Bowman-2	Arnita Bowman	N/A	Bowman-2-17	G-3
Brown-1	Judith Brown	N/A	Brown-1-01	G-25
Brown-1	Judith Brown	N/A	Brown-1-02	G-17
Brown-1	Judith Brown	N/A	Brown-1-03	RE-13
Brown-1	Judith Brown	N/A	Brown-1-04	RE-3
Brown-1	Judith Brown	N/A	Brown-1-05	RE-1
Brown-1	Judith Brown	N/A	Brown-1-06	RE-2
Brown-1	Judith Brown	N/A	Brown-1-07	G-23
Brown-1	Judith Brown	N/A	Brown-1-08	RE-7
Brown-1	Judith Brown	N/A	Brown-1-09	HZ-1
Brown-1	Judith Brown	N/A	Brown-1-10	TR-1
Brown-1	Judith Brown	N/A	Brown-1-11	G-26
Brown-1	Judith Brown	N/A	Brown-1-12	PD-23
Brown-1	Judith Brown	N/A	Brown-1-13	G-26
Brown-1	Judith Brown	N/A	Brown-1-14	G-26
Brown-1	Judith Brown	N/A	Brown-1-15	RE-9
Brown-1	Judith Brown	N/A	Brown-1-16	RE-8
Brown-1	Judith Brown	N/A	Brown-1-17	G-6
Brown-1	Judith Brown	N/A	Brown-1-18	AE-2
Brown-1	Judith Brown	N/A	Brown-1-19	GG-1
Brown-1	Judith Brown	N/A	Brown-1-20	GG-2
Browne-1	Luke Browne	N/A	Browne-1-01	G-26
Browne-1	Luke Browne	N/A	Browne-1-02	G-25
Browne-1	Luke Browne	N/A	Browne-1-03	G-25
Browne-1	Luke Browne	N/A	Browne-1-04	PD-6
Browning-1	Nadine Browning	N/A	Browning-1-01	G-19
Browning-2	Nadine Browning	N/A	Browning-2-01	G-19
Browning-3	Nadine Browning	N/A	Browning-3-01	G-19
Buckley-1	Kathy Buckley	N/A	Buckley-1-01	G-26
Buckley-1	Kathy Buckley	N/A	Buckley-1-02	G-25
Buckley-1	Kathy Buckley	N/A	Buckley-1-03	RE-13
Buckley-1	Kathy Buckley	N/A	Buckley-1-04	RE-9
Buckley-1	Kathy Buckley	N/A	Buckley-1-05	AL-8
Buffa-1	Andrea Buffa	N/A	Buffa-1-01	AL-8
Buffa-1	Andrea Buffa	N/A	Buffa-1-02	G-19
Buffa-1	Andrea Buffa	N/A	Buffa-1-03	AL-8
Burgard-1	Joe Burgard and Suzanne Kirrane	N/A	Burgard-1-01	PD-4
Burgard-1	Joe Burgard and Suzanne Kirrane	N/A	Burgard-1-02	HZ-4
Burgard-1	Joe Burgard and Suzanne Kirrane	N/A	Burgard-1-03	AE-1
Burgard-1	Joe Burgard and Suzanne Kirrane	N/A	Burgard-1-04	PD-20
Butler-1	Barabara Butler and Jeffrey Beal	N/A	Butler-1-01	G-19
Butler-1	Barabara Butler and Jeffrey Beal	N/A	Butler-1-02	G-25
Butler-1	Barabara Butler and Jeffrey Beal	N/A	Butler-1-03	HZ-1
Cabada-1	Ingrid Cabada	N/A	Cabada-1-01	PD-1
Campbell-C-1	Christopher Campbell	N/A	Campbell-C-1-01	G-11
Campbell-C-1	Christopher Campbell	N/A	Campbell-C-1-02	G-11
Campbell-C-1	Christopher Campbell	N/A	Campbell-C-1-03	PD-1
Campbell-N-1	Norma Campbell	N/A	Campbell-N-1-01	GE-2
Carrington-1	Rick Carrington	N/A	Carrington-1-01	G-19
Carrington-1	Rick Carrington	N/A	Carrington-1-02	RE-13

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Carrington-1	Rick Carrington	N/A	Carrington-1-03	G-6
Caskey-1	Julie Caskey	N/A	Caskey-1-01	PD-7
Caughman-1	Erin Caughman	N/A	Caughman-1-01	AL-8
Cech-1	Nancy Cech	N/A	Cech-1-01	G-19
Cerf-1	Diane Cerf	N/A	Cerf-1-01	AL-8
Cerf-1	Diane Cerf	N/A	Cerf-1-02	G-19
Cerf-1	Diane Cerf	N/A	Cerf-1-03	AL-8
Chambers-1	Thompson Chambers	N/A	Chambers-1-01	G-25
Chambers-1	Thompson Chambers	N/A	Chambers-1-02	G-17
Chambers-1	Thompson Chambers	N/A	Chambers-1-03	RE-13
Chambers-1	Thompson Chambers	N/A	Chambers-1-04	TR-1
Chambers-1	Thompson Chambers	N/A	Chambers-1-05	AL-8
Chase-1	Greg Chase	N/A	Chase-1-01	G-19
Chasnoff-1	Debra Chasnoff	N/A	Chasnoff-1-01	G-19
Child-1	Katrina Child	N/A	Child-1-01	PD-12
Chirico-1	John Chirico	N/A	Chirico-1-01	PD-6
Chirico-1	John Chirico	N/A	Chirico-1-02	AL-8
Cook-1	Elizabeth Cook	N/A	Cook-1-01	AL-9
Cook-1	Elizabeth Cook	N/A	Cook-1-02	PD-4
Cook-1	Elizabeth Cook	N/A	Cook-1-03	BI-13
Cook-1	Elizabeth Cook	N/A	Cook-1-04	BI-24
Cook-1	Elizabeth Cook	N/A	Cook-1-05	BI-21
Cook-1	Elizabeth Cook	N/A	Cook-1-06	PD-3
Cook-1	Elizabeth Cook	N/A	Cook-1-07	G-4
Corvan-1	Marianna Corvan	N/A	Corvan-1-01	G-19
Coxon-1	Michele Coxon	N/A	Coxon-1-01	AL-8
Creely-1	Elizabeth Creely	N/A	Creely-1-01	PD-1
Crouch-1	Dyer Crouch	N/A	Crouch-1-01	G-11
D'Antonio-1	Georgia D'Antonio	N/A	D'Antonio-1-01	G-19
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-01	AL-9
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-02	PD-4
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-03	BI-13
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-04	BI-21
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-05	BI-24
Delacroix-1	Pierre Delacroix	N/A	Delacroix-1-06	G-4
Demetrious-1	Amad Demetrious	N/A	Demetrious-1-01	AL-7
Demetrious-1	Amad Demetrious	N/A	Demetrious-1-02	G-19
Demetrious-1	Amad Demetrious	N/A	Demetrious-1-03	PD-23
Demetrious-1	Amad Demetrious	N/A	Demetrious-1-04	G-17
Devine-1	Deirdre Devine	N/A	Devine-1-01	G-19
DeWitt-1	Natalie DeWitt	N/A	DeWitt-1-01	G-19
DeWitt-1	Natalie DeWitt	N/A	DeWitt-1-02	AL-8
Donovan-1	Catherine Donovan	N/A	Donovan-1-01	PD-3
Donovan-1	Catherine Donovan	N/A	Donovan-1-02	G-25
Donovan-1	Catherine Donovan	N/A	Donovan-1-03	RE-13
Donovan-1	Catherine Donovan	N/A	Donovan-1-04	G-19
Dotz-1	Lawrence Dotz	N/A	Dotz-1-01	G-19
Dougherty-1	Mary Dougherty	N/A	Dougherty-1-01	G-25
Dougherty-1	Mary Dougherty	N/A	Dougherty-1-02	G-26
Dougherty-1	Mary Dougherty	N/A	Dougherty-1-03	RE-9

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Dougherty-1	Mary Dougherty	N/A	Dougherty-1-04	G-26
Dougherty-1	Mary Dougherty	N/A	Dougherty-1-05	AL-8
Drechsler-1	Richared Drechsler	N/A	Drechsler-1-01	AL-8
Drechsler-1	Richared Drechsler	N/A	Drechsler-1-02	AL-5
Elkins-1	Tod Elkins	N/A	Elkins-1-01	PD-4
Elliott-1	Lisa Ruth Elliott	N/A	Elliott-1-01	PD-12
Emanuel-1	David Emanuel	N/A	Emanuel-1-01	AL-8
Emanuel-1	David Emanuel	N/A	Emanuel-1-02	G-19
Emanuel-1	David Emanuel	N/A	Emanuel-1-03	RE-3
Emanuel-1	David Emanuel	N/A	Emanuel-1-04	G-25
Emanuel-1	David Emanuel	N/A	Emanuel-1-05	G-21
Emanuel-2	David Emanuel	N/A	Emanuel-2-01	AL-8
Emanuel-2	David Emanuel	N/A	Emanuel-2-02	G-19
Emanuel-2	David Emanuel	N/A	Emanuel-2-03	RE-3
Emanuel-2	David Emanuel	N/A	Emanuel-2-04	G-25
Emanuel-2	David Emanuel	N/A	Emanuel-2-05	G-21
Enzi-1	Christopher Enzi	N/A	Enzi-1-01	PD-6
Enzi-1	Christopher Enzi	N/A	Enzi-1-02	G-26
Fasman-1	Michael Fasman	N/A	Fasman-1-01	AL-8
Fasman-1	Michael Fasman	N/A	Fasman-1-02	G-19
Fasman-1	Michael Fasman	N/A	Fasman-1-03	AL-8
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-01	G-15
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-02	RE-13
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-03	G-25
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-04	G-4
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-05	G-15
Fitzer-1	Susan, Gene, and Wanda Fisher	N/A	Fitzer-1-06	G-26
Flasher-1	Bob Flasher	N/A	Flasher-1-01	PD-1
Flasher-1	Bob Flasher	N/A	Flasher-1-02	PD-12
Fong-1	Edward Fong	N/A	Fong-1-01	AL-5
Form Letter-1	Various Commentors	N/A	Form Letter-1-01	G-25
Form Letter-1	Various Commentors	N/A	Form Letter-1-02	RE-13
Form Letter-1	Various Commentors	N/A	Form Letter-1-03	G-26
Form Letter-1	Various Commentors	N/A	Form Letter-1-04	RE-9
Form Letter-1	Various Commentors	N/A	Form Letter-1-05	AL-10
Form Letter-1	Douglas Acres	N/A	Form Letter-1-06	Comment noted; no response required
Form Letter-1	Spencer Arcieri	N/A	Form Letter-1-07	G-19
Form Letter-1	Nikki Azuma	N/A	Form Letter-1-08	G-19
Form Letter-1	Carol Bakker	N/A	Form Letter-1-09	Comment noted; no response required
Form Letter-1	Linda K. Barnes	N/A	Form Letter-1-10	PD-21
Form Letter-1	Robin Buckley	N/A	Form Letter-1-11	G-19
Form Letter-1	Terry Burkes	N/A	Form Letter-1-12	G-19
Form Letter-1	Lynette Castiglione	N/A	Form Letter-1-13	G-19
Form Letter-1	Amy Chow	N/A	Form Letter-1-14	G-19
Form Letter-1	Ivy Chu	N/A	Form Letter-1-15	G-19
Form Letter-1	Motley Jane Chusiso	N/A	Form Letter-1-16	Comment noted; no response required
Form Letter-1	Amy Clark	N/A	Form Letter-1-17	G-19

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Form Letter-1	Michael Cohen	N/A	Form Letter-1-18	G-19
Form Letter-1	Gayle Donsky	N/A	Form Letter-1-19	RE-13
Form Letter-1	C DeBoer	N/A	Form Letter-1-20	Comment noted; no response required
Form Letter-1	Cindy Declorto	N/A	Form Letter-1-21	G-19
Form Letter-1	Corinne Dowling	N/A	Form Letter-1-22	AL-7
Form Letter-1	Jeff Faning	N/A	Form Letter-1-23	Comment noted; no response required
Form Letter-1	Joe P. Frey	N/A	Form Letter-1-24	PD-17
Form Letter-1	Jeannette Funcke	N/A	Form Letter-1-25	PD-21
Form Letter-1	Joell Hallowell	N/A	Form Letter-1-26	Comment noted; no response required
Form Letter-1	Arlene Handzel	N/A	Form Letter-1-27	Comment noted; no response required
Form Letter-1	Lee Heidhues	N/A	Form Letter-1-28	G-19
Form Letter-1	Mary Kennedy	N/A	Form Letter-1-29	Comment noted; no response required
Form Letter-1	Yuchun Ku	N/A	Form Letter-1-30	Comment noted; no response required
Form Letter-1	Gilian Ladd	N/A	Form Letter-1-31	G-19
Form Letter-1	Ricardo Lagos	N/A	Form Letter-1-32	G-19
Form Letter-1	Evelyn Lee	N/A	Form Letter-1-33	G-19
Form Letter-1	Jenny Leung	N/A	Form Letter-1-34	Comment noted; no response required
Form Letter-1	Triston McLaughlin	N/A	Form Letter-1-35	G-19
Form Letter-1	Sonja Ohldag	N/A	Form Letter-1-36	Comment noted; no response required
Form Letter-1	George E. Paphitis	N/A	Form Letter-1-37	G-19
Form Letter-1	Derek Park	N/A	Form Letter-1-38	G-19
Form Letter-1	Julianne Reidy	N/A	Form Letter-1-39	G-19
Form Letter-1	Judy Richardson	N/A	Form Letter-1-40	G-19
Form Letter-1	Maia Scott	N/A	Form Letter-1-41	Comment noted; no response required
Form Letter-1	Morley M. Singer	N/A	Form Letter-1-42	Comment noted; no response required
Form Letter-1	Tania Storti	N/A	Form Letter-1-43	Comment noted; no response required
Form Letter-1	Zoe Strauss	N/A	Form Letter-1-44	G-25
Form Letter-1	Teresa Swift	N/A	Form Letter-1-45	Comment noted; no response required
Form Letter-1	Natalie Tondelli	N/A	Form Letter-1-46	Comment noted; no response required
Form Letter-1	Ryan Tuozzolo	N/A	Form Letter-1-47	G-19
Form Letter-1	Sunny Walters	N/A	Form Letter-1-48	Comment noted; no response required
Form Letter-1	Sandra Waszak	N/A	Form Letter-1-49	G-19
Form Letter-1	Susan Wheeler	N/A	Form Letter-1-50	Comment noted; no response required
Form Letter-1	Shirley Wing	N/A	Form Letter-1-51	Comment noted; no response required

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Form Letter-1	Christina Wong	N/A	Form Letter-1-52	G-19
Form Letter-1	Debbie Yuu	N/A	Form Letter-1-53	G-19
Fox-1	Camilla Fox	N/A	Fox-1-01	AL-9
Fox-1	Camilla Fox	N/A	Fox-1-02	PD-4
Fox-1	Camilla Fox	N/A	Fox-1-03	BI-13
Fox-1	Camilla Fox	N/A	Fox-1-04	BI-21
Fox-1	Camilla Fox	N/A	Fox-1-05	BI-24
Fox-1	Camilla Fox	N/A	Fox-1-06	G-4
Freedman-1	Aubrey Freedman	N/A	Freedman-1-01	PD-3
Freedman-1	Aubrey Freedman	N/A	Freedman-1-02	G-4
Furney-1	Gary Furney	N/A	Furney-1-01	PD-18
Gaar-1	Greg Gaar	N/A	Gaar-1-01	BI-15
Gaar-1	Greg Gaar	N/A	Gaar-1-02	PD-22
Gaar-1	Greg Gaar	N/A	Gaar-1-03	AL-4
Gaar-1	Greg Gaar	N/A	Gaar-1-04	AL-4
Gachowski-1	Michele Gachowski	N/A	Gachowski-1-01	G-19
Gachowski-1	Michele Gachowski	N/A	Gachowski-1-02	G-25
Garber-1	Ted Garber	N/A	Garber-1-01	BI-30
Garber-1	Ted Garber	N/A	Garber-1-02	PD-4
Garber-1	Ted Garber	N/A	Garber-1-03	BI-13
Garber-1	Ted Garber	N/A	Garber-1-04	RE-13
Garber-1	Ted Garber	N/A	Garber-1-05	G-25
Garbutt-1	Gerard Garbutt	N/A	Garbutt-1-01	G-20
Garnett-1	Elizabeth Garnett	N/A	Garnett-1-01	G-19
Gavin-1	Gregory Gavin	N/A	Gavin-1-01	G-25
Gerrie-1	Philip Gerrie	N/A	Gerrie-1-01	G-11
Gerrie-1	Philip Gerrie	N/A	Gerrie-1-02	PD-27
Gerrie-1	Philip Gerrie	N/A	Gerrie-1-03	AL-10
Gerrie-1	Philip Gerrie	N/A	Gerrie-1-04	AL-2
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-01	PD-3
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-02	G-25
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-03	RE-13
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-04	G-26
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-05	RE-9
Ghosh-1	Samir Ghosh	N/A	Ghosh-1-06	AL-10
Gleichenhaus-1	Peter Gleichenhaus	N/A	Gleichenhaus-1-01	CP-1
Gleichenhaus-1	Peter Gleichenhaus	N/A	Gleichenhaus-1-02	PD-14
Glikshtern-1	Anastasia Glikshtern	N/A	Glikshtern-1-01	PD-3
Glikshtern-1	Anastasia Glikshtern	N/A	Glikshtern-1-02	AL-8
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-01	PD-3
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-02	GE-3
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-03	G-10
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-04	G-4
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-05	G-12
Gomez-1	Oswald Gomez and Carol Borden-Gomez	N/A	Gomez-1-06	BI-33
Gordon-1	Kelly Gordon	N/A	Gordon-1-01	AL-8
Gordon-1	Kelly Gordon	N/A	Gordon-1-02	RE-13
Gottesman-1	Judith Gottesman	N/A	Gottesman-1-01	AL-8
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-01	AL-10
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-02	PD-12

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-03	BI-27
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-04	BI-27
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-05	BI-23
Gravanis-1	Ruth Gravanis	N/A	Gravanis-1-06	BI-23
Greenberg-1	Sharon Greenberg	N/A	Greenberg-1-01	G-19
Griggs-1	Michael Griggs	N/A	Griggs-1-01	G-16
Grim-1	Dema Grim	N/A	Grim-1-01	G-19
Haire-1	Janet Haire	N/A	Haire-1-01	PD-14
Hammer-1	Milo Hammer	N/A	Hammer-1-01	G-19
Hartnett-1	William E. Hartnett	N/A	Hartnett-1-01	G-19
Hasbrouck-1	Edward Hasbrouck	N/A	Hasbrouck-1-01	G-20
Hatch-1	Caroline Hatch	N/A	Hatch-1-01	PD-1
Hayes-1	Dylan, Veronica, Isa Hayes	N/A	Hayes-1-01	G-11
Hayes-1	Dylan, Veronica, Isa Hayes	N/A	Hayes-1-02	PP-1
Hecht-1	Alma Hecht	N/A	Hecht-1-01	BI-33
Hecht-1	Alma Hecht	N/A	Hecht-1-02	GG-1
Hecht-1	Alma Hecht	N/A	Hecht-1-03	AQ-1
Hecht-1	Alma Hecht	N/A	Hecht-1-04	PD-4
Heldman-1	Mary Heldman	N/A	Heldman-1-01	PD-3
Heldman-1	Mary Heldman	N/A	Heldman-1-02	PD-4
Heldman-1	Mary Heldman	N/A	Heldman-1-03	AL-8
Hershkowitz-1	Daniel Hershkowitz	N/A	Hershkowitz-1-01	G-19
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-01	PD-20
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-02	BI-24
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-03	BI-20
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-04	HZ-4
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-05	AE-2
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-06	HZ-1
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-07	G-4
Hess-1	Claire and David Hess, David Young, Helen and David Zisser	N/A	Hess-1-08	PD-20
Hochschild-1	Frances Hochschild et al	N/A	Hochschild-1-01	G-19
Holzman-1	Barbara Holzman	N/A	Holzman-1-01	PD-1
Holzman-1	Barbara Holzman	N/A	Holzman-1-02	G-11
Holzman-1	Barbara Holzman	N/A	Holzman-1-03	G-11
Holzman-1	Barbara Holzman	N/A	Holzman-1-04	PD-1
Holzman-1	Barbara Holzman	N/A	Holzman-1-05	CP-3
Holzman-1	Barbara Holzman	N/A	Holzman-1-06	RE-4
Holzman-1	Barbara Holzman	N/A	Holzman-1-07	AL-4
Hooker-1	Steve Hooker	N/A	Hooker-1-01	AL-8
Hooker-1	Steve Hooker	N/A	Hooker-1-02	G-19
Hooker-1	Steve Hooker	N/A	Hooker-1-03	PD-3
Hooker-1	Steve Hooker	N/A	Hooker-1-04	AL-8
Horn-1	Margaret A. Horn	N/A	Horn-1-01	CP-1
Horn-1	Margaret A. Horn	N/A	Horn-1-02	PD-14
Hovland-1	Madeline Hovland	N/A	Hovland-1-01	PD-4
Hovland-1	Madeline Hovland	N/A	Hovland-1-02	HZ-4
Hu-1	Karen Hu	N/A	Hu-1-01	PD-3
Huebsch-1	Nina Huebsch	N/A	Huebsch-1-01	PD-7
Huebsch-1	Nina Huebsch	N/A	Huebsch-1-02	G-19
Hull-1	Prudence Hull	N/A	Hull-1-01	G-19

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Hull-1	Prudence Hull	N/A	Hull-1-02	HZ-1
Hull-1	Prudence Hull	N/A	Hull-1-03	G-25
Illig-1	Jim Illig	N/A	Illig-1-01	PD-7
Ingle-1	Kay Ingle	N/A	Ingle-1-01	G-25
Ingram-1	Terry Ingram	N/A	Ingram-1-01	PD-3
Jake-1	Krist Jake	N/A	Jake-1-01	G-25
Jake-1	Krist Jake	N/A	Jake-1-02	G-19
Jake-1	Krist Jake	N/A	Jake-1-03	G-26
Jake-1	Krist Jake	N/A	Jake-1-04	PD-23
Jake-1	Krist Jake	N/A	Jake-1-05	G-26
Jake-1	Krist Jake	N/A	Jake-1-06	G-5
Jake-1	Krist Jake	N/A	Jake-1-07	RE-9
Jake-1	Krist Jake	N/A	Jake-1-08	RE-8
Jake-1	Krist Jake	N/A	Jake-1-09	AE-6
Jake-1	Krist Jake	N/A	Jake-1-10	GG-1
Jake-1	Krist Jake	N/A	Jake-1-11	GG-2
Johns-1	Belinda Johns	N/A	Johns-1-01	PD-3
Johns-1	Belinda Johns	N/A	Johns-1-02	G-10
Johns-1	Belinda Johns	N/A	Johns-1-03	HZ-1
Johns-1	Belinda Johns	N/A	Johns-1-04	BI-20
Johns-1	Belinda Johns	N/A	Johns-1-05	GE-3
Johns-1	Belinda Johns	N/A	Johns-1-06	GG-1
Johns-1	Belinda Johns	N/A	Johns-1-07	HZ-1
Johns-1	Belinda Johns	N/A	Johns-1-08	G-4
Johnson-1	Mandy Johnson	N/A	Johnson-1-01	PD-7
Johnson-1	Mandy Johnson	N/A	Johnson-1-02	PD-3
Johnston-1	Carolyn Johnston	N/A	Johnston-1-01	PD-20
Joyce-1	Ann Joyce	N/A	Joyce-1-01	G-20
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-01	AL-9
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-02	PD-4
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-03	BI-13
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-04	BI-24
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-05	BI-21
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-06	PD-3
Jungreis-1	Jason Jungreis	N/A	Jungreis-1-07	G-4
Kalafati-1	Anton Kalafati	N/A	Kalafati-1-01	PD-3
Kalafati-1	Anton Kalafati	N/A	Kalafati-1-02	AL-8
Karpa-1	Mike Karpa	N/A	Karpa-1-01	G-19
Kass-1	Sidney Kass	N/A	Kass-1-01	PD-1
Kathie-1	Kathie	N/A	Kathie-1-01	G-20
Keating-1	John B. Keating	N/A	Keating-1-01	PD-3
Keating-1	John B. Keating	N/A	Keating-1-02	BI-13
Keating-1	John B. Keating	N/A	Keating-1-03	G-12
Keats-1	Carma Keats	N/A	Keats-1-01	G-19
Keitelman-1	Mary Keitelman	N/A	Keitelman-1-01	CP-2
Keitelman-1	Mary Keitelman	N/A	Keitelman-1-02	PD-13
Kelly-1	Kimberly Kelly	N/A	Kelly-1-01	G-25
Kelly-1	Kimberly Kelly	N/A	Kelly-1-02	G-17
Kelly-1	Kimberly Kelly	N/A	Kelly-1-03	RE-13
Kelly-1	Kimberly Kelly	N/A	Kelly-1-04	TR-1

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Kelly-1	Kimberly Kelly	N/A	Kelly-1-05	G-26
Kelly-1	Kimberly Kelly	N/A	Kelly-1-06	PD-23
Kelly-1	Kimberly Kelly	N/A	Kelly-1-07	GG-1
Kelly-1	Kimberly Kelly	N/A	Kelly-1-08	GG-2
Kenealy-1	Pat Kenealy	N/A	Kenealy-1-01	G-19
Kesel-1	Rachel Kesel	N/A	Kesel-1-01	G-11
Kesel-1	Rachel Kesel	N/A	Kesel-1-02	PD-1
Kessler-1	Janet Kessler	N/A	Kessler-1-01	G-12
Kessler-1	Janet Kessler	N/A	Kessler-1-02	BI-24
Kessler-1	Janet Kessler	N/A	Kessler-1-03	BI-13
Kessler-1	Janet Kessler	N/A	Kessler-1-04	HZ-1
Kessler-1	Janet Kessler	N/A	Kessler-1-05	HZ-1
Kessler-1	Janet Kessler	N/A	Kessler-1-06	HZ-1
Kessler-1	Janet Kessler	N/A	Kessler-1-07	HZ-1
Kessler-1	Janet Kessler	N/A	Kessler-1-08	HZ-1
Kessler-1	Janet Kessler	N/A	Kessler-1-09	G-3
Kessler-1	Janet Kessler	N/A	Kessler-1-10	BI-20
Kessler-1	Janet Kessler	N/A	Kessler-1-11	PD-3
Kessler-1	Janet Kessler	N/A	Kessler-1-12	PD-3
Kessler-1	Janet Kessler	N/A	Kessler-1-13	AL-8
Kessler-1	Janet Kessler	N/A	Kessler-1-14	AL-13
Kessler-1	Janet Kessler	N/A	Kessler-1-15	AL-10
Kessler-2	Janet Kessler	N/A	Kessler-2-01	G-12
Kessler-2	Janet Kessler	N/A	Kessler-2-02	BI-24
Kessler-2	Janet Kessler	N/A	Kessler-2-03	BI-13
Kessler-2	Janet Kessler	N/A	Kessler-2-04	HZ-1
Kessler-2	Janet Kessler	N/A	Kessler-2-05	HZ-1
Kessler-2	Janet Kessler	N/A	Kessler-2-06	HZ-1
Kessler-2	Janet Kessler	N/A	Kessler-2-07	HZ-1
Kessler-2	Janet Kessler	N/A	Kessler-2-08	HZ-1
Kessler-2	Janet Kessler	N/A	Kessler-2-09	G-3
Kessler-2	Janet Kessler	N/A	Kessler-2-10	BI-20
Kessler-2	Janet Kessler	N/A	Kessler-2-11	PD-3
Kessler-2	Janet Kessler	N/A	Kessler-2-12	PD-3
Kessler-2	Janet Kessler	N/A	Kessler-2-13	AL-8
Kessler-2	Janet Kessler	N/A	Kessler-2-14	AL-13
Kessler-2	Janet Kessler	N/A	Kessler-2-15	AL-10
Kind-1	Jean Kind	N/A	Kind-1-01	G-19
King-1	Julie King	N/A	King-1-01	G-25
Klebaner-1	Susanna Klebaner	N/A	Klebaner-1-01	PD-3
Klebaner-1	Susanna Klebaner	N/A	Klebaner-1-02	AL-8
Koster-1	Carolyn Koster	N/A	Koster-1-01	PD-3
Koury-1	Richard Koury	N/A	Koury-1-01	AL-9
Kovinsky-1	Mattew Kovinsky	N/A	Kovinsky-1-01	G-19
Kushner-1	Pinky Kushner	N/A	Kushner-1-01	G-11
Kushner-1	Pinky Kushner	N/A	Kushner-1-02	PD-12
Kushner-1	Pinky Kushner	N/A	Kushner-1-03	AL-10
Kushner-1	Pinky Kushner	N/A	Kushner-1-04	G-16
Kushner-1	Pinky Kushner	N/A	Kushner-1-05	AL-10
Kushner-1	Pinky Kushner	N/A	Kushner-1-06	BI-9

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Kushner-1	Pinky Kushner	N/A	Kushner-1-07	AL-10
Langille-1	Celeste Langille	N/A	Langille-1-01	AL-3
Langille-1	Celeste Langille	N/A	Langille-1-02	PD-12
Langille-1	Celeste Langille	N/A	Langille-1-03	PD-1
Langille-1	Celeste Langille	N/A	Langille-1-04	G-11
Langille-1	Celeste Langille	N/A	Langille-1-05	BI-15
Langille-1	Celeste Langille	N/A	Langille-1-06	PD-27
Langille-1	Celeste Langille	N/A	Langille-1-07	AL-10
Langille-1	Celeste Langille	N/A	Langille-1-08	AL-2
Lansdown-1	Victoria Lansdown	N/A	Lansdown-1-01	PD-3
Lapins-1	Denise Lapins	N/A	Lapins-1-01	BI-33
Lapins-1	Denise Lapins	N/A	Lapins-1-02	BI-33
Lapins-1	Denise Lapins	N/A	Lapins-1-03	AL-5
Lapins-1	Denise Lapins	N/A	Lapins-1-04	AL-8
Lee-P-1	Pam Lee	N/A	Lee-P-1-01	G-19
Lee-Y-1	Yen L. Lee	N/A	Lee-Y-1-01	CP-1
Lendaro-1	Melody Lendaro	N/A	Lendaro-1-01	PD-3
Levins-1	Alan Levins	N/A	Levins-1-01	CP-1
Links-1	Bo Links	N/A	Links-1-01	CP-1
Links-2	Bo Links	N/A	Links-2-01	CP-1
Litehiser-1	Linda Litehiser	N/A	Litehiser-1-01	AL-8
Litehiser-1	Linda Litehiser	N/A	Litehiser-1-02	AL-7
Litehiser-1	Linda Litehiser	N/A	Litehiser-1-03	G-19
Litehiser-1	Linda Litehiser	N/A	Litehiser-1-04	G-5
Lock-1	Ken Lock	N/A	Lock-1-01	G-20
Loeffler-1	Joan Loeffler	N/A	Loeffler-1-01	PD-8
Lorenz-1	Henry Lorenz	N/A	Lorenz-1-01	AL-8
Lorenz-1	Henry Lorenz	N/A	Lorenz-1-02	G-4
Lorenz-1	Henry Lorenz	N/A	Lorenz-1-03	AE-4
Lorenz-1	Henry Lorenz	N/A	Lorenz-1-04	G-2
Louie-1	Denise Louie	N/A	Louie-1-01	PD-12
Lu-1	Kathy Lu	N/A	Lu-1-01	PD-4
Lundeen-1	Eddie Lundeen	N/A	Lundeen-1-01	G-19
Lynch-1	Paul Lynch	N/A	Lynch-1-01	G-19
Mace-1	Shannon Mace	N/A	Mace-1-01	G-25
Mace-1	Shannon Mace	N/A	Mace-1-02	AL-8
Madar-1	Jen Madar	N/A	Madar-1-01	G-19
Mansbach-1	Larry Mansbach	N/A	Mansbach-1-01	CP-1
Mansbach-1	Larry Mansbach	N/A	Mansbach-1-02	G-8
Mar-1	Glenn Mar	N/A	Mar-1-01	AL-8
Masud-1	Chuck Masud	N/A	Masud-1-01	G-20
Mattingly-1	Judith Mattingly	N/A	Mattingly-1-01	PD-4
Mattingly-1	Judith Mattingly	N/A	Mattingly-1-02	HZ-1
Mattingly-1	Judith Mattingly	N/A	Mattingly-1-03	PD-3
McAllister-1	Mary McAllister	N/A	McAllister-1-01	AL-10
McAllister-1	Mary McAllister	N/A	McAllister-1-02	G-9
McAllister-2	Mary McAllister	N/A	McAllister-2-01	HZ-4
McAllister-2	Mary McAllister	N/A	McAllister-2-02	HZ-4
McAllister-2	Mary McAllister	N/A	McAllister-2-03	BI-33
McAllister-3	Mary McAllister	N/A	McAllister-3-01	BI-33

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
McAllister-3	Mary McAllister	N/A	McAllister-3-02	BI-33
McAllister-3	Mary McAllister	N/A	McAllister-3-03	GG-1
McAllister-3	Mary McAllister	N/A	McAllister-3-04	HZ-1
McAllister-3	Mary McAllister	N/A	McAllister-3-05	HZ-1
McAllister-3	Mary McAllister	N/A	McAllister-3-06	HZ-1
McAllister-3	Mary McAllister	N/A	McAllister-3-07	HZ-1
McAllister-3	Mary McAllister	N/A	McAllister-3-08	AL-8
McAllister-3	Mary McAllister	N/A	McAllister-3-09	AL-10
McAllister-3	Mary McAllister	N/A	McAllister-3-10	G-10
McAllister-3	Mary McAllister	N/A	McAllister-3-11	G-10
McCalla-1	Kim McCalla	N/A	McCalla-1-01	G-19
McCalla-1	Kim McCalla	N/A	McCalla-1-02	PD-23
McGinnis-1	Paula McGinnis	N/A	McGinnis-1-01	TR-1
Miller-E-1	Eric Miller	N/A	Miller-E-1-01	PD-3
Miller-E-2	Eric Miller	N/A	Miller-E-2-01	G-10
Miller-J-1	Jennifer Miller	N/A	Miller-J-1-01	G-19
Miller-N-1	Norma Miller	N/A	Miller-N-1-01	G-19
Miller-N-2	Norma Miller	N/A	Miller-N-2-01	G-10
Mills-1	Claire Mills	N/A	Mills-1-01	PD-3
Mills-1	Claire Mills	N/A	Mills-1-02	G-25
Mills-1	Claire Mills	N/A	Mills-1-03	AL-8
Milstein-1	Prabha Milstein	N/A	Milstein-1-01	HZ-1
Miner-1	Laura Miner	N/A	Miner-1-01	AL-8
Minsuk-1	Sue Minsuk	N/A	Minsuk-1-01	AL-8
Minsuk-1	Sue Minsuk	N/A	Minsuk-1-02	G-19
Minsuk-1	Sue Minsuk	N/A	Minsuk-1-03	AL-8
Monagle-1	Patricia Monagle	N/A	Monagle-1-01	G-19
Moseley-1	Beth Moseley	N/A	Moseley-1-01	G-11
Moyer-1	Leigh Moyer	N/A	Moyer-1-01	G-25
Moyer-1	Leigh Moyer	N/A	Moyer-1-02	RE-13
Moyer-1	Leigh Moyer	N/A	Moyer-1-03	G-26
Moyer-1	Leigh Moyer	N/A	Moyer-1-04	RE-9
Moyer-1	Leigh Moyer	N/A	Moyer-1-05	AL-8
Mundy-1	Al Mundy	N/A	Mundy-1-01	G-19
Muniz-1	Laurel Muniz	N/A	Muniz-1-01	PD-7
Murphy-B-1	Bob Murphy	N/A	Murphy-B-1-01	PD-14
Murphy-D-1	Dan and Joan Murphy	N/A	Murphy-D-1-01	PD-1
Murphy-D-1	Dan and Joan Murphy	N/A	Murphy-D-1-02	AL-3
Nagle-1	Taylor Nagle	N/A	Nagle-1-01	PD-32
Naima-1	Reza Naima	N/A	Naima-1-01	PD-33
Naima-1	Reza Naima	N/A	Naima-1-02	PD-23
Naima-1	Reza Naima	N/A	Naima-1-03	G-17
Naima-1	Reza Naima	N/A	Naima-1-04	RE-13
Naima-1	Reza Naima	N/A	Naima-1-05	PD-34
Nelson-1	Tiffany Nelson	N/A	Nelson-1-01	G-25
Nelson-1	Tiffany Nelson	N/A	Nelson-1-02	G-26
Nelson-1	Tiffany Nelson	N/A	Nelson-1-03	RE-9
Nelson-1	Tiffany Nelson	N/A	Nelson-1-04	G-26
Nelson-1	Tiffany Nelson	N/A	Nelson-1-05	AL-7
Norton-1	Donald Norton	N/A	Norton-1-01	G-19

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Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Norton-1	Donald Norton	N/A	Norton-1-02	AL-8
Oliva-1	Veronica Oliva	N/A	Oliva-1-01	PD-12
Olliphant-1	Hugh Olliphant	N/A	Olliphant-1-01	G-19
O'Neill-1	Elizabeth O'Neill	N/A	O'Neill-1-01	G-19
O'Neill-1	Elizabeth O'Neill	N/A	O'Neill-1-02	PD-3
Otto-1	Nancy Otto	N/A	Otto-1-01	HZ-1
Otto-1	Nancy Otto	N/A	Otto-1-02	HZ-1
Otto-1	Nancy Otto	N/A	Otto-1-03	HZ-1
Pattillo-1	Chris Pattillo	N/A	Pattillo-1-01	CP-2
Perrins-1	Georgina Perrins	N/A	Perrins-1-01	AL-8
Perrins-1	Georgina Perrins	N/A	Perrins-1-02	G-19
Perry-A-1	Andrea and Arie Perry	N/A	Perry-A-1-01	PD-3
Perry-J-1	John Perry	N/A	Perry-J-1-01	G-19
Pfister-1	Charles Pfister	N/A	Pfister-1-01	PD-21
Pfister-1	Charles Pfister	N/A	Pfister-1-02	PD-13
Pfister-1	Charles Pfister	N/A	Pfister-1-03	PD12
Pfister-1	Charles Pfister	N/A	Pfister-1-04	PD-27
Pfister-1	Charles Pfister	N/A	Pfister-1-05	AL-10
Pfister-1	Charles Pfister	N/A	Pfister-1-06	AL-2
Pfister-1	Charles Pfister	N/A	Pfister-1-07	G-16
Pittin-1	Renee Pittin	N/A	Pittin-1-01	G-25
Pittin-1	Renee Pittin	N/A	Pittin-1-02	HZ-1
Pittin-1	Renee Pittin	N/A	Pittin-1-03	RE-3
Pittin-1	Renee Pittin	N/A	Pittin-1-04	AL-14
Popoff-1	Michael Popoff	N/A	Popoff-1-01	G-19
Popoff-1	Michael Popoff	N/A	Popoff-1-02	G-25
Popoff-1	Michael Popoff	N/A	Popoff-1-03	RE-13
Potts-1	Jason Potts	N/A	Potts-1-01	PD-4
Pruitt-1	Beth Pruitt	N/A	Pruitt-1-01	PD-6
Pruitt-1	Beth Pruitt	N/A	Pruitt-1-02	RE-9
Pruitt-1	Beth Pruitt	N/A	Pruitt-1-03	G-19
Pruitt-1	Beth Pruitt	N/A	Pruitt-1-04	AL-8
Quinn-1	Chris Quinn	N/A	Quinn-1-01	AL-8
Quinn-1	Chris Quinn	N/A	Quinn-1-02	G-19
Radetsky-1	Ruth Radetsky	N/A	Radetsky-1-01	G-20
Raffaelli-1	Paulo Rafaelli	N/A	Raffaelli-1-01	G-19
Raffaelli-1	Paulo Rafaelli	N/A	Raffaelli-1-02	AL-8
Rafferty-1	Patrick Rafferty	N/A	Rafferty-1-01	PD-1
Rafferty-1	Patrick Rafferty	N/A	Rafferty-1-02	G-11
Randt-1	Bill Randt	N/A	Randt-1-01	G-19
Ray-1	Jamie Ray	N/A	Ray-1-01	AL-1
Ray-1	Jamie Ray	N/A	Ray-1-02	PD-4
Ray-1	Jamie Ray	N/A	Ray-1-03	BI-13
Ray-1	Jamie Ray	N/A	Ray-1-04	BI-21
Ray-1	Jamie Ray	N/A	Ray-1-05	BI-24
Ray-1	Jamie Ray	N/A	Ray-1-06	G-4
Rehling-1	Lu Rehling	N/A	Rehling-1-01	G-12
Rehling-1	Lu Rehling	N/A	Rehling-1-02	G-10
Rehling-1	Lu Rehling	N/A	Rehling-1-03	G-4
Reichardt-1	Kathy Reichardt	N/A	Reichardt-1-01	AL-8

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Reichardt-1	Kathy Reichardt	N/A	Reichardt-1-02	AL-10
Reichardt-1	Kathy Reichardt	N/A	Reichardt-1-03	HZ-1
Reque-1	Peter Reque	N/A	Reque-1-01	G-19
RileyHoppes-1	Donna Riley Hoppes	N/A	RileyHoppes-1-01	PD-7
Risk-1	Jane and Jerry Risk	N/A	Risk-1-01	G-10
Risk-1	Jane and Jerry Risk	N/A	Risk-1-02	PD-20
Risk-1	Jane and Jerry Risk	N/A	Risk-1-03	AL-6
Risk-1	Jane and Jerry Risk	N/A	Risk-1-04	WS-1
Risk-1	Jane and Jerry Risk	N/A	Risk-1-05	HZ-1
Risk-1	Jane and Jerry Risk	N/A	Risk-1-06	G-4
Risk-1	Jane and Jerry Risk	N/A	Risk-1-07	PD-3
Rodriguez-1	Marilyn Ines Rodriguez	N/A	Rodriguez-1-01	G-19
Rogers-1	Glenn Rogers	N/A	Rogers-1-01	PD-1
Rogers-1	Glenn Rogers	N/A	Rogers-1-02	PD-12
Roman-1	Jonathan Roman	N/A	Roman-1-01	G-19
Rosenthal-1	Nancy Rosenthal	N/A	Rosenthal-1-01	G-11
Rotter-E-1	Elizabeth Rotter	N/A	Rotter-E-1-01	AL-8
Rotter-E-1	Elizabeth Rotter	N/A	Rotter-E-1-02	BI-33
Rotter-E-1	Elizabeth Rotter	N/A	Rotter-E-1-03	BI-33
Rotter-E-1	Elizabeth Rotter	N/A	Rotter-E-1-04	AL-5
Rotter-P-1	Paul Rotter	N/A	Rotter-P-1-01	AL-8
Rotter-P-1	Paul Rotter	N/A	Rotter-P-1-02	PD-4
Rotter-P-1	Paul Rotter	N/A	Rotter-P-1-03	AL-13
Saino-1	Celia Saino	N/A	Saino-1-01	PD-23
Salamone-1	Lisa Salamone	N/A	Salamone-1-01	G-19
Saltzer-Lamb-1	Vicki Saltzer-Lamb	N/A	Saltzer-Lamb-1-01	AL-8
Schlund-1	Claus Schlund	N/A	Schlund-1-01	G-19
Schlund-1	Claus Schlund	N/A	Schlund-1-02	HZ-1
Schlund-1	Claus Schlund	N/A	Schlund-1-03	PD-3
Schlund-1	Claus Schlund	N/A	Schlund-1-04	G-4
Schmoll-1	Gisela Schmoll	N/A	Schmoll-1-01	PD-12
Scott-1	Joanne Scott	N/A	Scott-1-01	PD-3
Scott-1	Joanne Scott	N/A	Scott-1-02	PD-3
Scott-1	Joanne Scott	N/A	Scott-1-03	G-19
Scott-1	Joanne Scott	N/A	Scott-1-04	PD-3
Sebastian-1	Sandi Sebastian	N/A	Sebastian-1-01	G-19
Shapiro-1	Arthur Shapiro	N/A	Shapiro-1-01	PD-4
Sharp-1	Alisa Sharp	N/A	Sharp-1-01	G-19
Shepard-A-1	Avrum Shepard	N/A	Shepard-A-1-01	PD-11
Shepard-A-1	Avrum Shepard	N/A	Shepard-A-1-02	PD-3
Shepard-A-1	Avrum Shepard	N/A	Shepard-A-1-03	G-4
Shepard-A-1	Avrum Shepard	N/A	Shepard-A-1-04	G-10
Shepard-J-1	Jane Shepard	N/A	Shepard-J-1-01	G-25
Shepard-J-1	Jane Shepard	N/A	Shepard-J-1-02	PD-6
Simons-1	Kevin Simons	N/A	Simons-1-01	G-19
Skippy-1	Skippy	N/A	Skippy-1-01	G-19
Smith-1	Megan Smith	N/A	Smith-1-01	PD-6
Smith-1	Megan Smith	N/A	Smith-1-02	RE-13
Smith-1	Megan Smith	N/A	Smith-1-03	G-19
Stafford-1	Nancy Stafford	N/A	Stafford-1-01	AL-8

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Stevenson-1	Jan Stevenson	N/A	Stevenson-1-01	G-19
Stewart-E-1	Ethan Stewart	N/A	Stewart-E-1-01	PD-4
Stewart-M-1	Matt Stewart	N/A	Stewart-M-1-01	G-19
Strasbaugh-1	Louise Strasbaugh	N/A	Strasbaugh-1-01	G-25
Stringer-1	Lew Stringer	N/A	Stringer-1-01	PD-12
Stringer-1	Lew Stringer	N/A	Stringer-1-02	BI-15
Stringer-1	Lew Stringer	N/A	Stringer-1-03	PD-27
Summer-1	William Summer	N/A	Summer-1-01	G-25
Summer-1	William Summer	N/A	Summer-1-02	RE-13
Sutch-1	Jeff Sutch	N/A	Sutch-1-01	G-19
Swenerton-1	Kirra Swenerton	N/A	Swenerton-1-01	PD-1
Swenerton-1	Kirra Swenerton	N/A	Swenerton-1-02	G-11
Swenerton-1	Kirra Swenerton	N/A	Swenerton-1-03	PD-27
Thayer-1	Nick Thayer	N/A	Thayer-1-01	PD-3
Thomas-1	Barbara Thomas	N/A	Thomas-1-01	HZ-1
Thomas-1	Barbara Thomas	N/A	Thomas-1-02	GE-3
Thomas-1	Barbara Thomas	N/A	Thomas-1-03	HY-1
Thomas-1	Barbara Thomas	N/A	Thomas-1-04	WS-2
Thomas-1	Barbara Thomas	N/A	Thomas-1-05	HZ-1
Thomas-1	Barbara Thomas	N/A	Thomas-1-06	GG-1
Thompson-C-1	Clare Thompson	N/A	Thompson-C-1-01	PD-3
Thompson-D-1	Doug Thompson	N/A	Thompson-D-1-01	PD-3
Tondelli-1	Natalie Tondelli	N/A	Tondelli-1-01	G-18
Tully-1	Sean Tully	N/A	Tully-1-01	CP-1
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-01	AL-10
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-02	HZ-1
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-03	HZ-1
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-04	HZ-3
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-05	GE-3
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-06	PD-4
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-07	PD-6
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-08	PD-14
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-09	PD-3
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-10	G-4
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-11	AL-13
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-12	PD-3
Valente-1	Suzanne M. Valente and Stephan R. Golub	N/A	Valente-1-13	AL-13
Vittori-1	Lisa Vittori	N/A	Vittori-1-01	G-10
Vitulano-1	Karen Vitulano	N/A	Vitulano-1-01	G-19
Vitulano-1	Karen Vitulano	N/A	Vitulano-1-02	RE-3
Vitulano-1	Karen Vitulano	N/A	Vitulano-1-03	PD-23
Vitulano-1	Karen Vitulano	N/A	Vitulano-1-04	G-17
Vitulano-1	Karen Vitulano	N/A	Vitulano-1-05	HZ-1
Von Erb-1	Jon Von Erb	N/A	Von Erb-1-01	G-19
Wade-1	Isabel Wade	N/A	Wade-1-01	BI-30
Wade-1	Isabel Wade	N/A	Wade-1-02	AE-1
Wade-1	Isabel Wade	N/A	Wade-1-03	G-4
Walker-1	Josh Walker	N/A	Walker-1-01	G-20
Weed-1	Thomas Weed	N/A	Weed-1-01	PD-12
Werger-1	Alison Werger	N/A	Werger-1-01	G-19

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
Wilford-1	Linda Wilford	N/A	Wilford-1-01	AL-8
Wilson-1	Bill Wilson	N/A	Wilson-1-01	G-11
Wilson-1	Bill Wilson	N/A	Wilson-1-02	BI-15
Wilson-1	Bill Wilson	N/A	Wilson-1-03	PD-27
Wilson-1	Bill Wilson	N/A	Wilson-1-04	AL-10
Wilson-1	Bill Wilson	N/A	Wilson-1-05	AL-2
Wilson-1	Bill Wilson	N/A	Wilson-1-06	PD-12
Winquist-1	Kelly Winquist	N/A	Winquist-1-01	G-25
Winquist-1	Kelly Winquist	N/A	Winquist-1-02	RE-13
Woo-1	Giny Woo	N/A	Woo-1-01	G-19
Yip-1	Yunny Yip	N/A	Yip-1-01	G-25
Yip-1	Yunny Yip	N/A	Yip-1-02	RE-13
Yip-1	Yunny Yip	N/A	Yip-1-03	G-26
Yip-1	Yunny Yip	N/A	Yip-1-04	RE-9
Yip-1	Yunny Yip	N/A	Yip-1-05	AL-10
Zeiger-1	Felicia Zeiger	N/A	Zeiger-1-01	PD-3
Zeiger-1	Felicia Zeiger	N/A	Zeiger-1-02	WS-1
Zendarski-1	Art Zendarski	N/A	Zendarski-1-01	G-19
PH-Stephens	Sally Stephens	N/A	PH-Stephens-01	AL-8
PH-Stephens	Sally Stephens	N/A	PH-Stephens-02	RE-1
PH-Stephens	Sally Stephens	N/A	PH-Stephens-03	G-25
PH-Stephens	Sally Stephens	N/A	PH-Stephens-04	G-26
PH-Stephens	Sally Stephens	N/A	PH-Stephens-05	G-26
PH-Stephens	Sally Stephens	N/A	PH-Stephens-06	RE-13
PH-Links	Bo Links	N/A	PH-Links-01	CP-1
PH-Links	Bo Links	N/A	PH-Links-02	G-8
PH-Pittin	Renee Pittin	N/A	PH-Pittin-01	G-19
PH-Shaffer	Linda Shaffer	N/A	Comments noted	No response required
PH-Sherap	Tenzin Sherap	N/A	PH-Sherap-01	PD-14
PH-Mozingo	George Mozingo	N/A	PH-Mozingo-01	PD-1
PH-Mozingo	George Mozingo	N/A	PH-Mozingo-02	CP-1
PH-Skain	Pat Skain	N/A	PH-Skain-01	PD-1
PH-Skain	Pat Skain	N/A	PH-Skain-02	G-11
PH-Bryant	Clarence Bryant	N/A	PH-Bryant-01	CP-1
PH-Rotter-P	Paul Rotter	N/A	PH-Rotter-P-01	AL-8
PH-Rotter-P	Paul Rotter	N/A	PH-Rotter-P-02	AL-12
PH-Rotter-P	Paul Rotter	N/A	PH-Rotter-P-03	HZ-1
PH-Rotter-P	Paul Rotter	N/A	PH-Rotter-P-04	AL-8
PH-Rotter-P	Paul Rotter	N/A	PH-Rotter-P-05	PD-3
PH-Rotter-N	Neaf Rotter	N/A	PH-Rotter-N-01	AL-8
PH-Bowman	Arnita Bowman	N/A	PH-Bowman-01	BI-31
PH-Bowman	Arnita Bowman	N/A	PH-Bowman-02	RE-9
PH-Gaar	Greg Gaar	N/A	PH-Gaar-01	BI-27
PH-Gaar	Greg Gaar	N/A	PH-Gaar-02	PD-1
PH-Brastow	Peter Brastow	N/A	PH-Brastow-01	PD-1
PH-Brastow	Peter Brastow	N/A	PH-Brastow-02	AL-10
PH-Brastow	Peter Brastow	N/A	PH-Brastow-03	AL-2
PH-Brastow	Peter Brastow	N/A	PH-Brastow-04	AL-3
PH-Keating	John Keating	N/A	PH-Keating-01	G-12

Attachment A: Responses by Commenter

Comment Letter No.	Commenter	Organization	Individual Comment No.	RTC Comment/ Response No.
PH-Harris	Richard Harris	N/A	PH-Harris-01	G-8
PH-Noetzel	Steven Noetzel	N/A	PH-Noetzel-01	RE-13
PH-Emanuel	David Emanuel	N/A	PH-Emanuel-01	AL-7
PH-Solomon	Mark Solomon	N/A	PH-Solomon-01	PD-13
PH-Antonini	Michael Antonini	N/A	PH-Antonini-01	PD-1
PH-Antonini	Michael Antonini	N/A	PH-Antonini-02	BI-24
PH-Antonini	Michael Antonini	N/A	PH-Antonini-03	PD-5
PH-Antonini	Michael Antonini	N/A	PH-Antonini-04	BI-24
PH-Antonini	Michael Antonini	N/A	PH-Antonini-05	PD-14
PH-Antonini	Michael Antonini	N/A	PH-Antonini-06	RE-6
PH-Antonini	Michael Antonini	N/A	PH-Antonini-07	RE-5

Attachment B Draft EIR Comment Letters

NPS-1

United States Department of the Interior

NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Fort Mason, San Francisco, California 94123

IN REPLY REFER TO:
L76 (GOGA-PLAN)

OCT 31 2011

Mr. Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan Draft EIR
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Natural Areas Management Plan Draft Environmental Impact Report

Dear Mr. Wycko:

Golden Gate National Recreation Area (GGNRA) has reviewed San Francisco Recreation and Park Department's (RPD) Natural Areas Management Plan Draft Environmental Impact Report (DEIR). The National Park Service (NPS) has interest in this management plan because changes are proposed for areas that lie adjacent to lands managed by GGNRA, and these changes may result in effects or impacts to GGNRA land.

In 2006 GGNRA submitted scoping comments on this plan that mostly focused on Sharp Park and Laguna Salada. We appreciate the Plan incorporating most of our suggestions. Since 2006, the park has released a Dog Management Plan Draft EIS, and completed major restoration projects at Mori Point with ongoing restoration stewardship efforts at this site. In this regard, your management actions at the Sharp Park natural area are of great interest to the NPS, as this natural area is within GGNRA's legislative boundary.

Also, reflected in our attached comments are concerns regarding Dog Play Areas (DPA's). RPD expressed many concerns regarding GGNRA's Draft Dog Management Plan and how the plan may affect DPA's. Given RPD's interest and concerns, we would have welcomed collaborative discussions during development of the DEIR regarding this area of mutual concern.

Thank you for the opportunity to comment. We encourage RPD to closely coordinate activities on natural areas that are adjacent to NPS lands as the plan moves towards completion and adoption. If you have questions or further clarification regarding our comments please contact GGNRA Planning Division Chief Nancy Hornor at (415) 561-4937.

Sincerely,

Frank Dean
General Superintendent

Enclosures (1): GGNRA Comments on RPD Significant Natural Areas Management Plan DEIR

NPS-1

GGNRA Comments on San Francisco's Significant Natural Areas Management Plan

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General Comments

01 Plan Objectives (pg. 84): We suggest adding an objective that the RPD will coordinate management actions with adjacent open space managers so that habitat restoration work can be maximized over a larger area.

02 Maximum Recreation Alternative (pg. 498): Please clarify the sentence under "Recreation": "However, under this alternative, Natural Areas Program staff would continue routine maintenance, which would ensure that the physical deterioration of recreation facilities (trails, DPAs, and other facilities) would not be substantially degraded." Erosion Control - Mitigation measures should include a requirement that

03 erosion control materials be certified weed free, and when possible, certified wheat free. We also suggest that any erosion and sedimentation control materials, such as wattles, not be made of anything but natural fiber. We suggest that plastic mono-filament or biodegradable plastics not be used for erosion control where frogs or snakes may become entangled or trapped in it.

Dog Play Areas (DPAs)

04 • Pg. 33, 301: It would be helpful to provide further details on what the process would be to document adverse affects in DPA's and what the order of steps would be to address impacts, especially prior to a decision to discontinue a DPA. n.

05 Pg. 105, 110, 262: Further explanation is needed as to why no more DPAs may be planned. Since direction on this point dates to 2006, we suggest that this decision be revisited within RPD areas especially given SF concerns regarding impacts on existing SF DPAs due to GGNRA draft dog management plan. Proposed reductions in SF DPAs could increase pressure and impact on remaining dog areas.

06 Lake Merced DPA (pg. 136, 305-306): It would be helpful to our dog management planning for NPS to receive the report of data gathered (# of dogs/incidences of disturbance) on disturbance to breeding birds at Lake Merced DPA that led to the proposal to close this DPA.

07 Pg. 252: We would appreciate receiving any user data collected in preparation of this draft EIR that underlies the statement that the natural areas support a "substantial amount of outdoor recreation". The City submitted comments on the GGNRA Dog Management Plan/DEIS asking that we consider the re-distributional effects of closing areas, and noted that the City would provide visitor information to this effect. User data that documents the number of visitors (and dog walkers) currently using these areas will help us address this comment. Pg. 262, 346, 440 - Has any data been gathered to support the impacts on other DPAs and adjacent lands due to the proposed reductions of DPAs, together with the actions proposed

08 in the draft GGNRA Dog Management Plan? If so, it would be helpful to share this information with GGNRA.

4

09 Lake Merced DPA (pg. 443): GGNRA would appreciate receiving any Lake Merced DPA visitor use data, referenced in the summary of increase in traffic being "minimal" as a result of this DPA closure.

10 General Comment (pg. 443): Please correct description of acreage open to dog walking at Funston; 200 acres is not a correct figure. Please contact Shirwin Smith of my staff at 561-4947 for a correct acreage figure.

08 (Cont) Pg's 470, 484,498: GGNRA would appreciate receiving any data that documents how implementation of the GGNRA Dog Management Plan would result in significant and unavoidable impacts from deterioration of the DPAs.

NPS-1

GGNRA Comments on SNRAMP DEIR (Aug. 2011)

11 General Comment: GGNRA is instituting a survey this fall to evaluate potential for redistribution onto other areas both within and outside the park resulting from implementation of the dog management plan and will share that those survey results with RPD.

Sharp Park

12 General Comment : We are unable to find any information in the DEIR as to how management of the golf course regarding threatened and endangered species is linked with what is proposed in the document (e.g., mowing).

13 General Comment : We are pleased to see that signage, in addition to fencing, is being recommended to protect sensitive wetlands.

14 General Comment (Laguna Salada): We suggest that the plan clearly identifya long-term, sustainable solution of wetland protection and restoration that addresses rising salinity, sustainability of the seawall, and the issues associated with the pumping.

15 General Description (pg. 143): There is a statement that makes reference to the Mori Point site being recently acquired. The property was acquired by the NPS in 2004 and has undergone major restoration efforts, including efforts to enhance habitat for the San Francisco Garter Snake and California Red-Legged Frog.

16 Sharp Park Restoration (pg. 103): We suggest changing the language on the following statement: "Following completion of each season's restoration activities (anticipated between May 1 and October 15), those staging and storage areas that are not permanently modified would be scarified, re-contoured, and hydro-seeded with native vegetation to approximate their pre-disturbance condition." We recommend changing the language to state "those staging and storage areas that are not permanently modified (or identified as staging areas for near-future approved projects) would be scarified..." It doesn't seem appropriate to commit resources re-vegetating an area that will be disturbed in the following project season.

17 SP-3a Recommended Management Action (pg. 144): We recommend this management action be applied based on vegetation type. For example, branches/logs that are contaminated with some invasive species (such as invaded with ripe seeds, cape ivy, untreated [chemically] eucalyptus trees, etc.) should not be retained.

18 SP-4b Recommended Management Action (pg. 145): We suggest maintaining low vegetation in these upland mounds to allow for sufficient sun exposure, possibly by including some boulders or similar substrate that wouldn't support vegetation growth.

19 SP-8a Recommended Management Action (pg. 145): We recommend including language about working with golf course staff to reduce chemical (fertilizer/herbicide) use to the minimum required and to use chemicals appropriate for areas adjacent to endangered species habitat.

CCC-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Wednesday, November 16, 2011 3:14 PM
To: Bock, John; Sarah.B.Jones@sfgov.org; Lisa.Wayne@sfgov.org; Lisa.Beyer@sfgov.org; Karen.Mauney-Brodek@sfgov.org
Subject: Fw: Comments DEIR SF Natural Resource Areas Management

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/16/2011 03:14 PM -----

"Renee Ananda" <rananda@coastal.ca.gov>
11/16/2011 02:57 PM

To: <jessica.range@sfgov.org>
cc:
Subject: Comments DEIR SF Natural Resource Areas Management

Dear Ms. Range (Jessica),

Thank you for the opportunity to provide you with comments on the Draft EIR for the City of San Francisco's Significant Natural Resource Areas Management Plan. We understand that this CEQA document is programmatic. It does, however, contain a project-specific analysis for the proposed restoration of Sharp Park in Pacifica. I've also included a comment regarding Lake Merced.

SHARP PARK

Sharp Park is located within the Coastal Zone and the proposed restoration is located within an area under the Coastal Commission's (Commission) retained jurisdiction. A Coastal Development Permit (CDP), therefore, would be required from the Commission in order to implement the proposed restoration project. Please note that the comments below are preliminary and that Commission staff expects to conduct a more in-depth review/evaluation of the proposed project as part of the CDP application process.

1

CCC-1

01 Dredging of wetlands where there is no feasible, less environmentally-damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects is permitted for restoration purposes, pursuant to Section 30233 of the Coastal Act.
The City will need to provide supporting analysis/evidence and documentation that the City's proposal is indeed the least environmentally-damaging alternative for restoration of the site.

02 Proposed project activities, from the perspective of the Coastal Act, should not result in the filling of wetlands, as defined under the Section
30121 of the Coastal Act, or mowing of wetland vegetation. Additionally, there should not be significant modifications of wetland hydrology. The City will be required to ensure that all wetlands are correctly delineated according to Coastal Act Section 30121 and Section 13577 of the Administrative Regulations. Potential impacts to wetlands and other significant coastal resources must be clearly identified along with appropriate measures to mitigate those impacts.

03 The City's environmental impact review should include data and analyses of coastal resource impacts associated with: a) sediment and water quality; b) wetland hydrology; and c) de-watering activities. Impacts should be evaluated for all phases of the proposed project, i.e., during construction and after construction. This information, additionally, will be needed for evaluation of the City's CDP application.

LAKE MERCED

04 Lake Merced is located within the Coastal Zone. The DEIR correctly identifies the City of San Francisco as the agency responsible for issuing a CDP for any projects located within 100 feet of the lake. It should be additionally noted that the City's final action on a CDP is appealable to the Coastal Commission. Additionally, the open waters of the lake are under the retained jurisdiction of the Coastal Commission. Any proposal that involves that area requires a CDP from the Commission.

Please feel free to contact me if you have questions regarding these comments. I can be contacted at rananda@coastal.ca.gov or by phone at 415-904-5267.

Sincerely,
Renée Ananda, Coastal Program Analyst

==========
The Planning Department will have reduced services available the day before Thanksgiving and will be closed during the regularly observed legal holidays Thursday & Friday November 24-25, 2011. On Wednesday November 23rd only the Planning Information Center (PIC), located on the 1st floor of 1660 Mission Street, will be open for normal business hours.
Please note that the PIC will have reduced staffing on this day. The PIC phone number is (415) 558-6377. The Planning Department will resume full services on November 28, 2011.
==========

2

NAHC-1

STATE OF CALIFORNIA — Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

RECEIVED
SEP 09 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

September 7, 2011

Jessica Range
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: SCH# 2009042102 Natural Areas Management Plan; San Francisco/San Mateo Counties

Dear Ms. Range:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. . **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

01

Sincerely,
Katy Sanchez
Katy Sanchez
Program Analyst
(916) 653-4040

cc: State Clearinghouse

NAHC-1

Native American Contact List
San Francisco and San Mateo Counties
September 7, 2011

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
831-637-4238

Amah/Mutsun Tribal Band
Joseph Mondragon, Tribal Administrator
882 Bay view Avenue Ohlone/Costanoan
Pacific Grove, CA 94062
831-372-9015
831-372-7078 - fax

Jakki Kehl
720 North 2nd Street Ohlone/Costanoan
Patterson , CA 95363
jakki@bigvalley.net
(209) 892-1060

Amah/Mutsun Tribal Band
Melvin Ketchum III, Environmental Coordinator
7273 Rosanna Street Ohlone/Costanoan
Gilroy , CA 95020
408-842-3220

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street Ohlone/Costanoan
Union City , CA 94587 Bay Miwok
soaprootmo@msn.com Plains Miwok
510-972-0645-home Patwin
209-688-4753-cell

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
2574 Seaboard Avenue Ohlone / Costanoan
San Jose , CA 95131
muwekma@muwekma.org
408-205-9714
510-581-5194

Amah/MutsunTribal Band
Irene Zwierlein, Chairperson
789 Canada Road Ohlone/Costanoan
Woodside , CA 94062
amah_mutsun@yahoo.com
(650) 851-7747 - Home
(650) 851-7489 - Fax

Amah/MutsunTribal Band
Jean-Marie Feyling
19350 Hunter Court Ohlone/Costanoan
Redding , CA 96003
jmfgmc@sbcglobal.net
530-243-1633

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2009042102 Natural Areas Management Plan; San Francisco/San Mateo Counties.

NAHC-1

Native American Contact List
San Francisco and San Mateo Counties
September 7, 2011

The Ohlone Indian Tribe
Andrew Galvan
PO Box 3152
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 - Cell
(510) 687-9393 - Fax

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Linda G. Yamane
1585 Mira Mar Ave
Seaside , CA 93955
rumsien123@yahoo.com
831-394-5915

Ohlone/Costanaon

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2009042102 Natural Areas Management Plan; San Francisco/San Mateo Counties.

OPR-1

Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Ken Alex
Director

RECEIVED
OCT 17 2011
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M.E.A.

October 18, 2011

Jessica Range
City and County of San Francisco, Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: Natural Areas Management Plan
SCH#: 2009042102

Dear Jessica Range:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on October 17, 2011, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

01

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

01 (Cont.)

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

OPR-1

Document Details Report
State Clearinghouse Data Base

SCH#	**2009042102**
Project Title	Natural Areas Management Plan
Lead Agency	San Francisco, City and County of
Type	**EIR** Draft EIR
Description	The San Francisco Recreation and Park Department developed a Significant Natural Resource Areas Management Plan to guide the management activities of the Natural Areas Program. The Natural Areas Program was created to protect and manage Natural Areas (fragments of unique plant and animal habitats) for the natural and human values they provide. The plan contains detailed information on the biology, geology, and trails within 31 Natural Areas, 30 of which are in San Francisco and one (Sharp Park) is in Pacifica. The plan is intended to guide natural resource protection, habitat restoration, trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The proposed project is implementation of the plan.

Lead Agency Contact

Name	Jessica Range
Agency	City and County of San Francisco, Planning Department
Phone	(415) 575-9018 ***Fax***
email	
Address	1650 Mission Street, Suite 400
City	San Francisco ***State*** CA ***Zip*** 94103

Project Location

County	San Francisco, San Mateo
City	San Francisco, Pacifica
Region	
Lat / Long	
Cross Streets	
Parcel No.	
Township	***Range*** ***Section*** ***Base***

Proximity to:

Highways	Hwy 1
Airports	
Railways	
Waterways	San Francisco Bay, Pacific Ocean, Laguna Salada, etc.
Schools	numerous
Land Use	Land use is recreational, sites designated as open space and/or public.

Project Issues	Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; California Coastal Commission; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Department of Toxic Substances Control; Native American Heritage Commission
Date Received	09/01/2011 ***Start of Review*** 09/01/2011 ***End of Review*** 10/17/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

OPR-1

STATE OF CALIFORNIA — Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

RECEIVED
SEP - 9 2011
STATE CLEARING HOUSE

September 7, 2011

01828
10/17/11
e

Jessica Range
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: SCH# 2009042102 Natural Areas Management Plan; San Francisco/San Mateo Counties

Dear Ms. Range:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

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Sincerely,

Katy Sanchez
Program Analyst
(916) 653-4040

cc: State Clearinghouse

BAAQMD-1



Jeanie Poling/CTYPLN/SFGOV
10/20/2011 11:10 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SNRAMP

History: This message has been forwarded.

----- Forwarded by Jeanie Poling/CTYPLN/SFGOV on 10/20/2011 11:12 AM -----



Christine Holmes <cholmes@baaqmd.gov>
10/17/2011 11:41 AM

To "jeanie.poling@sfgov.org" <jeanie.poling@sfgov.org>
cc
Subject SNRAMP

Dear City/County of SF,

01 I would like to voice my strong support for the Significant Natural Resource Areas Management Plan. Pollution, habitat loss and fragmentation, and invasive species all make it difficult for native plants and animals to survive in the city. The remaining remnants of grasslands, coast scrub, oak woodlands, riparian areas, and salt marshes in natural areas throughout San Francisco must be maintained and expanded in order to preserve the bio-diversity which is San Francisco's most important natural element.

Thank you,

Christine Holmes
Bay Area Air Quality Management District
Human Resources Analyst | Human Resources Office
939 Ellis Street | San Francisco, CA 94109
Office: 415.749.4938 | Fax: 415.749.4992
cholmes@baaqmd.gov | www.baaqmd.gov

City of Pacifica-1

CITY HALL
170 Santa Maria Avenue • Pacifica, California 94044-2506
www.cityofpacifica.org

Scenic Pacifica

MAYOR
Mary Ann Nihart

MAYOR PRO TEM
Peter DeJarnatt

COUNCIL
Sue Digre
James M. Vreeland, Jr.
Len Stone

CITY MANAGER'S OFFICE
TEL. (650) 738-7301
FAX (650) 359-6038
CITY ATTORNEY
TEL. (650) 738-7409
FAX (650) 359-8947
CITY CLERK
TEL. (650) 738-7307
FAX (650) 359-6038
CITY COUNCIL
TEL. (650) 738-7301
FAX (650) 359-6038
FINANCE
TEL. (650) 738-7392
FAX (650) 738-7411
FIRE ADMINISTRATION
TEL. (650) 991-8138
FAX (650) 991-8090
HUMAN RESOURCES
TEL. (650) 738-7303
FAX (650) 359-6038
PARKS, BEACHES & RECREATION
TEL. (650) 738-7381
FAX (650) 738-2165
PLANNING
TEL. (650) 738-7341
FAX (650) 359-5807
• Building
TEL. (650) 738-7344
• Code Enforcement
TEL. (650) 738-7341
POLICE DEPARTMENT
TEL. (650) 738-7314
FAX (650) 355-1172
PUBLIC WORKS
TEL. (650) 738-3760
FAX (650) 738-9747
• Engineering
TEL. (650) 738-3767
FAX (650) 738-3003
• Field Services
TEL. (650) 738-3760
FAX (650) 738-9747

RECEIVED
OCT 28 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

October 26, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

RE: DEIR for SNRAMP Project (2005.1912E)

Dear Mr. Wycko:

This comment letter on the Environmental Report for the Significant Natural Resource Areas Management Plan is submitted on behalf of the City of Pacifica. One of the natural areas covered by the report is Sharp Park which is located in the City of Pacifica.

The City was asked by concerned residents to comment on the City/County of San Francisco's Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) which includes Sharp Park. The request came from those who have a concern about the impact of tree removal on drainage and the potential increase in mosquitoes due to increased size of the lagoon. These items are part of the SNRAMP that will be implemented at Sharp Park.

01 Based on staff research the City Council determined that the report addressed the concerns raised and that the concerns will be alleviated by the actions proposed to be included as a part of the SNRAMP. The City of Pacifica appreciates the work that San Francisco put into the DEIR, particularly in addressing the concerns that had been raised regarding management plan work proposed for Sharp Park.

Pacifica considers Sharp Park an important part of the community and believes that its natural areas and golf course are a part of what make Pacifica a pleasant community in which to live and recreate. We support the City of San Francisco's efforts to develop a plan to manage this most important resource for both communities.

Path of Portola 1769 • San Francisco Bay Discovery Site

City of Pacifica-1

The City of Pacifica will continue to be a partner with San Francisco in moving forward the work called for in the Significant Natural Resource Areas Management Plan and in the preservation of the Sharp Park Golf Course. This is an important resource that is shared by the two cities as well as the rest of San Mateo County.

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the Significant Natural Resource Areas Management Plan.

Sincerely,

Mary Ann Nihart
Mayor

HPC-1

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

September 26, 2011

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, 4th Floor
San Francisco, CA 94103

Dear Mr. Wycko,

On September 21, 2011, the Historic Preservation Commission (HPC) held a public hearing and took public comment on the Draft Environmental Impact Report (DEIR) for the proposed Significant Natural Resources Area Management Plan. After discussion, the HPC arrived at the comments below:

01
- The HPC did not have consensus on the historical integrity of the Sharp Park Golf Course. Some commissioners thought that the property does not retain sufficient integrity to convey the property's historical significance per the National Register of Historic Places and/or California Register of Historical Resources, while others thought that the property does retain sufficient integrity.

02
- The HPC suggest that the mitigation measure described in M-CP-1 (Page 11) should be modified to specify that the future historic resource evaluations should be completed by a qualified professional landscape architectural historian.

03
- The HPC suggests that the mitigation measure described in M-CP-7 (Page 13) should be modified to specify that a qualified professional landscape architectural historian should be retained to document the cultural landscape.

04
- The HPC suggests that implementation of the Sharp Park restoration activity to construct a post and rail fence along the seawall of the golf course described in I-CP-8 (Page 14) *would* cause a substantial adverse change in the significance of the Sharp Park Golf Course.

05
- The HPC also commented that it is likely that future projects involving federal permitting or funding will be reviewed and commented on by the Commission as part of the National Environmental Policy Act (NEPA) process.

The HPC appreciates the opportunity to participate in review of this environmental document.

Sincerely,

Charles Chase, President
Historic Preservation Commission

www.sfplanning.org

BAGCNC-1

RECEIVED AT CPC HEARING 10/6
2005.1912E J. Range

Bay Area Golf Club of Northern California
Nathaniel Jackson, President
407 Monticello Street, San Francisco, CA 94127
Telephone 415-407-7675 • Email: Njackson352@comcast.net

October 5, 2011

Congresswoman Jackie Speier
District Office
400 So. El Camino Real, #750
San Mateo, CA 94402

Hon. Ed Lee, Mayor
City and County of San Francisco
City Hall, Room 200
1 Dr. Carlton B. Goodlett Pl.
San Francisco, CA. 94104

San Francisco Board of Supervisors
David Chiu, President
Supervisor Sean Elsbernd
City Hall, Room 244
1 Dr. Carlton B. Goodlett Pl.
San Francisco, CA. 94104

San Mateo County Board of Supervisors
Carole Groom, President
400 County Center
Redwood City, CA. 94063

Hon. Mary Ann Nihart, Mayor
Members of the City Council
City of Pacifica
170 Santa Maria Ave.
Pacifica, CA. 94044

BAY AREA GOLF CLUB SUPPORTS SHARP PARK GOLF COURSE

Dear Congresswoman Speier, Mayors Lee and Nihart,
And San Francisco and San Mateo County Supervisors,

Sharp Park is well-known as "the People's Golf Course," a public course where racial minorities, retired seniors, school children; working men and women, and these days even the unemployed can play golf. Because of its modest fees, all of these groups play golf in large numbers at Sharp Park.

BAGCNC-1

The Bay Area Golf Club represents such golfers. We are a mostly African-American club, formed in 1954 and based in San Francisco. We are a founding member club of the Western States Golf Association, one of America's oldest African-American golf organizations.

We were the host club for Western States' inaugural championship tournament in 1955, where the founding member clubs met and played golf together for the first time. That tournament was held at Sharp Park.

It is significant that Sharp Park was built by history's greatest golf architect, Alister MacKenzie. Most of MacKenzie's courses – including the most famous ones like Augusta National—the site of the annual Masters Tournament, and Cypress Point – are private and inaccessible to common people.

Sharp Park is part of San Francisco's egalitarian tradition of providing great classical architecture for its public places. This is the spirit of San Francisco's City Hall, with its golden cupola and soaring dome inspired by Michaelangelo's St. Peter's Basilica in Rome. This great public architecture is San Francisco's way of showing respect to its citizens, to help them respect themselves.

Our members, and all who play golf at Sharp Park know of its Alister MacKenzie heritage. It is important to them. If San Francisco were to destroy this golf course, the city would be telling our members and those other minority and working-class golfers that the city does not respect or care about them.

The tradition of African-American golf continues at Sharp Park. For over 20 years, Sharp Park has been the home of the annual Senior Swingers tournament, a largely but not exclusively African-American golf event to raise money for the Western Addition Senior Center. The tournament's founder, Riley Jameison, is an African-American golf pioneer, now over 90 years old, who joined the fight in the early 1950's against racial discrimination on the old Professional Golfers Association golf tour.

Today, Bay Area Golf Club members support the First Tee, which has a golf driving range and operates youth sports programs at the Visitation Valley Middle School in the Sunnydale neighborhood.

For these reasons, we thank you for your efforts to preserve the historic
01 Alister MacKenzie golf course at Sharp Park. And we urge you to resist those who would destroy it.

Very truly yours,

Nathaniel Jackson

Nathaniel Jackson, President
Bay Area Golf Club of Northern California

cc: Willie L. Brown, Jr.

2

BDunes-1

BANDON DUNES

RECEIVED
SEP 26 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

September 22, 2011

San Francisco Planning Department
1650 Mission Street, #400
San Francisco, CA 94103

RE: Sharp Park Golf Course

To Whom It May Concern:

01 I am writing to express my complete and enthusiastic support for designating the incomparable Sharp Park Golf Course a "historical resource." Its architect, Alister MacKenzie, is one of the great masters of the 700 year old craft and Sharp Park is one of his masterpieces. It is truly a work of living art. As the owner of two golf resorts, Bandon Dunes in Bandon, Oregon and Cabot Links in Nova Scotia, I have a very strong opinion that Sharp Park should not only be preserved but maintained to the very highest standard.

Sincerely,

Michael L. Keiser

MLK/ml

cc: Richard Harris

c/o Mike Keiser
2450 N. Lakeview
Chicago, Illinois 60614
773/348-6410 • 773/929-7123 fax

Round Lake Drive
Bandon, Oregon 97411
www.bandondunesgolf.com
541/347-4380 • 541/347-8161 fax

CAAONC-1

COUNCIL OF ARMENIAN AMERICAN ORGANIZATIONS OF NORTHERN CALIFORNIA

ՀԱՅԿԱԿԱՆ ԳԱԼԻՓՈՐՆԻԱՅԻ ԱՄԵՐԻԿԱՀԱՅ ԿԱԶՄԱԿԵՐՊՈՒԹԵԱՆՑ ԽՈՐՀՈՒԴ

825 BROTHERHOOD WAY, SAN FRANCISCO, CALIFORNIA 94132 - PHONE (415) 749-1750

RECEIVED
OCT 1 1 20
CITY & COUNTY OF S
PLANNING DEPARTMENT
M.E.A

BOARD OF DIRECTORS
CHAIRMAN
CHARLES K. PASKERIAN

VICE CHAIRMAN
ANTRANIK CINGOZ

TREASURER
IRFAN AGBABIAN

RECORDING SECRETARY
HAIG BAGHDASSARIAN

CORRESPONDING SECRETARY
ANI YENI-KOMSHIAN

ADVISORS
ARMEN ALAYAN
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LEVON ISHAG
ZAVEN KASNELIAN
ANI KANTARCI
ELAINE KAMJIAN-PITT
REV. JAMES KIZIRIAN
VAHE KOUYOUMDJIAN
ARA MAKASDJIAN

LEGAL ADVISOR
PAUL TOUR-SARKISSIAN, ESQ.

HONORARY MEMBERS
EDWARD ASEANIAN
ARCHBISHOP ARIS SHIRVANIAN
REV. JAMES KIZIRIAN
PAUL TOUR-SARKISSIAN, ESQ.

ADMINSTRATIVE SUPPORT
AYKO BERBERIAN

October 5, 2011
Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: Draft Environmental Impact Report

Dear Mr. Wycko:

We believe that the Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan.

01 **It considers a broad range of potential impacts to our City's resources and proposes feasible mitigation measures to address impacts where possible.**

The EIR looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Areas.

In Summary,
We feel:

02
- **It is an innovative management plan to safeguard our City's Natural Areas.**
- **Implementation of the Plan will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas.**
- **It provides clear direction to the City on how to prioritize management and restoration of our Natural Areas.**
- **The Plan is the most cost effective method for managing our resources and protecting these areas for future generations.**

Sincerely,

Charles Paskerian
Chairman

MEMBER ORGANIZATIONS: ARARAT ARMENIAN SOCIETY, ARMENIAN AMERICAN CITIZENS' LEAGUE, ARMENIAN ASSEMBLY OF AMERICA BAY AREA REGIONAL, ARMENIAN CHURCH YOUTH ORGANIZATION – ST. JOHN & ST. VARTAN, ARMENIAN DEMOCRATIC LEAGUE, ARMENIAN GENERAL BENEVOLENT UNION - OAKLAND, SAN FRANCISCO, SILICON VALLEY CHAPTERS, ARMENIAN NATIONAL COMMITTEE, ARMENIAN PROFESSIONAL SOCIETY, ARMENIAN RELIEF SOCIETY - EREBOUNI – EAST BAY, GARIN - SAN FRANCISCO CHAPTERS, ARMENIAN REVOLUTIONARY FEDERATION, ARMENIAN TECHNOLOGY GROUP, ARMENIAN YOUTH FEDERATION - ROSTOM CHAPTER, BETHEL ARMENIAN EVANGELICAL CHURCH, CALVARY ARMENIAN CONGREGATIONAL CHURCH, HAMAZKAYIN CULTURAL AND EDUCATIONAL ASSOCIATION, HOMENETMEN SCOUTS AND ATHLETIC ORGANIZATION - ANI - SANTA CLARA, SAN FRANCISCO, GARS - WALNUT CREEK CHAPTERS, KNIGHTS OF VARTAN, NORCAL ARMENIAN HOME AND SENIOR SERVICES, SAINT ANDREW ARMENIAN APOSTOLIC CHURCH, SAINT GREGORY ARMENIAN APOSTOLIC CHURCH, SAINT JAMES ARMENIAN APOSTOLIC CHURCH, SAINT JOHN ARMENIAN APOSTOLIC CHURCH, SAINT VARTAN ARMENIAN APOSTOLIC CHURCH, TEKEYAN CULTURAL ASSOCIATION, TRIPLE X FRATERNITY - GOLDEN GATE, MOUNT DIABLO, OAKLAND, PENINSULA CHAPTERS, UNIVERSITY OF CALIFORNIA AT BERKELEY ARMENIAN ALUMNI ASSOCIATION

CBD-1



CENTER *for* BIOLOGICAL DIVERSITY

October 31, 2011

Sent Via Email to bill.wycko@sfgov.org

Bill Wycko
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco CA 94103
bill.wycko@sfgov.org

RE: Significant Natural Resource Areas Management Plan DEIR

Dear Mr. Wycko,

The Center for Biological Diversity ("Center") submits the following comments on the draft EIR for San Francisco's Significant Natural Resource Areas Management Plan. The Center for Biological Diversity is a national nonprofit conservation organization with more than 320,000 members and supporters dedicated to protecting endangered species and wild places. The Center has been advocating for endangered species and restoration of natural areas in the San Francisco Bay Area since 1998. Our organization has been extensively involved in efforts to restore Sharp Park and end San Francisco's mismanagement and illegal harm to endangered species at this site

01 In general, we support the goals of the Natural Areas Plan which promote ecological restoration, community stewardship and sustainable management of San Francisco's natural areas. However, the Natural Areas Plan is severely flawed due to inclusion of a poison pill in the form of a sham "restoration" plan for Sharp Park. The Sharp Park element of the plan is at odds with the best available science on impacts of the golf course, it ignores the recommendations of the only peer-reviewed restoration plan for Sharp Park and it proposes further illegal impacts to endangered species at the site. **Sharp Park should be removed from the Natural Areas Plan.**

02 It is shameful that San Francisco has put the restoration of all of the City's natural areas in jeopardy by including a knowingly controversial and objectionable Sharp Park project which has been discredited by independent scientists, restoration experts and dozens of San Francisco conservation and community groups. We question why San Francisco would include a Sharp Park element that would likely drive San Francisco's namesake species, the San Francisco garter snake, toward extinction - all to promote an unsustainable, money-losing golf course.

If San Francisco approves and attempts to implement the proposed Natural Areas Plan with the sham Sharp Park "restoration" element, it will result in additional litigation against the City for illegal and unnecessary degradation of endangered species habitat.

Arizona • California • Nevada • New Mexico • Alaska • Oregon • Montana • Illinois • Minnesota • Vermont • Washington, DC

Jeff Miller, Conservation Advocate • 351 California St., Suite 600 • San Francisco, CA 94104
Phone: 415-669-7357 • Fax: 415-436-9683 • jmiller@biologicaldiversity.org

CBD-1

We find it curious that the Sharp Park element of the Natural Areas Plan ignores ongoing violations of the Endangered Species Act resulting from golf course activities such as water pumping from wetlands and mowing that are harming endangered San Francisco garter snakes and California red-legged frogs. The Natural Areas Plan ignores the current litigation against San Francisco for continuing illegal activities at Sharp Park without an approved habitat conservation plan or legal permits under the Endangered Species Act. The Natural Areas Plan ignores the pending San Francisco Board of Supervisors vote on legislation to repurpose the golf course and transition management to the Golden Gate National Recreation Area.

The Natural Areas Plan ignores the conclusions and recommendations of leading scientific experts on endangered species and wetlands restoration, who contend that the Park Department's proposed golf course activities impair the long-term survival and recovery of endangered species at the site, and that the Parks Department's alleged compliance plan is not being followed and is unworkable. The Natural Areas Plan ignores the only peer-reviewed science on alternatives for managing Sharp Park, *Conceptual Ecosystem Restoration Plan and Feasibility Assessment: Laguna Salada, Pacifica, California* (ESA-PWA 2011). The peer-reviewed report demonstrates that the best option for protecting and restoring endangered species at Sharp Park is removing the golf course and restoring the functions and natural processes of the lagoon and surrounding wetlands; and that removing the golf course to restore habitat to the east of the lagoon is essential for the long-term sustainability of endangered species found on the site. This approach would also be the most cost-effective option and provide the best flood protection for neighbors against sea-level rise and coastal storm events.

02 cont.

The Sharp Park element of the Natural Areas Plan proposes numerous unnecessary, controversial, discredited, illegal and ecologically damaging projects such as: dredging Laguna Salada and other wetlands with a backhoe; continuing an illegal water pumping and management regime; filling in 5.5 acres of existing wetlands; de-watering endangered species habitat; and removing and evicting endangered species from Sharp Park to Mori Point, an activity that is extremely unlikely to be permitted by state and federal regulators and is illegal without proper permits. The Sharp Park element proposes perpetuating the very illegal management activities that kill and harm endangered species and have resulted in the current litigation against San Francisco.

The "restoration" projects proposed in the Sharp Park element elements are not based on any credible science and fly in the face of recommendations from experts on endangered species and wetlands restoration. The proposed pre-activity surveys, worker education program, biological monitoring and illegal relocation of individual endangered species do not in any way adequately mitigate for impacts. The only proposed management actions for Sharp Park we support are those dealing with controlling invasive species, reintroducing native species and fencing dogs out of sensitive wetlands.

03

The DEIR analysis is flawed since it identifies recreation and maintenance alternatives as the "environmentally superior alternatives."

04

We recommend you remove the Sharp Park element from the Natural Areas Plan and re-read ESA-PWA 2011.

CBD-1

Sincerely,

Jeff Miller
Conservation Advocate
Center for Biological Diversity

CFDG-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:48 PM
To: Bock, John
Subject: Fw: NAP comments from the Crissy Field Dog Group

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:49 PM -----

Bill Wycko/CTYPLN/SFGO V
11/01/2011 03:25 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: NAP comments from the Crissy Field Dog Group

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:25 PM -----

crissyfielddog1@aol.com
10/31/2011 06:39 PM

To: bill.wycko@sfgov.org
cc:
Subject: NAP comments from the Crissy Field Dog Group

1

CFDG-1

Dear Mr. Wycko,

Thank you for the opportunity to comment on the San Francisco Department of Recreation and Park's Natural Areas Program EIR. Below is a list of our concerns.

01 1) There is no evidence in this EIR to substantiate claims that dogs have an impact on plants or wildlife in natural areas. The EIR must be based on solid, documented impacts, and there is no evidence cited to justify closing or reducing the size of any Dog Play Area (DPA).

02 2) There are a number of places in this EIR that state that dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred.
And continues to state: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife.
If there's no proof of an impact, then that impact cannot "continue."
The analysis in this EIR based on this speculation is inadequate.

03 3) In a few places, the NAP EIR says: Observations indicate dogs are impacting erosion, or natural communities, yet it offers no information on these "observations." Who made them? Were they done in a scientifically and objective way? EIRs should be based on solid, scientific data, not on anecdotal "observations." Any conclusions based on this information is again, inadequate.

04 4) The EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. For example, a 200-pound man will have a much more significant impact on plants that he walks on than a 20-pound dog will have on any that it walks on. If there is little difference in the impacts, then the conclusions in this EIR cannot justify banning off-leash dogs from natural areas.

05 5) The EIR considers only the closures of 15% of total off-leash space when

determining impacts on remaining DPAs and recreation. Because the NAP plan puts 80% of off-leash space at risk of closure in the future, this EIR must also

consider the impacts of this much larger closure on remaining DPAs and on recreation.

06 6) This EIR acknowledges that there is likely to be a significant and unavoidable impact of DPA closures when combined with closures of off-leash area in the GGNRA. However, the EIR says the nature of the GGNRA closures is "speculative" and therefore it doesn't try to analyze the level of the combined impacts. However, we know that the GGNRA proposed to cut a substantive amount of its off-leash space, and this EIR should analyze the impact of that level of closure when

combined with the NAP closures of 15% and 80%.

07 7) The EIR assumes that because there will still be relatively large off-leash areas in McLaren Park and on Bernal Hill, that few people will be

forced to drive to other DPAs to walk their dogs, with few resulting impacts on air pollution, traffic congestion, and climate change from the added car trips after the 15% closures take place. However, this EIR does not adequately consider the topography of the remaining off-leash spaces in these parks. If much of the remaining area is steep, people will not be able to use the area, and more people will be forced to drive to other DPAs. This must be analyzed in this

2

CFDG-1

07 (Cont.) EIR.

08 8) This EIR does not consider the impact of people driving to other parks if 80% of off-leash space is closed. This analysis must be done.

09 9) This EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether dogs are on- or off-leash). Dogs are particularly susceptible to problems from Garlon. This distinction is not made and the analysis of impacts from herbicides must be redone to reflect this.

10 10) The EIR refers to dogs as "nuisances." It does not consider the positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. These must be included in the analysis of different alternatives. People walk in McLaren Park and on Bernal HIll because they are large enough to take long walks with your dog. Most other DPAs are much smaller and do not offer the same walking experience. This EIR assumes all DPAs are interchangeable. They are not. This must be corrected.

11 11) This EIR does not adequately analyze mitigations short of closing DPAs if any impacts can be proven.

12 12) This EIR does not consider any impacts on the social community of people who walk with dogs in areas NAP wants to close. This is especially important if 80% of off-leash space is closed. These are significant impacts and must be evaluated and considered.

We are especially concerned about the "dispersion" issue within the City of San Francisco and the nexus between City Parks' DPAs and the GGNRA off leash areas. Any significant reduction of either area will impact where and how people take their dogs, if it a safe environment for all park users and would significantly reduce the "quality of life" for thousands of San Franciscans.

Again, thank for the opportunity to comment on this EIR.
Sincerely,

Martha Walters
Chair, Crissy Field Dog Group

3

CNPS-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:48 PM
To: Bock, John
Subject: Fw: Significant Natural Resource Areas Mgt Plan - comments

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
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----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:49 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:24 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Significant Natural Resource Areas Mgt Plan - comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:24 PM -----

Jake Sigg <jakesigg@earthlink.net>
10/31/2011 07:13 PM

To: bill.wycko@sfgov.org
cc:
Subject: Significant Natural Resource Areas Mgt Plan - comments

1

CNPS-1

Bill Wycko
Environmental Review Officer
San Francisco Planning Dept

We appreciate the hard work by staff to produce this extensive and detailed document. In general, we find the document to be fairly thorough in identifying resources and problems, especially for the 31 natural areas in San Francisco.

01 There are problem areas. For example, the term Urban Forest is used throughout, in spite of the fact that it is not a scientific term and no definition of what constitutes an urban forest exists. The term should be stricken from the document, as it means different things to different people.

02 For many, it means street trees, for others it means the artificial eucalyptus plantations (not forests) which are having a devastating effect on the biological diversity of the areas where they are planted, such as Mt Davidson, McLaren Park, and Glen Canyon. It is proper to evaluate the effects of tree removal, but the effects of non-removal should also be evaluated. One of those effects is the unstable conditions the trees create. The shading, wind protection, and summer fog drip drastically changes the environment, inviting in English and Algerian ivy, and Cape ivy (Delairea odorata). Not only are all the native plants of the area eliminated, the eucalyptus and cypress trees themselves are unable to regenerate. The consequence is what we see beginning to happen on Mt Davidson now: trees toppling because of the weight of the ivy and the cutting off of light from the tree crown, making it unable to photosynthesize. Regardless of whether the trees remain, are thinned, or removed, the impacts of non-removal need identification.

03 Feral cats are identified as predators, which they are. But the connotation in the DEIR implies that predators are bad. They are not; native predators are a part of the system that nature has employed for millions of years to bring balance and stability. Non-native feral cats should be identified as deleterious and destabilizing to natural ecosystems and biodiversity.

04 There is mention of scrub, without identifying it as a habitat. We have many different types of ecosystems or habitats: wetlands, grasslands, shrublands, oak woodlands, &c. Scrub as a habitat type should be identified as a scientific community--e.g., North Coastal Scrub. French broom and Himalayan blackberry do not fit in that category.

05 The statement on page 524 (VII.E - Environmentally Superior Alternative) has this astounding statement: "...In determining the environmentally superior alternative for the proposed project, this EIR considers the environmental effects of the project and project alternatives. The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because...." I have no idea what this means, but it sounds like a non sequitur. Please revisit this.

Jake Sigg, Chair
Conservation Committee
California Native Plant Society
Yerba Buena Chapter
338 Ortega Street
San Francisco CA 94122
415-731-3028

DB-1

DOGGIE BUSINESS
San Francisco's Premiere Dog Walker

Oct 30, 2011

Bill Wycko
Environmental Review Officer
SF Planning Department
1650 Mission Street
San Francisco, CA 94103

Dear Mr. Wycko,

I am a native San Franciscan, born at Kaiser Hospital, raised in Forest Hill and these days, I own a home in the Sunset District. I have been here for 58 years. I remember the days, as a kid, that I would take our family dog out for long walks on the beach at Taraval Street Now, that we can no longer do this (because we are restricted to on-leash only, and what fun is that?), I really feel as though this city is becoming less and less like the friendly town that I grew up in. People in San Francisco are becoming less tolerant of others and angrier as more of our rights disappear.

People that own dogs in San Francisco have been forced to gravitate towards spending their time strolling through dog parks and these parks have almost become community centers for them. In San Francisco, I believe that these days there are somewhere between 150,000 to 175,000 dogs living within our city boundaries with people that adore them and consider them part of the family. In fact, many dogs get to sleep in the same bed with there owners! These people take their dogs to dog parks so that the dogs can release pent up tension from being in the house all day, while their owners are at work and to let them play freely with other dogs, which most dog owners agree is a God given right; and also, the owners can connect with their friends and neighbors to blow off steam about what ever is on their mind in these high-stress times. It is a place for them to feel happy, connected and a place to release anxiety with friends and neighbors, both the dogs and the owners.

When the SFRPD, in the late 1990s, initiated a Natural Areas Program to protect and manage these Natural Areas, there were significantly fewer dogs living in San Franciscan households and there were significantly more areas where dogs were allowed off-leash. Practically, you could go anywhere in the city with your dog and decide if **you** wanted

DB-1

DOGGIE BUSINESS

them on or off-leash. It was **our** decision to put the dog on leash and even if a sign said it was required, as long as your dog was well behaved, everyone, including law enforcement, looked the other way.

One park in San Francisco that I regularly frequent these days is McLaren Park. Since this park is near the Housing Projects, this park has always had a reputation for being a very dangerous place to go, which has kept the community from using it and it had fallen into poor maintenance. There were heroin addicts leaving needles all over the grounds, there were prostitutes in the parking lots, there were pimps and drug dealers peddling their goods, and there were gang fights over the turf. Finding dead bodies was the norm. Dog Walkers and dog owners, are the biggest reason that McLaren Park is now a safe please to take your dogs and kids. Drug dealers and other undesirable people felt uncomfortable using the park and stayed away because of the dogs.

01

Let me get to the point. I am in favor of the Maintenance Alternative. It maintains the "recreation" in city parks and "recreation" is what a city the size of San Francisco needs. With 175,000 dogs in the city, where will they all go, if you reduce the play areas? People will be forced into smaller areas, dogs will fight, people will shout and scream at each other and the only available dog play areas will be trampled so that all vegetation is left dead. Please leave thing as they are. We need our parks for the dogs. They are a very, very large part of the community and DOGS AND PEOPLE need a good deal of space to roam.

02

In my opinion, McLaren Park was designated a "dog park" and should remain so. All the other dog parks should remain without change to preserve the sanity. It is easy to tip the scales and have complete chaos on your hands. Why chance it?

01 (cont.)

Sincerely yours,

Janet Slissman

Owner

2

DogPACSF-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:48 PM
To: Bock, John
Subject: Fw: SF RPD NAP DEIS Public Comment

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
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----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:50 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:26 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: SF RPD NAP DEIS Public Comment

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:26 PM -----

DogPAC SF <info@dogpacsf.org>
Sent by: dogpacsf@gmail.com
10/31/2011 05:07 PM

To: bill.wycko@sfgov.org
cc:
Subject: SF RPD NAP DEIS Public Comment

DogPACSF-1

Comments on RPD NAP DEIS

I visit Golden Gate Park, Spreckels Lake , Panhandle, Randall Museum, Douglass Park, 5th-7th Ave/Lincoln Way, Stearn Grove, McLaren Park, Bernal Hill, Lake Merced among many other DPAs. All city park DPAs are essential for the little greenspace we have in our very urban city.

01 If the GGNRA Master and Dog Management Plans are implemented, the overflow for resident and dog recreation will overcrowd our city parks. To date, the GGNRA has not provided the city with any analysis or metrics of the effects of their plans on city assets.

This must be accounted for BEFORE ANY sweeping adjustment to city parks is considered.

I know of no known science that shows any ill effects of dogs on open spaces. Humans are the most widely perpetrators of environmental destruction, not dogs.

02 Additionally, recent reports of Monsanto's Round Up herbicides and other chemicals that are not only harmful to dogs but the general animal population in the park is untenable. Furthermore, the use of genetically harvested herbicide resistant seeds must never be allowed in the confines of our city.

As a taxpayer and voter of 20 years, I am appalled that the NAP would close down what is one of the core culture and lifestyle in SF. Dogs are our family members whether its a companion for elders, a service dogs for people with disabilities, single people, or families with or without children.

03 1) The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

2) The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts."

04 3) The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

2

DogPACSF-1

04 4) In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by "observers" biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is this the case here as well? We do not know, since the NAP EIR provides no information about them. Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If not, their analyses cannot be trusted and are inadequate.

05 5) The NAP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. Do people in the natural areas with dogs cause significantly more impacts than people in the natural areas without dogs? Clearly a 200-pound person will have a much more significant impact on plants than a 20-pound dog. Because this was not evaluated in the EIR, the analyses presented in the NAP EIR are inadequate. If there is little difference in impacts, then the EIR cannot justify banning dogs from the natural areas.

06 6) The NAP EIR considers only the NAP plans to close 15% of the legal off-leash space in SF city parks when considering impacts on the remaining DPAs and on recreation. However, the NAP plan also calls for expanding the most sensitive areas within natural areas, and this potentially could result in the closure of significantly more DPAs (up to 80% of the total off-leash space currently available in city parks, off-leash space that is located either within or adjacent to a natural area). These added closures (up to 80%) will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate.

07 7) The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures can and should be analyzed. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. The busiest weekend days normally find about 60 dogs at the Pine Lake DPA at any one time. Weekday mornings normally have far fewer, closer to 20. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday and more than 3 times the maximum numbers of dogs seen on weekends. This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The analysis presented in the EIR, which does not contain this, is inadequate.

08 8) The number of DPAs in city parks listed in the NAP EIR is wrong. Page 155 says there are 19 DPAs, when the actual number is 29. To get such a basic fact wrong is shocking and calls into question other information about dogs, such as their alleged "impacts' on plants and wildlife.

3

DogPACSF-1

09 9) The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct the citywide survey. While the survey was being conducted, the DAC was told, there would be a hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." This hold was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the

10 closures. The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones because of a temporary halt on new designations is absurd. Any analysis of alternatives that does not include this possible mitigation is incorrect and inadequate.

10) The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the 15% closures will not cause a significant number of people to drive to other parks to walk their dogs. People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does

11 not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs.
Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. This must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate.

11) The NAP EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is on- or off-leash). In a paper on the effects of Garlon, the Marin Municipal Water District (
http://www.marinwater.org/documents/Chap4_Triclopyr_8_27_08.pdf) notes that Garlon can cause kidney problems in

12 dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this). The NAP's reliance on herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it has been applied. This is especially true in Glen Canyon, where Garlon was applied over 30 separate times last year. This impact was not considered in the Hazards and Hazardous Materials section of the NAP EIR and a discussion of the health impacts on dogs of repeated exposure to Garlon should be included.

12) The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the closures of 15%

13 of off-leash space at Lake Merced, Bernal Hill, and McLaren Park will be less than significant because there will remain sufficient off-leash space in those parks (except for Lake Merced). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs. This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows.

4

DogPACSF-1

13) The NAP EIR refers to dogs as "nuisances". The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are closed. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections.

14

14) The NAP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR.
Other mitigations – education, signage, more extensive fencing, etc. – are not discussed. NAP seems to go straight from a single impact to closing the DPA.

15

15) The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the DPAs and portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers.
These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate.

16

16) The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting.

17

DogPACSF-1

17) The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people and dogs. The NAP goal to preserve existing remnants of historical habitat does not require the planting of
18 threatened and endangered species.
There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives.

18) The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of
32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP
19 controls over 50% of the land.
Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control citywide
(57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2.
In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative.

19) The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no
20 maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland. The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis.

20) The NAP EIR does not consider the negative impact on aesthetics of NAP management decisions. For many people,
21 brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing.
For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green not brown half the year. Because these impacts were not considered, the NAP EIR is inadequate.

21) The NAP plans call for cutting down over 18,000 healthy trees simply because they are not native. The NAP EIR does
22 not adequately consider the long-term impacts on climate change and global warming of the conversion of land covered by trees with grasslands. Tree are much better at carbon sequestration than grasslands, and the long-term consequences of this difference are not adequately considered. For more on NAP impacts on trees,

DogPACSF-1

see: http://milliontrees.wordpress.com

23 22) The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (and tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time when the climate has changed since that time. The environmental consequences (for example, more herbicides, etc.) of trying to force the old habitat into today's climate should be analyzed more thoroughly.

Bruce Wolfe, M.S.W., President
DogPAC of SF

FOW-GGP-1

Friends of Oak Woodlands - Golden Gate Park
Park Partner SFPA
863 Arguello Blvd.
San Francisco California 94118
Co-founders:
Rob Bakewell , Volunteer Steward Oak Woodlands Natural Area
Peter Zepponi, AIA , San Francisco Horseshoe Pitching Club

Attn: Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street , Suite 400
San Francisco, CA 94103

Comments in regard to Draft Environmental Impact Report (DEIR) for the Significant Natural Areas Management Plan (SNRAMP)

01 We of ' Friends of Oak Woodlands - Golden Gate Park ' (FOW-GGP***) fully support*** the DEIR for SNRAMP as an ***adequate*** , accurate and comprehensive review of the Plan.

The implementation of this innovative management plan will help improve the habitat and landscape for threatened local plants and animals, enhance public safety and improve access and recreational use in the designated Natural Areas.

02 The Plan provides clear priorities and cost effective methods for management of resources and protection of these for future generations. FOW-GGP's fully supports the SNRAMP , and our mission is to provide stewardship: community advocacy and resources for the realization of the Plan's objectives for the Oak Woodlands Natural Area of Golden Gate Park.

Sincerely,
Robert Bakewell
Co-founder ' FOW- GGP '
rcbakewell@gmail.com
415-710-9617

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1 Research Park Drive • Lawrence, KS 66049-3859 • Tel 800.472.2690 • Fax 785.832-4100 • www.gcsaa.org

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

October 6, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission Suite 400
San Francisco, CA 94103

Re: Supporting "Historical Resource Designation for the Sharp Park Golf Course

Dear San Francisco Planning Department,

01 On behalf of the Golf Course Superintendents Association of America (GCSAA) I am writing in support of the "historical resource" designation for the Sharp Park Golf Course.

GCSAA is a leading golf organization and has as its focus golf course management. Since 1926, GCSAA has been the top professional association for the men and women who manage golf courses in the United States and worldwide. From its headquarters in Lawrence, Kan., the association provides education, information and representation to 19,000 members in more than 72 countries.

GCSAA's mission is to serve its members, advance their profession and enhance the enjoyment, growth and vitality of the game of golf. The association's philanthropic organization, The Environmental Institute for Golf, works to strengthen the compatibility of golf with the natural environment through research grants, support for education programs and outreach efforts.

01 (Cont.) Sharp Park Golf Course is a historical and cultural resource, and is recognized as such by local, state and national entities. Not only was Sharp Park designed by Alister MacKenzie, one of the greatest golf course architects of all time, but it is also unique because it is one of the few municipal courses he designed.

Golf is a game that can be played by people of all ages and abilities, and 80% of the golf rounds played in the United States

GCSAA-1

GCSAA

are played on public golf courses such as Sharp Park. Preserving this historical resource as a place of recreation and good health for all of the people of the City and County of San Francisco and the City of Pacifica, and all surrounding areas, is imperative.

01 (Cont.)

Thank you for your time and for allowing GCSAA to express support of the San Francisco Planning Department's determination that Sharp Park Golf Course, designed by Alister MacKenzie and opened for play in 1932, is a "historical resource" under the California Environmental Quality Act.

Sincerely,

J. Rhett Evans
Chief Executive Officer

cc: The Honorable Jackie Speier, U.S. House of Representatives
The Honorable Ed Lee, Mayor, City and County of San Francisco
The Honorable Mary Ann Nihart, Mayor, City of Pacifica
Mr. David Chiu, President, San Francisco Board of Supervisors
Ms. Carole Groom, President, San Mateo County Board of Supervisors
Mr. Philip Ginsburg, General Manager, San Francisco Recreation and Park Department
Mr. Charles Edwin Chase, AIA, President, San Francisco Historic Preservation Commission
The San Francisco Public Golf Alliance

GCSAA is dedicated to serving its members, advancing their profession and enhancing the enjoyment, growth and vitality of the game of golf.

GGAS-1



inspiring people to protect Bay Area birds since 1917

October 31, 2011

Via U.S. Mail and electronic mail
Mr. Bill Wycko
Environmental Review Officer
SNRAMP EIR
City and County of San Francisco
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Re: Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project (2005.1912E)

Dear Mr. Wycko:

I am writing on behalf of the Golden Gate Audubon Society and its more than 10,000 members and supporters regarding the Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan (SNRAMP) Project 2005.1912E. The Project is an excellent opportunity to promote public education and protection of these parks while being sensitive to the natural values and ecology of the area for the next 20 years.

Since 1917, Golden Gate Audubon's members have been dedicated to protecting Bay Area birds and other wildlife, to conserve and restore native habitat, and to connect people of all ages with the natural world. Our members use and enjoy the many parks that comprise the Natural Areas of San Francisco and along the San Francisco Bay and Pacific Ocean. Our members often visit these areas to engage in bird watching, scientific research, and recreation activities. We appreciate this opportunity to comment on the DEIR and improve the Project.

Overall, Golden Gate Audubon is encouraged by the progress made in implementing the Natural Areas Program in San Francisco. While the NAP is still woefully under understaffed and underfunded, the DEIR is a good first step for moving forward. However, the DEIR can be improved in many ways, such as…

01 As an initial matter, Golden Gate Audubon is extremely concerned that the DEIR's inclusion of what is essentially a new project at Sharp Park will derail the approval of the DEIR and implementation of the Management Plan. As presented in the DEIR, the project at Sharp Park is far different than what has been considered in the past and would essentially force a

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01 (Cont.)

decision to be made about management at the site before adequate environmental review and public input has been conducted. The Sharp Park plan, as now included in the DEIR, is likely to result in significant (and in our opinion, successful) challenge to the DEIR, slowing down the implementation process for the entire Project. Therefore, Golden Gate Audubon urges the Planning Department to tier Sharp Park from the DEIR for further study. We address this issue—include the question of piece-mealing review—further below.

For ease of reference, this letter will for the most part follow the structure of the DEIR. It will begin with a comment on the Project Description and Objectives, followed by a discussion of management actions and environmental impacts.

I. PROJECT DESCRIPTION AND OBJECTIVES

A. Project Description

Overall, the Project Description adequately describes the SNRAMP program and the purpose of the DEIR. We appreciate that the DEIR provides a list of special management concerns that exist in San Francisco, especially in its Natural Areas. These include:

- Loss of special status or unusual native species or habitats;
- Loss of diversity and components of a healthy ecosystem;
- Effect of nonnative invasive species on the local native flora and fauna;
- Erosion of Natural Areas from inappropriately located or constructed trails and access roads;
- Effect of human uses (recreation, poor trail location or too many trails, and a general increase in use) that conflict with conservation values; and
- Effects of feral animals and domestic pets on native flora and fauna.

02

We will address these specific concerns in the Recommendations and Environmental Impacts sections below, but we note that while the DEIR calls out these issues, it does not prescribe adequate management measures to deal with each. Of particular concern is the Planning Department's decision to allow feral cat feeing stations to continue to be operated in San Francisco's Natural Areas. In fact, the DEIR's failure to study the impacts of feral cat feeding stations in the Natural Area may be a fatal flaw that renders it vulnerable to challenge.

We also note that the DEIR makes specific reference to the 2006 version of the SNRAMP, which sets forth a plan for Sharp Park that is very different than the one described in the DEIR. Golden Gate Audubon believes that this is further evidence that Sharp Park should be tiered from the SNRAMP DEIR for further study.

01 (Cont.)

B. Objectives

The DEIR identifies the following objectives of the Project for CEQA purposes. These are:

- To identify issues and impacts adversely affecting ecosystem functions and biological diversity;

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- To identify, prioritize, and implement restoration and management actions designed to promote the functioning of San Francisco's native ecosystem, including the maintenance and enhancement of native biodiversity;
- To identify and prioritize monitoring of natural resources to support an adaptive management approach;
- To provide guidelines for passive recreation compatible with San Francisco's natural
- resources;
- To provide guidelines for education, research, and stewardship programs; and
- To restore the Laguna Salada wetland complex for the benefit of special status species.

(DEIR, at 82).

Overall, Golden Gate Audubon endorses the objectives as set forth in the DEIR. However, we would amend the second-to-last objective to read (new text in underline):

03

- To provide guidelines for education, research, ~~and~~ stewardship programs, and outreach to inform community members about the value and importance of natural areas within San Francisco; and

We see "stewardship" and "education" as being somewhat more narrow than broader outreach to the community. Alternately, similar language could be inserted under the "Education" or "Stewardship" sections of Section III.E.1 *Objectives and Goals of the SNRAMP*. (DEIR, at 85, 86).

04

One of the clear failures of the Recreation and Parks Department and the Natural Areas Program to date has been the inability to effectively communicate that native wildlife, plants and their ecosystems are valuable and extremely vulnerable assets to the quality of life in San Francisco. In communications stating opposition to the Natural Areas Program, some have argued that because San Francisco is a city, it is inherently "unnatural" and that native ecosystems do not deserve protection. Others seek to push more domestic pets, including off-leash dogs and feral cats, into these few, remnant areas. Golden Gate Audubon believes that the Project must include an outreach element to dispel false information about the NAP, promote the importance of stewardship of natural areas, and help build a political constituency to keep the NAP adequately funded and empowered to meet the other objectives.

C. Description of Natural Areas Program

1. Section III E 3 Description of Natural Areas Program Management

05

Golden Gate Audubon supports additional funding to support additional Natural Areas Program staff. The SNRAMP is a 20-year plan that anticipates growing impacts on the natural areas. To be effectively implemented, the Project will demand more than the ten gardeners that are currently on staff.

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2. Management Practices

a. Integrated Pest Management

Golden Gate Audubon endorses the DEIR's selection of the "least toxic decision making model." (DEIR, at 90). Because the use of pesticides in San Francisco is extremely controversial, Golden Gate Audubon encourages the NAP to develop a comprehensive communication and education package prior to applications, especially near neighborhoods, schools, playgrounds, and other areas that may be accessed by children and other vulnerable groups.[1]

06

b. Tree Management

Golden Gate Audubon supports the tree removal proposed in this plan when the tree trimmers and tree removal is made after taking precautions defined above to protect native, nesting bird species. (*See* DEIR, at 92) Where trees must be removed during the bird nesting season (February 1 – August 1 of each year), surveys should be conducted to avoid unnecessarily disturbing nesting birds. Destruction of birds' nests, eggs, or young constitutes a violation of the federal Migratory Bird Treaty Act, for which there are no take permits allowed.

07

Golden Gate Audubon also endorses the intent to remove non-native trees with native trees or shrubs, as is appropriate for the habitat. Golden Gate Audubon cautions the Planning Department that removal of trees results in loss of carbon and carbon-fixing, which may be considered to contribute to climate change. The Department should address this issue in the DEIR because failing to do so may be considered a flaw in the DEIR that leaves it vulnerable to challenge.

08

09

c. Erosion Control

Golden Gate Audubon encourages the use of site-appropriate erosion control measures. (*See* DEIR, at 93) For example, in the past, the RPD has dumped piles of redwood chips along Lake Merced, which has resulted in (likely illegal) discharges of the chips and their chemical components into the Lake, changing its chemical composition and adding pollutants.

10

3. Monitoring Program

Overall, Golden Gate Audubon endorses the Monitoring Program as written, but is concerned that the DEIR does not commit the City to fully executing or funding the Monitoring Program. (DEIR, at 94-95) Golden Gate Audubon strongly recommends that this section be improved to identify funding sources and state an affirmative commitment that monitoring will be conducted and that findings will be made available to the public (via reports or other means of sharing data) in a timely manner. This is of particular importance for the monitoring of special status species.

11

Golden Gate Audubon further endorses the Monitoring Program's component to monitor avian and butterfly abundance and diversity even for species that are not considered to be a "special-

[1] See http://www.epa.gov/opp00001/ipm/schoolipm/append-b.pdf

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status." (DEIR, at 95) The goal of many conservation efforts is to keep "common species common" before they are considered special-status species that require the kind of significant and often controversial management practices necessary to keep special-status species extant.

D. Project-Level Activities (Section III.F.2)

1. Sharp Park

01 (Cont.)

The full plan for Sharp Park is laid out in Section III.I.23 of the DEIR and we will therefore address it further below. However, for purposes of reviewing the DEIR in its current state, Golden Gate Audubon must comment on the project as described in Section III.F.2. (DEIR, at 97-98) It appears that the Sharp Park project as described in the DEIR is significant different than what was envisioned in the SNRAMP. (*See* DEIR, at 105). Golden Gate Audubon believes that the Planning Department is attempting to shoehorn a much larger Sharp Park project into the SNRAMP DEIR and creating the potential for confusion, conflict and delay. On that grounds, Golden Gate Audubon recommends that the Planning Department separate out Sharp Park from the rest of the DEIR for further study, public input, and approval.

E. General Recommendations for All Areas (Section III.H)

1. Breeding Bird Habitat

12

Golden Gate Audubon endorses the text included in the Breeding Bird Habitat portion of Section III.H. (DEIR, at 109). However, we recommend that the text be amended to include consideration of nest predators other than the nest-parasite Brown Headed Cowbirds. For example, the number of crows in San Francisco has been increasing in recent years, likely due in part to poor trash management. Therefore, Golden Gate Audubon recommends the following text:

- If surveys indicate that predation by crows, European Starlings, English House Sparrows, or other bird species are subsidized by human activities is a significant problem, consult with CDFG and the USFWS to determine the proper course of action, if any, to address population increases of these species and to minimize effects of these species on native, local breeding birds.

2. Cat Predators

02 (Cont.)

Feral cat colonies and feeding stations should not be tolerated in any portion of the Natural Areas. The destructive impact on birds and other wildlife has been well documented.[2] Feral cat

[2] *See Impacts of Feral and Free-Ranging Cats on Species of Conservation Concern*, available at http://www.abcbirds.org/newsandreports/NFWF.pdf; *see also Feral Cat Colonies in Florida: The Fur and Feathers are Flying: A Report to the U.S. Fish & Wildlife Service*, available at http://www.law.ufl.edu/conservation/pdf/feralcat.pdf (finding that feral and free-ranging cats pose significant threats to native wildlife and human health); Mott, M. 2004. *US Faces Growing Feral Cat Problem*. National Geographic News Service. Available at http://news.nationalgeographic.com/news/2004/09/0907_040907_feralcats.html (quoting

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feeding stations also feed non-native rats and other species which eat native bird eggs and chicks (raccoons, common raven and western scrub jays). There is an estimated population of 60 million feral cats in the US and their negative financial impact in the US cost $17 billion.[3]

Unfortunately, the DEIR states the intent to "[i]mplement the feral cat control policy from the Quail Recovery Plan approved by the San Francisco Commission on the Environment." (DEIR, at 110)

Section 2.4.3 of the Quail Recovery Plan states:

> Board of Supervisors Resolution No. 631-00 specifically requires a quail recovery effort that will be implemented "without killing other animals." Removal or relocation of predators may result in death and other unintended negative consequences. Therefore, any proposed removal or relocation of predators of any kind must be submitted in writing to the San Francisco Recreation and Park Department for review and recommendation. In each proposed case, the Department will consult with San Francisco SPCA to determine whether the relocation or removal is feasible and, if so, how best it can be done. If the relocation or removal is approved by SFRPD, the Department will utilize the pro bono services of SF/SPCA to accomplish the task unless SF/SPCA declines to participate.

02 (Cont.)

(Quail Recovery Plan, at 3). The Board of Supervisors Resolution No. 631-00 was intended to specifically apply to the Quail Recovery Plan, not to the SNRAMP. It is an extremely unwise management decision to import the strictures of Resolution No. 631-00 into a management for natural areas.

First, Resolution No. 631-00 was intended to apply only to the Save the Quail campaign and was not subject to debate or public input as part of a larger management scheme for all of San Francisco. Second, the Resolution was not considered with the special needs and sensitivities of the Natural Areas Program or its prioritization of the protection of biodiversity. Third, the Resolution was ill-founded in the first instance and constitutes a significant and unnecessary conflict with the goal of protecting native wildlife in the City.

In any event, the DEIR as written prohibits the use of lethal control for "any animal", including feral cats. It also effectively delegates decision-making authority about the potential removal or other control of feral cats to the SPCA, which is not a government entity and which has unfortunately consistently demonstrated that it prioritizes non-native feral cats over the wellbeing of native birds, lizards, mammals and insects that suffer significant impacts from feral cat colonies and feral cat feeding stations. While the SPCA has repeatedly verbally expressed concern about native animals, it has never once made efforts to reduce their impacts on native

a Cal. Dept. of Fish & Game staff person as saying "Cats do kill wildlife to a significant degree, which is not a popular notion with a lot of people.")

[3] *See* Hildreth, A. et al. 2010. *Feral Cats and Their Management*. University of Nebraska, Lincoln Extension. Available at http://elkhorn.unl.edu/epublic/live/ec1781/build/ec1781.pdf

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wildlife. Rather, it has consistently fought every reasonable effort to do so. With this language, the Planning Department is putting a non-wildlife organization at the forefront of decisions that have significant impacts on native wildlife and native ecosystems in the Natural Areas Program.

Perhaps more importantly to the viability of the DEIR, Golden Gate Audubon argues that **if the Planning Department intends to implement a prohibition against lethal control in the NAP, the environmental impacts of that policy must be fully reviewed in the DEIR**. The current DEIR provides no data or other information about this policy. If the Planning Department fails to conduct the necessary environmental review, Golden Gate Audubon will consider the DEIR to be fatally flaws and will consider an appeal and all necessary legal challenges.

02 (Cont.)

It would be far wise for the NAP to develop feral cat control as part of its Integrated Pest Management (IPM) program. (*See*, Hildreth, A. et al. 2010. *Feral Cats and Their Management.* University of Nebraska, Lincoln Extension, at 4)[4] As part of a planned IPM program, the effort could involve a series of prophylactic measures to prevent feral cat populations from expanding to the point that lethal control would be necessary. (*Id.*) A well-planned, comprehensive program would also reduce the need for extremely expensive and controversial Trap-Neuter-Release ("TNR") efforts, which are of questionable value in reducing colony sizes.

The Planning Department's effort to sweep this issue under the rug is one of the most glaring flaws in the DEIR. As expressed above, unless this issue is given much greater consideration—and the environmental impacts of the policy are fully studied and mitigated—Golden Gate Audubon will be in the unhappy and unwanted position of consider a challenge to the adequacy of the DEIR.

3. Dog Use

13 Dog-related recreation in the Natural Areas should be limited to areas and activities that are appropriate for each area. (*See* DEIR, at 110) For example, the walking of dogs on leash around Lake Merced may be appropriate, while permitting a dog to swim in the lake off-leash would not. The DEIR could be greatly improved by a site-specific discussion of which dog-related activities will be allowed.

14 The DEIR and the SNRAMP suffer from the larger problem endemic to San Francisco's management of dog-related activities. Though all city parks permit dogs only on-leash and off-leash in designated off-leash areas, non-compliance with leash requirements is rampant. Despite that dogs are regularly allowed to run off-leash throughout nearly every park in the city, off-leash dogs continue to oppose even reasonable restrictions on dogs in the few Natural Areas covered by this Project.

15 In any event, any Dog Play Area in any Natural Area should be fully enclosed or otherwise well-marked. Enclosures provide dog owners with a clear explanation of where off-leash activity is appropriate. Enclosures also restrain dogs from activities that may result in significant, negative

[4] Available at http://elkhorn.unl.edu/epublic/live/ec1781/build/ec1781.pdf

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15 (Cont.) impacts on native wildlife and plants in the Natural Area. Finally, enclosures reduce conflicts with other park users and other dogs.

16 Overall, the DEIR would be improved by a greater discussion of the environmental impacts of dogs on the Natural Areas. Because the stated priorities of the NAP, the protection of biodiversity and other natural values should be prioritized over dog-related recreation and other similar activities. Even where biodiversity is prioritized (in this small amount of San Francisco's total park acreage), there should be ample opportunities for responsible dog owners and other visitors to full enjoy the Natural Areas.

4. Urban Forestry

17 Golden Gate Audubon endorses the section of the DEIR relating to Urban Forests practices. (DEIR, at 111). We recommend that the section include text that all urban forest practices will consider impacts to nesting birds during the bird breeding season or where particular trees have been known to be important nesting or roosting sites in prior nesting seasons.

F. Recommendations for Specific Natural Areas (Section III.I)

1. Glen Canyon Park and O'Shaughnessy Hollow (GC/OH) (§ III.I.12, DEIR at 125)

18 Management measure GC/OH - 4a (*Avoid removing trees with red - tailed hawk or great horned owl nests and prohibit tree removal within 150 feet of occupied nest*) provides an illustration off the kind of need for sound urban forestry management discussed above. Tree inventories should be considered while nesting is underway. Information about the local of important nest trees should be recorded, preferably on maps and with GPS units or tree-tagging. Removal of important nesting trees should be avoided, even if those nesting trees are non-native (at least de-prioritized over other non-native tree removals). Staff should assess whether suitable nesting habitat exists nearby for returning breeding raptors or other birds that rely on the tall trees.

19 Golden Gate Audubon strongly endorses management measure GC/OH - 9a (*Monitor the dog impact on wetlands and Islais Creek channel and consider appropriate restrictions (including fencing) to keep dogs out of the creek channel and wetlands*). It is known that dogs have significant negative impacts on local birds and other wildlife populations. San Francisco Bay has already lost approximately 90% of its wetland habitats, leaving native wildlife that depend on such habitats few spots for rest, forage, and roosting. Dogs should be entirely excluded from the wetland and any riparian habitat areas. All dog play areas should be clearly delineated, preferably with fences.

20 Give the priorities of the Natural Areas Program, it is appropriate to prioritize protection of wetlands and creek channels above dog-related recreation. Staff should ensure effective implementation of this management measure by monitoring dog-related recreation in the area

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and enforcing leash requirements. A failure to enforce leash requirements will result in the ineffective implementation of this measure.

20 (Cont.)

2. Golden Gate Park Oak Woodlands (Section III.I.14)

21 Golden Gate Audubon strongly endorses the protection of Golden Gate Park's Oak Woodlands. (DEIR, at 130). We do note that dog play areas should be well-delineated, preferably with fences, and that leash requirements should be monitored and enforced.

3. Lake Merced (Section III.I.18)

Lake Merced Park is one of the most important Natural Areas in San Francisco. The park provides nesting habitat to herons in the rookery, waterbirds including grebe species in the lake, Red-shouldered hawks and passerines, including the San Francisco Common Yellowthroat, in the area surrounding the lake. The park is also highly accessible to neighboring communities and receives extensive recreational use.

In addition to the management actions already identified, Golden Gate Audubon recommends the following for Lake Merced:

- Improved trash management
  - Trash containers should be made wildlife-proof
  - Trash containers should be emptied regularly; currently trash is overflowing on weekends, attracting pests, non-native animals, and posing health risks. 22
- Cease dumping green waste along the sides of the lake
  - Green waste dumped around the edge of the lake eventually works its way into the lake, changing its chemical composition and contributing to pollutant problems in the lake, including eutrophication.
- Discourage feeding of all animals.
  - Signs should be installed to discourage the feeding of pigeons, other birds, and animals near the concrete bridge. Signs should be in multiple languages.

23 Golden Gate Audubon endorses management measure LM – 4a (*Maintain and enhance important bird nesting and foraging habitat to include the removal of invasive species and natural recruitment of preferred species*). (DEIR, at 135) Golden Gate Audubon also endorses management measure LM – 7a (Relocate the DPA to a different area to avoid disturbing breeding birds in the current location). Given the current moratorium on DPAs, it is unlikely that the DPA could be moved and that the only viable option is removal. While Golden Gate 24 Audubon supports removing the DPA from the site, Golden Gate Audubon encourages the city to find a suitable location for the DPA that will not result in an impact to native wildlife or plants. While the SNRAMP would reduce the total number of DPAs currently in San Francisco, Golden Gate Audubon reminds the City that new DPAs are being planned for Heron's Head Park, Lennar's Hunters Point and Candlestick Point development sites, Treasure Island, and other sites in the Sunset district.

GGAS-1

4. McLaren Park (Section III.I.19)

Golden Gate Audubon endorses management measures MP - 8a (Restrict access to sensitive habitat areas if damage continues), MP - 9a (Eliminate dog access to a portion of Gray Fox Creek and convert the area around the creek to an on - leash area, resulting in the loss of 8.3 acres of DPA), and MP - 9b (Monitor native grassland and wildflower areas within the remaining off - leash area of the Shelley Loop and Geneva Avenue DPAs). (DEIR, at 138-139) As discussed at length above, the priorities of the Natural Areas Program require consideration of the monitoring and protecting of biodiversity and natural habitat values above recreation, including dog-related recreation, which can have significant negative impacts on the environment and other visitors to the natural area. Specifically, Golden Gate Audubon supports the protections at the Gray Fox Creek area and also recommends that if the native grassland and wildflower areas near Shelley Loop and Geneva DPAs show harm to these plants attributed to dogs then adaptive management action should be implemented to protect the plants.

25

5. Mt. Davidson (Section III.I.20)

Mt. Davidson also provides valuable habitat for hawks, hummingbirds, and other native species. Any tree removal necessary should be conducted in a manner sensitive to these and other nesting species.

26

II. PLANS AND POLICIES

A. San Francisco Dog Policy (Section IV.A.5)

While the DEIR does not identify any inconsistencies with the San Francisco Dog Policy, Golden Gate Audubon notes that San Francisco's failure to fully implement the Dog Policy does create ongoing and serious conflicts with the priorities of the NAP. (See DEIR, at 155-156) The lack of adequate enforcement of the Dog Policy, especially in sensitive areas where leashes are required or dogs are excluded, has perpetuated conflicts between different users of the park system in San Francisco and exacerbated impacts to local wildlife and plants. The DEIR should include provisions requiring active compliance monitoring and enforcement of the policy to ensure that the application of the Dog Policy is consistent with the NAP.

27

B. San Francisco Climate Action Plan (Section IV.A.8)

Golden Gate Audubon does not challenge the assertion that the DEIR is inconsistent with San Francisco's Climate Action Plan. (*See* DEIR, at 156). However, we note that the Project calls for the removal of many trees and other vegetation, which may have impacts on carbon-release and carbon-sequestration. Golden Gate Audubon urges the Planning Department to fully consider these impacts to ensure that the lack of information related to invasive plant removal and carbon-sequestration creates a vulnerable flaw in the DEIR.

09 (Cont.)

C. California Coastal Act (Section IV.A.12)

GGAS-1

Golden Gate Audubon does not take a position as to whether there are any conflicts with the Coastal Conservation Act. We do note, however, that some of the work that may be required to fully implement management at Sharp Park may require permits under the Coastal Act (and other regulations and laws). Golden Gate Audubon does not understand from the DEIR how some parts of the Sharp Park management project can be distinguished from those proposed as part of SNRAMP. Because management of all of Sharp Park should be considered holistically, Golden Gate Audubon encourages the Planning Department to segregate Sharp Park from the rest of the SNRAMP DEIR for further environmental review and planning.

01 (Cont.)

III. BIOLOGICAL IMPACTS

A. Consideration of California Clapper Rail

During the bird breeding season of 2011, California Clapper Rail young were observed on multiple occasions at Heron's Head Park. This was the first detection of (likely) breeding California Clapper Rail in a considerable period and it is believed that the nesting pair derived from rail populations further south in the Bay. The appearance of this breeding, endangered bird highlights the importance of all of San Francisco's bayside wetland areas, including, potentially, India Basin. Golden Gate Audubon recommends that the Planning Department consider whether the California Clapper Rail should be included on Table 9.

28

B. Impacts to Native Plants

Golden Gate Audubon joins in the comments provided by the Yerba Beuna Chapter of the California Native Plant Society with regard to the impacts to native special status plants. (See DEIR, at 294-295)

Overall, the DEIR would be improved by including a discussion of the value and creation of brush piles in areas where tree trimming or tree removal is planned. Brush piles can provide immense value for wildlife and suppress invasive plant growth.

29

B. Impacts to Native Birds and Sensitive Bird Species (Impacts BI-2, BI-5).

Golden Gate Audubon is most concerned with this section's failure to discuss the environmental impacts of implementing General Recommendation 7, especially GR 7a, as formal policy in implanting the SNRAMP. The DEIR does not discuss the environmental impacts arising from GR 7 and does not consider any alternatives to perpetuating feral cat colonies in Natural Areas. The DEIR should be revised to consider different alternatives, including the absolute exclusion of feral and free-ranging cats in Natural Areas and to consider the impacts of all reasonable alternatives for cat population management.

02 (Cont.)

To the extent that maintenance activities will have impacts on birds and other sensitive species, Golden Gate Audubon believes that as long as best management practices are in place, monitored, and enforced, impacts to native species should be minimized. (See DIER, at 313-316) For example, trail-clearing, maintenance, or tree cutting during the breeding season should follow protocols identified in the DEIR to avoid disturbance to breeding birds or other animals.

30

GGAS-1

02 (Cont.) The DEIR would be improved by acknowledging that the total San Francisco population of California Quail is approximately 12 birds. The quail have been extirpated from much of the city due to management, including tolerance of feral cat colonies and off-leash dog activities. The quail should be considered a locally significant bird and provided special status protection consideration in the DEIR.

C. Impacts to Sharp Park Will Have Significant and Unavoidable Impacts.

31 Golden Gate Audubon does not agree with the analysis provided under Impact BI-6 that the plan for Sharp Park as laid out in the DEIR will result in impacts that are less than significant to sensitive species with mitigation. (*See* DEIR, at 319-343) Golden Gate Audubon believes that the breadth of impacts has not been adequately described or studied in the DEIR and is concerned that the incomplete nature of the DEIR in this regard constitutes a potentially fatal flaw that is subject to challenge. Golden Gate Audubon also believes that implementation of the proposed Sharp Park project would inevitably conflict with the federal Endangered Species Act and potentially other federal and state laws, resulting in difficulty in obtaining permits and perhaps further litigation regarding the matter. Golden Gate Audubon reiterates its recommendation to the Planning Department that it tier off study of the Sharp Park project for further study and subsequent review and approval.

IV. CONCLUSION

Thank you for your consideration of our comments. Golden Gate Audubon will continue to submit comments, both written and verbal, in an effort to improve the SNRAMP project. If you would like to discuss this matter further, please do no hesitate to contact me at (510) 843-6551 or mlynes@goldengateaudubon.org.

Best regards,

Michael Lynes
Conservation Director

GGHNA-1

Golden Gate Heights Neighborhood Association
P.O. Box 27608
San Francisco, CA 94127

October 31, 2011

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CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

Bill Wycko, Environmental Review Officer
SF Planning Dept.
1650 Mission St, Suite 400
San Francisco, CA 94103

RE: Comment on Significant Natural Resources Area Management Plan EIR

The Golden Gate Heights Neighborhood Association (GGHNA) represents over 400 households in the Golden Gate Heights Neighborhood of San Francisco (bounded by 9th Avenue, Quintara St, 10th Ave, and Kirkham St.). Our neighborhood is composed of primarily single-family homes (mostly homeowners, not renters) densely packed together. We have four parks in our neighborhood, and all of them have natural areas in them – Grandview and Golden Gate Heights Parks, Hawk Hill, and the Rock Outcrop. In every park in our neighborhood, except Golden Gate Heights Park, the Natural Areas Program (NAP) controls 100% of the park. All of the natural areas in the parks in our neighborhood are located on steep slopes.

01 GGHNA has repeatedly expressed our concerns about damage to neighboring homes and property from drifting sand from the parks in our neighborhood, about plans to remove trees from the natural areas, and about poor maintenance in natural areas. We worry that our concerns have been ignored. Indeed, there is little in the NAP EIR to indicate they have been heard.

GGHNA has the following concerns about the NAP EIR:

1) **The analysis of impacts from drifting sand is inadequate.**
Years ago, drifting sand was a BIG problem in our neighborhood, especially around Grandview Park and the Rock Outcrop. The parks in Golden Gate Heights are located on the westernmost hills in San Francisco. There is literally nothing that stands between Asia and us and the wind frequently screams through our neighborhood. The wind picks up any open sand
02 in the parks and essentially "sand blasts" our homes, our property, and ourselves. Over the years, neighbors at Grandview and the Rock Outcrop experimented with plants to stabilize the sand in the parks and found that iceplant was the only thing that really worked. While there was still some drifting sand, it was minimized.

Then about ten years ago, NAP staff began tearing up the iceplant and replacing it with native plants. Drifting sand is once again a problem in our neighborhood. The sand blows into

GGHNA-1

people's backyards, damaging their property, fills the streets, and clogs the sewers. This is especially concerning on 14th Avenue below the Rock Outcrop, where a very narrow street becomes even narrower when sand drifts into the street. In 2006, a house on 14th Avenue was red-tagged after a major landslide in the backyard smashed into it. The house is immediately adjacent to the Rock Outcrop, where NAP staff had removed large amounts of iceplant. While we cannot say definitively that the iceplant removal caused the landslide, we are concerned that it might have had at least some impact.

02 (Cont.)

At a GGHNA meeting several years ago about the NAP, homeowners who live adjacent to Grandview complained about damage to their backyards from sand that had drifted into them after iceplant in Grandview that had held the sand in place was removed by RPD. NAP staff at the meeting responded that RPD has no "legal" responsibility for damage to property outside of a park caused by sand that drifted into their backyards from the park because of the actions by NAP staff (removing iceplant).

When the NAP Management Plan was released in 2006, it called for "scattered, open sand" in all the natural areas in our neighborhood. Given the NAP staff's arrogant response to our members' concerns about damage, the plan to have scattered, open sand in the parks in our neighborhood has been of great concern to us.

The NAP EIR does not adequately address concerns, especially at the four parks in our neighborhood, about impacts of drifting sand on people's land and property that is immediately adjacent to the parks. This must be considered, and mitigations proposed (such as no scattered, open sand) to address the impacts. We know there are impacts. We see them daily. The NAP EIR must consider these impacts as well.

2) **The analysis of impacts from NAP tree management is inadequate.**

03

Grandview Park is one of the few parks where tree removal is planned by the NAP. The people in our neighborhood have always loved the trees atop Grandview. Indeed, our association initially formed to fight development of Grandview Park, and the park and its trees make up our logo. We have expressed repeated concerns about the removal of any trees in Grandview, especially since there are so few remaining. At a March 2010 public meeting on the Grandview Trail Restoration Project, attendees were told there would be no tree removals at Grandview. Then, when the final Trail Restoration Project was announced several months later, it included removing "hazard" trees. While we support removing hazardous trees because of public safety concerns, we are concerned about the mixed messages we have gotten from RPD and our inability to find out what will really be done.

The Trail Restoration Project released in 2010 indicated that NAP will "limb" the remaining cypress and eucalyptus trees in Grandview, with no indication of how much pruning would actually be done. We have seen at other parks, such as Tank Hill, that this "limbing" can be extreme, resulting in ugly-looking trees that appear misshapen and do little to slow down the wind. The NAP EIR does not adequately consider the impacts on aesthetics, or on wind and impacts of wind on neighboring properties, or on the trees themselves of the extensive "limbing" planned by NAP staff.

3) **The analysis does not adequately address impacts from introducing sensitive species into natural areas.**

04

The NAP Management Plan calls for the re-introduction of sensitive species at Grandview and other parks. Because of their special status (threatened or endangered), these species, once planted, automatically trigger additional protections and restrictions, especially in

GGHNA-1

access. The NAP EIR does not address the impacts on recreation of planting sensitive species in natural areas. It also does not address impacts on neighboring properties if sensitive species are planted. This is especially concerning in the parks in our neighborhood, where the natural areas control the entire park and where sensitive species could be planted immediately adjacent to a homeowner's property. What will be the impact on these park neighbors if invasives from their backyards "threaten" the sensitive species? Will they be held liable in any way because of damage to the sensitive species? Will they be forced to cut down invasive plants on their own property? These impacts should be considered in the EIR.

04 (Cont.)

4) **The analysis does not adequately address impacts from poor maintenance of NAP areas.** The NAP program has a history of poor maintenance. One of the GGHNA Board members has testified at hearings that he and his daughter once spent a very enjoyable time planting native plants in a NAP-managed natural area. Six months later, when his daughter wanted to see how "her" plants were doing, they went to the park and discovered nothing but a bunch of dead and dying plants. There had been no maintenance done since the original planting. His daughter was devastated at the death of all the plants she had worked so hard to plant.

05

The NAP Management Plan allocates fewer than 20 days/year for planting/maintenance of each natural area. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. A few parks are scheduled for only one work day/year. Clearly, NAP cannot maintain all the areas that it now controls. The NAP EIR must consider the impacts on aesthetics, and on the biological resources themselves of this lack of maintenance. What good does it do to plant native plants if they die within a few months because no maintenance was done? These impacts must be considered in the NAP EIR.

The Golden Gate Heights Neighborhood Association appreciates the opportunity for us to give, yet again, our comments about the NAP and the NAP EIR. We feel that the NAP EIR is not adequate in the above areas, and that it must be revised to consider the impacts we outlined above. Thank you.

01 (Cont.)

Sincerely,

Sally Stephens
President

GHCC-1

Green Hills Country Club
500 LUDEMAN LANE · MILLBRAE, CALIFORNIA 94030

May 19, 2012

Dear Colleagues:

Sharp Park Golf Course is one of only a handful of golf courses that the general public can play that was designed by the worlds most famous golf architect, Dr. Alister MacKenzie. It is indeed a national treasure, and although only 14 of the original MacKenzie holes remain they are indeed MacKenzie "gems". Sharp Park opened to great fanfare 80 years ago and MacKenzie was so proud of the layout that he highlighted it in his book "The Spirit of St. Andrews".

There are amazing parallels that Sharp Park shares with a nearby MacKenzie designed course, Green Hills Country Club (Originally the Union League Golf and Country Club of San Francisco). Green Hills was designed by Alister MacKenzie and was formerly the site of an orchard, where flowers were grown and used by John MacLaren for the 1915 Worlds Fair. John MacLaren hired Alister MacKenzie to design Sharps Park. John MacLaren, one of the most famous horticulturists of the time, planted the cypress trees that line the fairways of Sharp Park. Similar Cypress trees are present at Green Hills. Green Hills original clubhouse was designed by Willis Polk Architects, a company that helped to restore much of San Francisco after the great earthquake and fire of 1906. The architect that designed the original Green Hills clubhouse for Willis Polk was Angus McSweeney. Sharp Park's clubhouse was also designed by Angus McSweeney.

01

When Green Hills was opened in 1930 MacKenzie praised the layout and called it one of the best golf courses on the west coast. Interestingly, when MacKenzie wrote the "Spirit of St. Andrews" Green Hills was only mentioned in one sentence. On the other hand Mackenzie devoted much of a chapter to his pride in Sharp Park and the seaside links design philosophy. This public golf course was indeed one of the works MacKenzie was most happy with in California (which is significant when one looks at the Magnificent layouts, almost all private, that he is responsible for. They include

CLUB HOUSE (650) 648-9952 · PRO SHOP (650) 648-9989 · WEBSITE www.greehillscc.com

GHCC-1

Green Hills Country Club
500 LUDEMAN LANE · MILLBRAE, CALIFORNIA 94030

Cypress Point, The Valley Club, The Meadow Club, Green Hills, Pasatiempo and others).

Those that say that Sharp Park is no longer a MacKenzie layout are grasping at straws. Fourteen of the original holes are still in use (two modified somewhat) and the four replacement holes to the east of Highway One were designed by MacKenzie's assistant, Jack Fleming.

01 (Cont.)

Closing Sharp Park would be a travesty and would forever prevent the average person from playing golf at a course designed by the worlds most famous golf architect.

Sincerely,

Paul Grech

Joseph Michelucci

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CITY & COUNTY OF S.F.

GAY AND LESBIAN SIERRANS

SIERRA CLUB
FOUNDED 1892



San Francisco Bay Chapter / 2530 San Pablo Ave., Ste I / Berkeley, CA. 94702

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA. 94103

Re: The Draft Environmental Impact Report for Natural Areas Management Plan

01 We find that the Natural Areas Management Plan has been thoroughly vetted and that the appropriate conclusions, best serving the broad range of interests and needs of the citizens and wildlife of San Francisco, have been arrived at. We therefore strongly support the adoption it's Draft Environmental Impact Report and the final approval of the Management Plan. We have been volunteer participants as a group in the Corona Heights Natural Area habitat restoration project since 1993, and as individuals at Natural Areas throughout the City.

Thank You,

[signature], 2011 GOV Com mem Ben

The Gay and Lesbian Sierrans (GLS)
of the San Francisco Bay Chapter of the Sierra Club

MGSG-1

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Amber Hasselbring
415-786-4957
www.missiongreenbelt.com

Amber Hasselbring
4150-A 25th Street
San Francisco, CA 94114

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CITY & COUNTY OF S
PLANNING DEPARTMENT
MEA

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

October 5, 2011

Subject: Natural Areas Program and Management Plan

Dear Bill,

01 I am writing in support of the Natural Areas Program and Management Plan.

02
- The Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan.
- Considers a broad range of potential impacts to our City's resources.
- Proposes mitigation measures to address impacts where possible.
- Has been based on detailed studies and scientific experts.
- Consistent with several directives, including the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan.
- Looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Areas.

Most sincerely,

Amber Hasselbring

MPIC-1

350 O'Shaughnessy Boulevard • San Francisco, California 94127
Telephone: (415) 281-0892

Miraloma Park Improvement Club

October 6, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
Natural Area Management Plan
1650 Mission Street
San Francisco, CA 94103

Re: Deficiencies in DEIR, Significant Natural Resource Areas Management Plan (SNRAMP):
Mt. Davidson

Dear Mr. Wycko:

The Miraloma Park Improvement Club (MPIC) represents the San Francisco residential community that will be most impacted by the SNRAMP. If required to choose among the alternatives in the DEIR for SNRAMP, the MPIC must urge adoption of the more reasonable Maximum Recreation Alternative (MRA) of the SNRAMP
01 for Mt. Davidson Park because this alternative involves substantially less invasive tree removal, and thus mitigates the extensive and unavoidable impact on this important recreation and cultural resource that the more radical alternatives will involve. We absolutely oppose the Maximum Restoration Alternative because it
02 involves even more tree removal than the proposed project total of 1600 trees and would thus maximize the negative impact on Park recreational use and appearance.

However, even the environmental effect of the proposed removal of 1600 trees is not satisfactorily studied by the draft EIR. For one thing, the projected number of 1600 trees to be removed does not represent all of the
03 trees that would be removed from this historic Sutro forest, because additional trees will have to be removed for reasons not included in the MRA, such as the SFPUC tank and other utility projects, storm damage, and tree death due to age and/or lack of maintenance. To us, the goal of all of the SNRAMP alternatives for Mt. Davidson Park appears to be to deter public recreational use of this Park and make large portions of it into an
04 oak and prairie landscape. This goal is unacceptable to the neighborhood of Miraloma Park, which borders on the Mt. Davidson forest and for which this forest is a major recreational resource and therefore a mainstay of our quality of life and property values. This goal is also inconsistent with historic Park uses and the original status of Blue Mountain, later renamed Mt. Davidson (see below).

In addition to these general objections, the MPIC also finds the DEIR inadequate and inaccurate when addressing the environmental impacts of the SNRAMP in the following specific areas:

1. Preservation of the Historic Forest and Scenic Vistas. The Historic Resource Evaluation Response for the SNRAP confirms that the Mount Davidson natural area is a historic resource and potentially eligible for listing under the CA Register as an ethnographic landscape. The SNRAP project described in the DEIR will significantly negatively impact this historic forest because (1) it proposes that replacement trees can be
05 planted anywhere in San Francisco, rather than in the Park in the location of trees removed; (2) it specifies replacement of trees removed with oaks rather than the historic forest species; and (3) it lacks any plan for replanting the remaining trees (i.e., those trees not subject to planned removal) as the existing historic species reach the end of their lifespan. Furthermore, the project map (see Exhibit A) indicates that areas

MPIC-1

06 where tree removal would be concentrated are the most visible areas within the Park, which is a major scenic and historic resource for Park visitors as well as residents of surrounding communities. Clear-cutting these highly visible areas along major trails and sightlines within the Park will be very detrimental to enjoyment of the Park by its users. Of crucial concern is not the impact on views of the forest from outside of the park—shown on page 193-194 of the DEIR, or the impact on distant views to and from the Park, but the view and experience of the historic forest up close from within the Park: along the trails, roads, and historic monuments within the MA-1 and MA-2 areas where substantial tree removal is proposed.

07 Also, the DEIR is does not clearly define the planned scope and specific impact of the 1000-tree removal planned for the MA-1c area: what percentage are these 1000 trees to be removed of the existing forest in that area:100%, 75%, 50%, or 25%? If 50% or more, this would more than just thin the historic forest—it would decimate it, a significant negative impact to this historic resource. The EIR should detail the square-footage of the MA-1c, MA-2c, and MA-2e areas where trees would be removed and provide the estimated percentage of trees to be removed from each one. These numbers would help to ascertain the environmental impact with respect to what recreational users will experience within the park.

08 Furthermore, if the MRA alternative or some variant of it is adopted, to mitigate the negative impacts on appearance and recreational use, the MPIC insists that all healthy cypress and pine trees in the MA-1c, MA-2c, and MA-2e areas be allowed to remain. Unlike eucalyptus, these species from the original historic forest are not invasive and add greatly to pleasure of viewing within the Park, as well as hosting a varied bird population that would be lost with their removal. The MPIC further insists that all trees removed from Mt. Davidson as part of SNRAMP be replaced one-for-one within the Park in the locations vacated by the removed trees using cypress, cedar, or pine species in order to maintain the historic visual character of the Sutro forest. The historic cypress and pine species and cedar as well are neither exotic nor invasive, grow much faster than oaks, and are more suited than oaks to survive the soil and climate conditions in Mt. Davidson Park. In fact, oaks never existed on Blue Mountain or Mt. Davidson, so no valid argument can be made for replacement of removed trees with oaks.

09 Finally, tree removal from the MA-1c and MA-2c areas as part of building and native plant restoration has already left unsightly stumps, remnants, and debris along the most accessible and visible areas inside the forest sectors of the park (See Exhibit B attached). The MPICs require that any trees killed for SNRAMP be totally removed—all the way to the ground—so that no unsightly stumps are left to negatively impact the aesthetic view from within the park. Also, non-native vegetation and tree parts removed by City staff thus far has been left in unsightly debris heaps along the public trails. This significantly negatively impacts the Park as a scenic resource for those wishing to enjoy the beauty of nature along the Park trails. The MPIC requires that the debris created by the SNRAMP project be collected and dumped away from public view or removed from the park all together.

2. Noise and Wind Pollution Mitigation. The DEIR addresses the noise-pollution impact anticipated from the actual tree clearing to residents adjacent to the park. However, the DEIR does not address the MPIC's concern that tree removal will result in a substantial permanent increase in ambient noise levels

10 heard by visitors within the park. The nearby 280 freeway, BART, and Portola Drive are substantial sources of noise currently partly mitigated by trees slated for removal. The Final EIR should compare sound readings within the MA-1a area with those in the MA-3a areas to demonstrate the impact of MA-1c and MA-2c area tree removal on noise levels along the Park road and trails surrounding the summit of the mountain. Furthermore, the trees in the MA-1c area now serve as a wind-break, and we believe their removal will significantly increase wind in inside the park and thus negatively impact the experience for visitors within the Park. The EIR should address this potential impact, which could be

11 documented by taking wind speed-readings from the now treeless northeast viewpoint of the Park and comparing these readings with other readings from the MA-3a areas.

MPIC-1

3. Recreational Use. The DEIR notes that Mt. Davidson Park has high recreational values and trail use by the citizens of San Francisco, yet it does not address the impact of the project tree removal plan on fostering the growth of the invasive native poison-oak or how this significant negative impact on Park visitors will be mitigated. Where trees have been removed thus far, we have seen a significant increase in poison oak, often along hiking trails, and we believe this proliferation of poison oak will increase substantially as more trees are removed. The MPIC reiterates its request for the project plan to include a policy to keep poison oak at least 10 feet away from all trails at all times. 12

The DEIR also does not address the negative impact on Park visitors of prohibiting benches in scenic view areas within the MA-1 sector in order to deter off-leash dogs. The DEIR does not assess how leash rules could be effectively enforced or that, instead of pursuing such enforcement, City staff are choosing to remove recreational amenities such as benches in sensitive plant areas. This policy significantly negatively impacts recreational experience of one of the best views in San Francisco. There is now only one bench in Mt. Davidson Park, and for full enjoyment by recreational users additional benches should be installed throughout the Park. 13

4. Economic Factors. The DEIR lacks any cost estimate for implementing the SNRAMP and has no information about how it will be funded. It also does not address the potential impact of shifting resources such as park bond funds away from recreation and park maintenance/improvements to complete the SNRAMP. The substantial cost of removing the trees from Mt. Davidson will divert significant resources from providing what the MPIC considers a higher priority for resource use: basic maintenance of Mt. Davidson Park including litter and graffiti removal, forest and trail maintenance, and installation of benches and trail direction signage. 14

In summary and conclusion, mitigation measures for any approved Natural Areas Plan tree removal and trail closure should include 30-day advance notification to the MPIC of specific cutting planned and the right of interactive review and potential adjustment of specific removals by the MPIC—the neighborhood most heavily impacted by the Plan. Furthermore, any trees cut down should be completely removed to ground level and all remnants taken away in order to maintain the aesthetic quality of the forest and park. The Plan should also include monthly removal of all poison oak within 10 feet of trails and maintenance and protection of historic Works Project Administration (WPA) trails and retaining walls. Any activity for implementation of the SNRAMP should not restrict public use of the park or access to the historic area or viewpoints for more than 30 days at a time. 15 09 cont. 12 cont. 16 17

If the Planning and Recreation and Parks Departments do not adopt the Maximal Recreation Alternative and are not willing to completely implement the above-requested mitigations to the SNRAMP and augmentations to the DEIR, the MPIC requests that these Departments remove Mt. Davidson from the SNRAMP. This would be the only acceptable solution to avoid permanent degradation of this important recreational and aesthetic resource for residents of the second densest city in the United States. 18

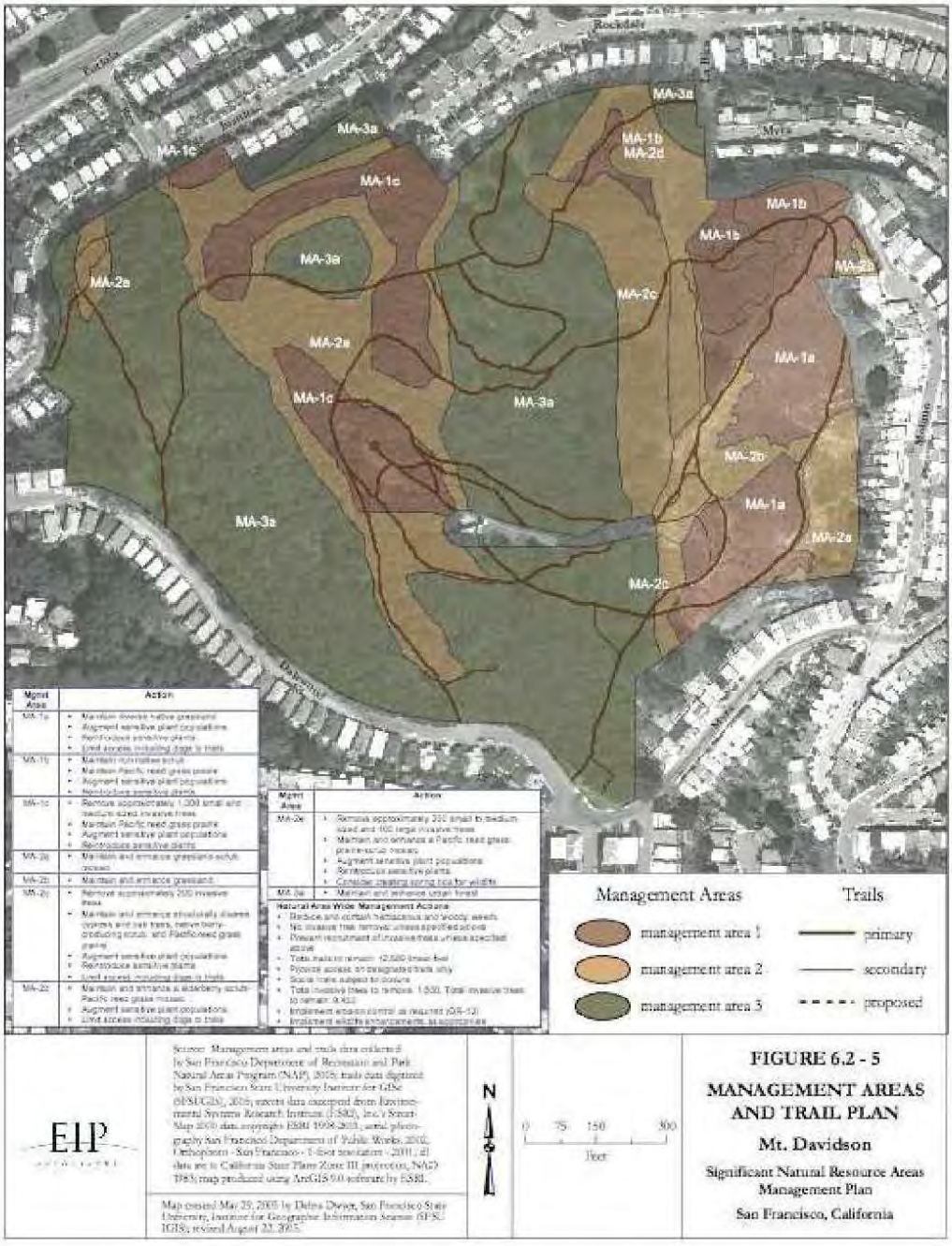
Sincerely yours,

Dan Liberthson, Corresponding Secretary

Cc: S. Elsbernd, P. Ginsberg, West of Twin Peaks Central Council, West Portal Monthly, Westside Observer, SF Parks Alliance, M. Welther (Golden Gate Audubon Society)

MPIC-1

EXHIBIT A. Plan Map



FINAL DRAFT 6.2–19

MPIC-1

EXHIBIT B. Debris and Remnants from Tree Removal



MPIC-2

350 O'Shaughnessy Boulevard • San Francisco, California 94127
Telephone: (415) 281-0892

1

Miraloma Park Improvement Club

June 7, 2012

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
Natural Areas Management Plan
1650 Mission Street
San Francisco, CA 94103

Re: Deficiencies in Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) for Mt. Davidson

Dear Mr. Wycko:

The Miraloma Park Improvement Club (MPIC) represents the San Francisco residential community that will be most impacted by the SNRAMP for Mt. Davidson Park. The MPIC agrees with the conclusion in the DEIR for the Natural Areas Program (NAP) that removing 1600 trees from Mt. Davidson Park, eliminating 2900 feet of trails, and restricting access to 6 acres of this neighborhood park, located within one of America's densest cities, in order to implement the proposed project will result in a significant and unavoidable negative cumulative environmental impact on the irreplaceable cultural, recreational, and biological resources of Mt. Davidson Park. We agree with the conclusion of the DEIR (page 525) that the Maintenance and
01 Maximum Recreation Alternatives are the Environmentally Superior Alternatives because these alternatives involve removal of substantially fewer trees and less access, as well as less herbicide use. We absolutely oppose the Proposed Project and Maximum Restoration Alternatives because
02 of the significant and unavoidable negative environmental impact these plans would have on the Park's aesthetics, cultural resources, wind and shadow, recreation, biological resources, hydrology, hazardous materials, and air quality. If these alternatives are approved and
03 implemented, the MPIC will seek to have Mount Davidson Park removed from the Natural Areas Program and returned to its original purpose as a recreational facility subject to all of the maintenance standards required by Proposition C, passed by voters in 2003.

Since our comment letter was sent in last October, we have uncovered even more deficiencies in the DEIR for the SNRAMP. Central to these deficiencies are inconsistencies in the SNRAMP for Mt. Davidson that were not addressed in the DEIR and therefore led to flaws in its conclusions. We find the DEIR deficient in analyzing the potential negative environmental impacts of the project on aesthetics, cultural heritage, wind and shadow, hydrology and water quality (including erosion), air quality, and increasing hazardous materials. The DEIR does not adequately assess these impacts despite the potential for more tree loss from increased windthrow, increased erosion onto properties next to the park, significant reduction in CO_2 absorption, loss of existing animal and bird habitat, and the fact that maintenance of the native plant area would require frequent applications of herbicides classified by the City as "Most Hazardous" and "More Hazardous" to control non-native plant growth.

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The DEIR's conclusion that the tree removal on Mount Davidson Park would have less than significant impact on this historic landscape and forest is based on incomplete analysis. Much of the inaccuracy of the analysis is stated on page 191 of the DEIR:

> "The assumption that the SFRPD intends to spread the overall tree removal across the forested portion of a Natural Area and would not concentrate it in a particular location … Removing clusters of 20 or more trees over half an acre would still leave the surrounding forest and its aesthetic value intact. Also no Landmark Trees would be removed or altered."

This assumption is inconsistent with Appendix F of the SNRAMP, page 14, which indicates plans to remove trees in a concentrated area of 10.2 acres in order to convert 1/3 of the current 30.1 acre forest into a grass and scrub landscape. It indicates that a substantial amount equal to 82% of the trees in the 3.5-acre MA-1c zone would be removed. Two other zones within the 10.2-acre relandscaping area would lose 23-31% of their trees. This 10.2 acres would in fact lose substantially more than 40 trees per acre, as stated in the DEIR page 195. The MA-1c zone would lose 286 trees per acre, MA-2c 111 trees per acre, and MA-2e 82 trees per acre. These areas would be substantially reduced from the current 350 trees per acre to as low as 63 trees per acre in what amounts to deforestation – not thinning. Statements that only sick and dead trees would be removed are inconsistent with the reality that any person looking at this area of the park could not agree that 82% of the trees are in this condition now.

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Removing the trees over a 20-year period would not mitigate the substantial, cumulative, negative environmental impact. There are errors in the SNRAMP that were not addressed or corrected, as on Appendix F, page 8, for example: "The bulk of the tree removal [on Mount Davidson] will occur in MA-2e …" – inconsistent with page 14, which lists 23% for MA-2e, the least planned tree removal.

While The Historic Resource Evaluation Report (HRER) in the DEIR declares the landscape historic, the analysis is limited to the retaining walls and steps. A cultural landscape study is required to evaluate the historical significance of the forest landscape and the impact of the project on this significant resource, as requested by the MPIC letter regarding the SNRAMP Initial Study. All of the environmental impact conclusions of the DEIR regarding Mt. Davidson Park require additional analysis to address the concentrated historic tree clearing actually proposed in the SNRAMP for Mt. Davidson.

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The DEIR does not address the economic impact of the significant financial resources that would be diverted from SF Park and Recreation services to implement SNRAMP. There is no cost estimate for implementing the SNRAMP and no information about how it will be funded. It also does not address the potential impact of shifting resources, such as park bond funds, away from recreation and park maintenance and improvements in order to complete the SNRAMP. The substantial cost of removing the trees from Mt. Davidson will divert significant resources from providing what the MPIC considers a higher priority for resource use: basic maintenance of Mt Davidson Park, including litter and graffiti removal, forest and trail upkeep, and installation of benches and trail direction signage. Ongoing costs for herbicide spraying, erosion control, replanting, and fencing are also not addressed.

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In conclusion, the goals and current scope of the SNRAMP project for Mt. Davidson are incompatible with, degrade, and subordinate the goals and needs of those who live next to and use this important San Francisco park and recreation resource. The following SNRAMP proposals would all have significant negative environmental impacts for the residents of Miraloma Park: concentrated removal of 1600 trees; closure of 2,900 feet of unidentified trails; limitation of dog access to nearly six acres of the park; continued use of hazardous herbicides; prohibition of recreational amenities as defined by the Park Maintenance Standards developed to implement Proposition C in 2003; leaving maimed trees and trim waste in the park; disregard and degradation of the forest's historic and cultural value; and the failure to develop a vigorous reforestation plan for the MA-3 zones (with the same species). While the SNRAMP is described as a community-based program, the DEIR does not describe any meaningful way for residents to modify this plan once it is approved.

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Therefore, if the Planning and Recreation and Parks Departments do not adopt the Maximum Recreation or Maintenance Alternative, are not willing to fully analyze the additional impacts inadequately addressed in the DEIR, and fail to reduce the scope of the SNRAMP, the MPIC will request that Mt. Davidson Park be removed from the SNRAMP. This would be the only acceptable solution to avoid permanent degradation of this important environmental resource for residents of one of the densest cities in the United States. Mount Davidson Park is a public treasure – not a biological museum.

Following are our detailed comments on the DEIR regarding wind, forest resources, cultural landscape, erosion, aesthetics, recreation, noise pollution, herbicides, and wildlife.

Sincerely yours,

Dan Liberthson, Corresponding Secretary

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I. Wind

The forest in Mt. Davidson Park is a significant wind barrier. The SNRAMP project disregards this fact in its proposed doubling of the existing native plant area of the park by converting a third of the forest area (10.2 acres) into a prairie/coastal scrub landscape. The DEIR statements that this is thinning the forest and would involve removal of only 15% of all the trees are misleading, as the trees are actually proposed for removal in a concentrated 10.2-acre area (p. 14, SNRAMP – Appendix F). The DEIR therefore does not adequately evaluate the potential damage to the remaining forest from windthrow after implementation of the 1000-tree removal planned for the MA-1c area. This concentrated removal, estimated by the SNRAMP to be 82% of the trees in this 3.5-acre area, is substantial – not mere thinning.

The DEIR concludes that the wind impacts would be less than significant because trees would be removed in accordance with the Urban Forestry Statements in Appendix F of the SNRAMP. This
08 is an inaccurate conclusion because it does not address the statement in Appendix F that substantial tree removal should not occur in the MA-1c and MA-2c areas because this would increase the rate of windthrow. The DEIR states that ground-level wind hazards would not increase along the trails of Mt. Davidson because mostly small and medium trees would be selectively removed. This is incorrect. The MA-1c zone, which will lose 82% of its trees, is the location of the major and most popular trails in the park, which cross this zone in several locations. This concentrated removal would therefore result in a significant negative impact to this cultural, recreational, and biological resource.

The EIR should acknowledge the above inconsistency in the SNRAMP by recommending a significant reduction in the percentage of trees to be removed in the MA-1c area, to 15% or less, in order to avoid an increase in windthrow that could damage or kill trees, as well as expose trails and hikers to a significant increase in wind hazard created by making this area an exposed hilltop. In the existing situation, the forest serves as a wind-break and provides protection to visitors from the high wind speeds that prevail in this area. The EIR should address this potential cumulative negative impact, which could be documented by taking wind-speed readings from the now treeless northeast viewpoint of the Park and comparing these readings with other readings in the MA-1c zone, which would lose 82% of its trees.

II. Forest Ecology Considerations

MPIC agrees with the DEIR that a major reforestation effort should be undertaken by the City to rejuvenate Mt. Davidson Park's historic forest canopy. This should be a higher budget priority than tree destruction. The DEIR is deficient in documenting the scientific source for its statement that the proposed concentrated tree removal on Mt. Davidson will in fact make the remaining forest areas healthier than would improved maintenance – such as clearance of ivy, trimming of
09 potentially hazardous branches, and replanting of new trees of the same species to rejuvenate the forest, rather than allowing it to die from neglect. The DEIR should include as detailed a forest management plan for the MA-3 area of the park as it does for the vegetation of the MA-1 and MA-2 areas. It should further recommend that management of the MA-3 zones be transferred to the Recreation and Park Department's Urban Forestry Division, because Natural Areas Program staff lack the arborist and forestry expertise necessary to properly maintain the forest.

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The MPIC finds the conclusion in the DEIR that converting 10.2 acres of the park from forest to prairie reed grass will have a less than significant impact to be based on inaccurate and incomplete documentation. The DEIR (page 408) states that the total number of trees would not change within the Natural Areas. It further states that San Francisco trees are protected by the San Francisco Urban Forestry Ordinance (page 410). This is inaccurate and inconsistent with Table 5 (page 114), which says that a total of 18,448 trees will be lost in the Natural Areas if the proposed project is implemented. **The DEIR further states that one-for-one replacement trees can be planted anywhere in San Francisco, rather than in the Park or the specific location of trees removed and it specifies replacement of trees removed with slow-growing oaks rather than the historic forest species.** The actual goal of SNRAMP project – to eliminate, not thin or rejuvenate – the historic forests in these parks should be factually stated, although we strongly object to this goal. The DEIR states that no landmark trees will be removed; however, no trees in the SNRAMP areas are currently protected by landmark status. We must ask, do the Urban Forestry or Landmark Tree ordinances even apply to trees in City parks or Natural Areas? If not, references in the DEIR to these ordinances should say so, in order to avoid misleading readers into thinking that these historic trees are eligible for and subject to these protections.

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SNRAMP Figure 6.2-3, Vegetation for Mt. Davidson, significantly undercounts the number of Monterey Cypress trees growing in the areas described as blue gum forest by incorrectly showing the cypress as limited to a very small area on the southeastern edge of the park. The SNRAMP vegetation inventory of Monterey Cypress should be corrected, and these cypress trees should be exempt from the tree clearing proposed to implement this program. Neither Monterey cypress nor Monterey pine are invasive, and both add greatly to the recreational and aesthetic experience within the Park, including hosting a varied bird population that would be lost with their removal. Even the California Invasive Plant Council agrees with this assessment. Both of these species are California natives; fossil evidence shows that they existed on the San Francisco peninsula in the distant past.

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On Mt. Davidson, plans to destroy 1,600 trees over 15 ft tall include many Monterey cypresses In this particular "natural area," it is not accurate to say that "most" trees that will be removed are invasive. Since these species are native to California and have existed in San Francisco in the past, it is an exaggeration to call them non-native. The MPIC insists that all healthy cypress and pine trees in the MA-1e, MA-2e, and MA-2e areas be allowed to remain and that new cypress or pine be replanted one-for-one within in these same zones to replace each blue gum eucalyptus cut down. Furthermore, any trees removed from the MA-3 zone also should be replaced with the historic cypress, cedar, or pine species in order to maintain the historic visual character of the Sutro forest. These species grow much faster than oaks, and are more suited than oaks to survive the soil and climate conditions in Mt. Davidson Park. In fact, oaks never existed on Mt. Davidson, so no valid argument can be made for replacement of removed trees with oaks.

The projected 1600 trees to be removed does not represent all of the trees that would be removed from this historic forest. Additional trees will and have been removed for reasons not addressed, such as the SFPUC tank and pipeline upgrade, installation of utility lines, storm damage, vandalism, and tree death due to age and/or lack of maintenance. The Natural Areas Program does not document how many trees have been removed from the forest already, and so the 1600

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goal is a moving target and is unenforceable. Approximately 100 trees were removed in 2008 to move the Mt. Davidson pipeline from the native plant area to the area designated for forest preservation. Only 5 replacement trees were planted.

The evident goal of the SNRAMP for Mt. Davidson Park is to deter public recreational use and to double the existing native plant area of the park by converting a third of the forest area (10.2 acres) into a prairie/coastal scrub landscape. The SNRAMP estimate of 353 trees per acre on Mt. Davidson is half of that estimated by UCSF for their forest on Mt. Sutro, which is similar in density and age. The SNRAMP forest management goals of 50-100 square feet of basal area per acre in the MA-1 area would leave only 23-46 trees per acre, assuming an average tree diameter of 20 inches; 100-200 sqf basal area for MA-2 would leave 46-92 average 20-inch trees per acre and just 92-275 trees of this average size per acre in the MA-3 forest zone. The result would be even more than 1600 trees permanently removed, especially if the total trees per acre are now closer to 750 than 350. This goes beyond "thinning … to improve the health of the forest by relieving crowding," as the DEIR describes the plan. No evidence is provided that this extensive clearing will improve the health of the forest. In any case, such major clearing is unacceptable to the neighborhood of Miraloma Park, which borders on the Mt. Davidson forest and for which this forest is a prime recreational resource and a mainstay of our quality of life and property values.

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The DEIR also justifies the destruction of thousands of trees on the grounds that they are non-native and "invasive":

> Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur. (DEIR, page 456)

In fact, there is no evidence that any of these trees are "invasive." Although the California Invasive Plant Council has classified eucalyptus as "moderately invasive," there is no scientific evidence to support this claim. According to the US Forest Database of Plants and Trees, "It [blue gum eucalyptus] does not spread far and rarely invades wildlands." (http://www.fs.fed.us/database/feis/plants/tree/eucglo/all.html)

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In "Vegetation Change and Fire Hazard in the San Francisco Bay Area Open Spaces," William Russell (US Geological Survey) and Joe McBride (UC Berkeley) used aerial photos of Bay Area parks taken over a 60-year period from 1939 to 1997 to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Point Reyes, Bolinas Ridge), and one on the Peninsula (Skyline). These photos revealed that grasslands are acceding to shrubland, dominated by native coyote brush and manzanita. Eucalyptus and Monterey pine forests actually decreased during the period of study. In those cases in which forests increased in size, they were native forests of oaks or Douglas fir. In other words, **these researchers found no evidence that non-native trees are invading native trees or shrubs.**

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Implementation of SNRAMP will result in a significant loss of stored carbon.

The urban forest of San Francisco stores 196,000 tons of carbon and adds to that accumulated store of carbon at an annual rate of 5,200 tons per year, according to a US Forest Service survey (Nowak 2007). About 25% of the annual rate of sequestration and the accumulated storage of carbon are accomplished by the blue gum eucalyptus, the chief target for destruction by SNRAMP. When a tree is destroyed, it releases the carbon that it has accumulated throughout its lifetime into the atmosphere as carbon dioxide (CO_2) as it decays. CO_2 is the predominant greenhouse gas that is causing climate change. Since greenhouse gases are regulated in California by a law that commits the state to reduce greenhouse gas emissions, the DEIR for the NAP goes to great lengths to make the case that destroying thousands of trees will not violate California law. The DEIR's claim that the implementation of SNRAMP will not contribute to greenhouse gas emissions is based on:

- Fabricating facts by misrepresenting scientific studies. The facts are:
  - Grassland in San Francisco does NOT lower ground temperature.
  - Grassland does NOT store more carbon than forests.
- Confusion of the RATE of carbon sequestration with the total accumulated carbon storage in the plant or tree as it continues to grow.
  - While a young tree may sequester carbon at a faster RATE while it is growing rapidly, as the DEIR maintains, that does not alter the fact that a mature tree stores more carbon over its lifetime as the carbon accumulates.
  - Replacing mature trees with ANY plant or tree will never compensate for the loss of the carbon stored in the trees that will be destroyed. Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in mature trees.

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These misrepresentations and confusions are discussed in detail in the following subsections.

Grassland in the San Francisco Bay Area does NOT lower ground temperature.

The DEIR claims: "According to a study presented at the American Geophysical Union's meeting, **grasslands above 50 degrees' latitude** reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsius." (DEIR, page 457, citing Jha A, "Planting trees to save planet is pointless, say ecologists" in *The Guardian*, 12/15/2006). However, the DEIR's statement does not apply to the San Francisco Bay Area and the reference used to support the statement misrepresents the cited study, because:

- The entire continental United States, including the San Francisco Bay Area, is below 50 degrees latitude. In other words, this statement—even if it were true—would not apply to the San Francisco Bay Area.



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14 (Cont.)

- The statement is taken out of the context of the article. The entire sentence in which this statement appears actually says, "Grassland or **snowfields**, however, reflected more sun, keeping temperatures lower. Planting trees above 50 degrees latitude, such as in Siberia, could cover tundras normally blanketed in heat-reflecting snow." It does not snow in the San Francisco Bay Area. Therefore, this statement does not apply to the San Francisco Bay Area.
- The article being quoted by the DEIR is NOT the scientific study, but rather a journalistic article in *The Guardian*, a newspaper in England, in which the author of the study has been misquoted and his study misrepresented.
- The day after this article appeared in *The Guardian* (and also in the *New York Times*), *The Guardian* published an op-ed (which also appeared in the *New York Times*) by the author of the scientific study, Ken Caldeira (Stanford University) in which he objected to the misrepresentation of his study:

> "I was aghast to see our study reported under the headline "Planting trees to save planet is pointless, say ecologists." (December 15). Indeed, our study found that **preserving and restoring tropical forests is doubly important**, as they cool the earth both by removing the greenhouse gas carbon dioxide from the atmosphere and by helping produce cooling clouds. We did find that preserving and restoring forests outside the tropics does little or nothing to help slow climate change, but nevertheless **these forests are a critical component of Earth's biosphere and great urgency should be placed on preserving them."** (Caldeira, 2006)

As if this misrepresentation of the facts weren't bad enough, we find in Appendix A of the DEIR that this isn't the first time that someone has informed the authors of the DEIR that their statement is not accurate. One of the public comments submitted in 2009 in response to the Initial Study quoted Ken Caldeira's op-ed in the *New York Times*. Yet, 2 years later, the DEIR repeats this misrepresentation of Professor Caldeira's research.

Grassland does NOT store more carbon than forests.

The DEIR also claims that "Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink." (DEIR, page 457, citing Conant, Paustian and Elliot, 2001 and Hu, et al. 2001).

Once again, **the cited studies do not support the statement in the DEIR:**

- The statement has been taken out of context. The entire sentence reads, "We conclude that grasslands can act as a significant carbon sink **with the implementation of improved management**." This sentence appears in the abstract for the publication. (Conant 2001)
- The point of the study is that land management techniques such as fertilization, irrigation, introduction of earthworms, plowing and fallow methods, etc., can improve the sequestration of carbon in the soil of croplands and pastures. This is obviously irrelevant to the Natural Areas Program, which is not engaged in agriculture or pasturage.

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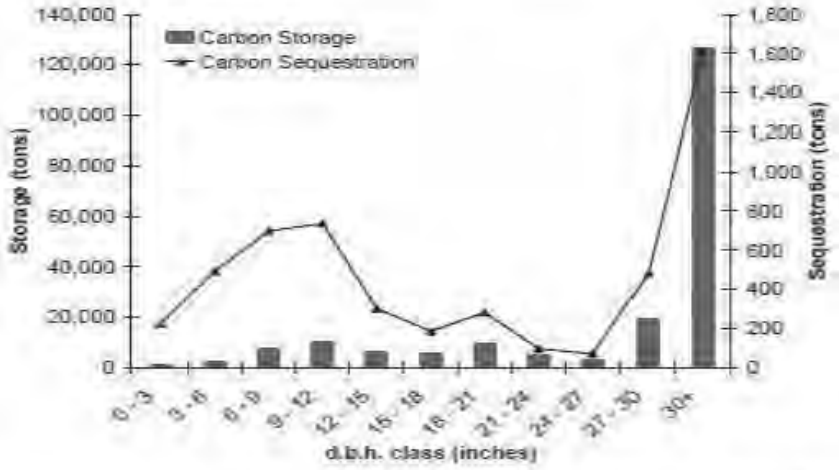
- However, the study is relevant in that it reports that **when forest is converted to grassland, no amount of "management techniques" can compensate for the loss of the carbon in the trees that are destroyed**: "Though more than half of the rain forest conversion studies (60%) resulted in increased soil carbon content, **net ecosystem carbon balance…decreased substantially due to the loss of large amounts of biomass carbon.**" (Conant 2001)

The second study cited (Hu et al, 2001) in support of the claim about carbon storage in grassland reports that increased levels of carbon dioxide **in the air** increase carbon accumulation in the soil. This study says nothing about the relative merits of grasslands and forests with respect to carbon storage. Another study reports a relation between global warming and carbon storage in trees: "…warmer temperatures stimulate the gain of carbon stored in trees as woody tissue, partially offsetting the soil carbon loss to the atmosphere." (Melillo, 2011)

<u>The DEIR confuses the RATE of carbon sequestration with the total accumulated storage over the life of the tree.</u>

The DEIR claims that because a young tree, growing at a faster rate than a mature tree, sequesters carbon at a faster rate than a mature tree, it follows that replacing mature trees with young trees will result in a net carbon benefit. This is NOT a logical conclusion, as illustrated by the following graph from the US Forest Service survey of San Francisco's urban forest (Nowak, 2007):

14 (Cont.)



This graph tells us that although trees sequester carbon faster when they are very small, the large, most mature trees are also sequestering carbon, and they store far more carbon than the smaller trees. This is as expected, because **the total amount of carbon stored within the plant or tree is proportional to its biomass, both above ground (trunk, foliage, leaf litter, etc.) and below ground (roots).**

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Even IF it were possible to replace the non-native trees with native trees – and it is NOT – the native trees would be significantly smaller than the trees destroyed. The few trees that are native to San Francisco are ALL small trees, compared to the larger species that would be destroyed. The NAP says that they have planted 8 species of native trees in the "natural areas" since 2008. Of those 8 species, only one (Red Alder) is classified as a tree by the USDA plant database. The other 7 species are classified as "tree/shrub," indicating their small stature and low branching habit. Since the amount of carbon stored within the tree is proportional to its biomass, the native trees would never sequester as much carbon as the trees destroyed by the implementation of SNRAMP.

In its zeal to exonerate SNRAMP from releasing carbon stored in the trees it proposes to destroy, the DEIR contradicts itself. The SNRAMP proposes to destroy all non-native trees less than 15 tall, but these are the very same young trees that the DEIR says (inaccurately) are capable of sequestering more carbon than mature trees. If, indeed, the level of carbon storage could be maintained by a forest of exclusively young trees – and it CANNOT – what is the point of destroying all the young non-native trees?

The DEIR does not account for the loss of the carbon in the trees that will be destroyed.

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If we were starting with bare ground, it might be relevant to compare carbon sequestration in various types of vegetation. But we're not: we are talking about a project that will require the destruction of thousands of non-native trees. Therefore, we must consider the loss of carbon associated with destroying those trees. **It doesn't matter what is planted after the destruction of those trees; nothing will compensate for that carbon loss because of how the trees will be disposed of.**

The fate of the wood in destroyed trees determines how much carbon is released into the atmosphere. For example, if the wood is used to build houses, less carbon is lost than if the wood is allowed to decompose on the forest floor. Yet that the latter is what this project proposes to do: chip the wood from the trees and distribute it on the forest floor, also known as "mulching." **As the wood decomposes, the carbon stored in the wood is released into the atmosphere as carbon dioxide.**

> "Two common tree disposal/utilization scenarios were modeled: (1) mulching and (2) landfill. Although no mulch decomposition studies could be found, studies on decomposition of tree roots and twigs reveal that 50% of the carbon is lost within the first 3 years. The remaining carbon is estimated to be lost within 20 years of mulching. Belowground biomass was modeled to decompose at the same rate as mulch regardless of how the aboveground biomass was disposed" (Nowak et al, 2002)

Furthermore, the process of removing trees releases stored carbon into the atmosphere, regardless of the fate of the destroyed trees: "Even in forests harvested for long-term storage wood, more than 50% of the harvested biomass is released to the atmosphere in a short period after harvest." (Anderson et al, 2008)

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The DEIR claims to have run a model of carbon loss resulting from the project in Sharp Park: "The model returns the CO_2 emission rates for all equipment deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use." (DEIR, page 455). Yet the CO_2 emissions resulting from the destruction of 15,000 trees over 15 feet tall in Sharp Park is conspicuously absent from this analysis.

Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in the trees that will be removed.

The DEIR claims that improving the health of the urban forest by thinning and reforestation with young trees – which will NOT be physically possible – will result in a net benefit of carbon storage. In fact, more open canopy of an urban forest with less tree density results in greater growth rates (Environmental Protection Agency, 2010). Although more rapid growth is associated with greater rates of carbon sequestration, rates of storage have little effect on the net carbon storage over the life of the tree (Nowak 1997). **Net carbon storage over the life of the tree is determined by how long the species lives and how big the tree is at maturity. These characteristics are inherent in the species of tree and are little influenced by forest management practices such as thinning.** (Nowak 1997)

More importantly, even if there were some small increase in carbon storage of individual trees associated with thinning, this increase would be swamped by the loss of the carbon from the trees that will be destroyed.

As required by the California Environmental Quality Act (CEQA) and California Law AB 32, the final EIR must quantify the loss of carbon resulting from the destruction of thousands of healthy trees, compare that loss to the effect of the resulting vegetation (grassland and scrub), and mitigate for the net carbon loss that will inevitably result from implementation of SNRAMP.

III. Cultural Landscape and Recreational Resource

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The Historic Resource Evaluation Response (HRER) for the SNRAP confirms that Mt. Davidson Park is an historic landscape resource and potentially eligible for listing under the CA Register as an ethnographic landscape, but this study focuses primarily on the retaining wall and steps. A cultural landscape study is also required to address the significant historic resource created by the forest planted by Adolph Sutro, and how its existence led to the Easter sunrise event and the creation of a public park to protect the forest. This forest is also a significant part of the cultural landscape of the West of Twin Peaks District. Historic trails should be documented and preserved for public access in the SNRAMP. The cultural landscape study should be completed by a cultural landscape architect, as described in National Park Service Preservation Brief 36:

> "Protection of Cultural Landscapes: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; development of a cultural landscape preservation approach and treatment plan; development of a cultural landscape management plan and management philosophy; the development of a strategy for ongoing maintenance; and preparation of a record of treatment and future research recommendations."

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The cultural landscape study should reference and consider the content of the pre-existing rating and survey report to the San Francisco Landmarks Board dated 2/5/1997 regarding the Mount Davidson Cross and Park, as follows.

> "In San Francisco, where row-housing predominates and vegetation in any degree of positive impact – if existent at all – is found principally in shallow front yards or strips, or on the interior of blocks where it is screened from public view by allees of eucalyptus trees on the slopes of Mount Davidson. Below the summit itself nestle domestic architecture in a sustained garden-like setting which climbs ever higher to culminate in 32 acres of park-like wilderness. The simplicity of the monument is played artfully against the natural appearing surroundings. Its setting significantly contributes to the definition of the West of Twin Peaks locale." (Section 11. Setting)

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The cultural landscape study should also consider the analysis done in April 1991 by Marie Bolton for the City Attorney as part of the lawsuit regarding the cross at the summit of Mt. Davidson, "The Contemplative Ideal in a Public Space: The Cross at Mt. Davidson Park, San Francisco, 1923-1990." Ms. Bolton documents that:

> "On Feb. 23, 1910 members of the Sierra Club hiked into was what then called 'the little wildernesses of the Sutro Forest,' and held a ceremony renaming the peak in honor of George P. Davidson, who had been greatly respected for his incorruptibility as a surveyor and for his many contributions as a geologist, noted surveyor and naturalist, at the request of the Sierra Club.
>
> "... The Sierra Club was supportive of the park because it was concerned about development, which threatened to obliterate the trees planted by Adolph Sutro ... In creating this park, the city was building on its earlier tradition of setting aside land for parks and recreational purposes ... At the dedication ceremony in 1929, three Monterey pines were planted to honor [Mayor Rolph, John McLaren, and Mrs. Edmund Brown]."

The HRER is incorrect as to the date of the concrete cross construction. It was 1934, not 1929 (earlier wood crosses had been erected since 1923).

Bolton further documents:

> "Decatur [the founder of the annual Easter sunrise event] described the 'solitude of the forest' on Mt. Davidson as conveying ' a sense of vastness quite as real as one would experience among the age-old monarchs of the High Sierras'... Decatur was moved to make Mt. Davidson serve as a place of tranquility for the citizens of the Bay Area, a refuge from what was often seen in the 1920s and 1930s as the increasingly debilitating effects of city life."

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San Francisco is now has 100,000 more residents and plans to further increase the city's residential density.

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The HRER conclusion that the SNRAMP project will not result in a substantial adverse changes to this historic cultural landscape and forest is based on incomplete analysis. The SNRAMP project will significantly negatively impact this historic forest because (1) Appendix J of the DEIR states that replacement trees can be planted anywhere in San Francisco, rather than in the Park or at the specific location of trees removed; (2) SNRAMP specifies replacement of trees removed with oaks rather than the historic forest species; and (3) it lacks any plan for restoring the remaining forest in the MA-3a zone as the existing historic species reach the end of their lifespan. Furthermore, the project map (see Exhibit A) indicates that areas where tree removal would be concentrated are the most visible areas as seen from **within the Park**, which is a major scenic and historic resource for Park visitors as well as residents of surrounding communities. Concentrated tree removal in these highly visible areas along major trails and sightlines within the Park will be very detrimental to enjoyment of the Park by its users. This goal is also inconsistent with historic Park uses and purpose. The purpose of the acquisition of the land by the City as a public park was to preserve the forest and provide for the recreation needs of the West of Twin Peaks District. A report to the Finance Committee of the Board of Supervisors dated 4/29/1927 confirms this:

> "At the request of your Committee made at the last session, we are submitting herewith a report of such data as we have been able to get in reference to the Mount Davidson Park Project, together with our recommendations.
>
> (1) Purposes of Acquisition: As stated to your Honorable Committee at the last meeting the purpose of the proposed acquisition of lands on the summit of Mount Davidson is for a public park serving the needs of the West of Twin Peaks District and also serving as a recreation center and **forest play ground** for the whole city. **The acquisition will also preserve for all time the beautiful tree covered slopes of the mountain** as an attractive scenic land mark in the city and will help perpetuate the annual Easter Pilgrimage tradition."

15 (Cont.)

The HRER does not document the significance of what may be the first grass-roots campaign in San Francisco to preserve as a public park an area zoned for development. Led by Madie Brown and San Francisco's Women's Clubs, this campaign to preserve the area as a public park in 1926, was an example of the open-space movement that Richard Walker documents in his book *The City in the Country* (2008): "Out of 4.5 million acres in the 9-county region, more than 3.5 million are open space – thanks to a century-old environmental movement – primarily led by women … Every acre of land and water has been fought for, often, in campaigns lasting years." The campaign by Mrs. Edmund Brown and the Mt. Davidson Conservation Committee that began "when the subdividers' axe and steam shovel were heard on Mt. Davidson's lower slopes, destroying in ruthless fashion the beauties of nature," took three years. The 4/26/1927 *Examiner* wrote an editorial in support of purchasing the land for park … "As the residential area advances, **the forest** goes down before the axe. In another year, it will be too late for the beauty of the summit to be preserved…" The 6/24/1927 *Examiner* reported on the ground breaking ceremonies for the park and quoted the president of the West Park Association as pointing out that "the plan [at Mt. Davidson] is to **preserve as many of the trees as possible**." The April 1928 issue of *The Municipal Employee*, a city publication, described the purpose of the campaign as: "to preserve for San Francisco this **wooded** hill, Mt. Davidson …"

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The *San Francisco Chronicle* report on the dedication of the park on 12/9/1929 described how Mrs. Edmund Brown had researched the history of the site and

> "brought to light the fact that the mountain was not always covered with **stately trees** ... it was but a barren, rocky hill … [when] "part of the property owned by Adolph Sutro, Joaquin Miller, the poet who was enthusiastically planting trees on 'The Heights' in the east bay, envisioned the beauty that might be created by trees on the San Miguel Hills and suggested the plan to Sutro … [who] planted thousands of tiny trees: cedars, pines, and eucalyptus."

Richard Walker credits Joaquin Miller as being one of the first to promote preservation of the forests in the Sierra Nevada. The San Francisco Garden Club published vignettes of early San Francisco homes and gardens in December 1935. It quoted from the notes of Emma Sutro:

15 (Cont.)

> "There is an account in Joaquin Miller's Poetical Works of the first Arbor Day in San Francisco, celebrated on Nov. 27, 1886. The celebration was promoted by Joaquin Miller, Adolph Sutro, General Vallejo and General O. O. Howard … Adolph Sutro, as his contribution to the first Arbor Day, gave 50,000 trees to be planted by the school children of Oakland and San Francisco. Climate has been modified and many a sandy bare monotone in San Francisco has been beautified by the massed dark accent of Mr. Sutro's trees."

Mount Davidson Park, among the last remnants in San Francisco of this historic forest that once extended from Ocean Avenue north to Mt. Sutro and was planted to celebrate CA's first Arbor Day and to beautify the City, has been preserved in a City park. The forest has significant historical associations and defines the character of the surrounding neighborhoods. The size and age of the trees are significant and they provide a prominent landscape feature in West of Twin Peaks, especially for Miraloma Park residents. The experience of the forest led to initiation of the historic Easter sunrise event and the residents' campaign to preserve it as public park. Without the forest, there would be no native plants left to protect and the land would be covered with housing. The forest in Mount Davidson Park meets most criteria for protection by the Landmark Tree Ordinance: visual, cultural, ecological, and locational characteristics The Recreation and Parks Department should fulfill its stewardship responsibility and recommend to the Urban Forestry Council designation of the 30.1 acre forest in Mt. Davidson Park for Landmark status.

A structural engineer should evaluate the historic retaining walls before embarking on the 2008 Park Bond work planned for this area. The HRER notes that the mature vegetation growing on these walls and stairs is historic. The trees along these features should therefore be protected. The forest is also holding the steep slopes of Mt. Davidson intact. The DEIR on page 219 acknowledges that extensive erosion control structures would create an additional substantial adverse impact on this cultural resource. Whether these structures would be necessary if the concentrated tree clearing is implemented should be addressed in the EIR.

IV. Erosion

16

As acknowledged in the SNRAMP, the urban forest on the western portion of Mt. Davidson Park has steep slopes, with groundwater seep at the base of the outcrop. There is also substantial groundwater seep or underground stream/aquifer runoff during heavy rain storms on the southern

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slope, which drains onto adjoining properties. Many homes have had to build channels for the run-off in their basements and garages to prevent flooding of their homes. The SNRAMP further acknowledges that the heavy vegetation cover in many areas aids in preventing trail and slope erosion. The SNRAMP is incorrect in stating that all erosion and soil issues relate to the trail system and public use. This may be the case now, but the proposed concentrated tree removals will likely result in much more significant erosion and soil issues, potentially creating conditions for landslides onto abutting properties.

In 1998, native plant activists removed stands of French Broom from the bottom of the eastern slope of the Mt Davidson. As 1998 was an el Niño year, subsequent rains carried the upper layer of dirt and rock, no longer anchored by roots, into the back patios and homes of those living adjacent to the park, endangering life, damaging property, and resulting many thousands of dollars in costs for some home owners. A USGS assessment stated that, although the area is seismically sound, the bedrock and shale of the steep mountainside has a 4 to 7 foot deep layer of loose matter, which is liable to slide under some conditions – as when the topsoil is not anchored. The current vegetation has proved sufficient to prevent this. Grass and brush will not provide the same safeguard. Were the mountain whole and uninhabited, this would be of no great concern, but the construction of the forties and the fifties terraced the hills, cutting into the bedrock and leaving the top strata unsupported, creating conditions favorable to a minor landslide like the deadly and destructive 1942 Foerster slide, which occurred below an area of native grasses.

16 (Cont.)

The DEIR should include a requirement for detailed soils and geologic surveys and analyses of the MA-1 and MA-2 zones by a qualified engineer with respect to the SNRAMP project plan before any tree removal would be allowed. The DEIR's conclusion that the substantial erosion and siltation that could occur from the tree removal could be mitigated is based on insufficient analysis of the actual geology and hydrology of Mt. Davidson Park. This proposed removal of the heavy vegetation there now would substantially increase storm water and groundwater runoff from the steep slopes of the park and cause a significant adverse impact on adjoining properties. Limiting the mitigation to revegetation with grasses in lieu of the tree roots and thick shrubs there now would likely not be sufficient to prevent such adverse effects. More expensive and extensive mitigation may be required, such as retaining walls and other structures, unless the proposed level of tree elimination is substantially reduced.

The DEIR claims that increased run-off and erosion will be prevented by revegetating areas in which non-native plants and trees are eradicated. **This claim is based on these erroneous assumptions:**

- **That native plants will quickly occupy the bare ground on which they are planted.** In the 15 years in which the NAP has been engaged in its enterprise, it has not successfully vegetated the bare ground created by eradicating non-native plants and trees. Denuded areas are quickly occupied by annual grasses that die back to leave bare ground during the dry season.
- **That grassland and dune scrub and non-native trees are equally capable of absorbing run-off and stabilizing soil.**
  This assumption is contradicted by the following scientific studies:

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16

- "Results indicate that **smoothing of precipitation intensities may translate into overall greater stability of hill slopes under forest canopies**. In general, peak intensities of through-fall were damped in intensity and lagged in time relative to peak intensities of rainfall. Damping and lagging of rainfall intensity at both study sites generally increased modeled slope stability relative to openings (areas with no canopy)." (Keim & Skaugset 2003)
- "The **reinforcement of the main body of a dike by a grove of trees is much higher** and effective in comparison to the reinforcement of the top soil layer by a grass sward. The increase in stability against landslides was found to be least ten times higher." (Lammeranner & Meixner 2009)

Leaving tree stumps in the ground will **not** prevent erosion.

The DEIR claims that the removal of trees will not result in erosion because: "...tree removal would be selective, would be implemented gradually over several years, would involve limb-by-limb removals, and would leave tree stumps and root balls intact." (DEIR, page 364) These claims are inconsistent with SNRAMP, incredible, and/or contradicted by scientific studies:

16 (Cont.)

- As we have already discussed, trees have been selected for removal by SNRAMP in large groups wherever they shade native plants. Some of these groups are as large as 1,000 trees on 3.5 acres of Mt. Davidson. Such removals cannot be accurately described as "selective."
- It is simply not believable that 18,500 large trees will be removed "limb-by-limb." What public entity would ever be in a position to pay for such a laborious removal? Nor is it believable that 18,500 trees will be taken down piecemeal over a long period of time. This would be both physically difficult and prohibitively expensive.
- **Leaving "tree stumps and root balls intact" does not prevent erosion. There is considerable scientific evidence that erosion results when the roots die**:
  - "The immediate effect of deforestation is, therefore, favorable, but adverse effects become evident when root systems decay and when a drop in evapo-transpiration causes a rise in the ground water table." (Brown & Sheu, 1975)
  - "Measurement of the decline in tensile strength of small roots in coastal British Columbia after death of the parent tree indicates that over half the strength is lost within 3 to 5 years after cutting." (O'Loughlin, 1974)
  - "Soil strength increased linearly as root biomass increased. Forests clear-felled 3 years earlier contained about one-third of the root biomass of old growth forests." (Zeimer, 1981)
  - "Decay of tree roots subsequent to logging was found to cause a reduction in the shear strength of the soil-root system." (Wu, McKinnell & Swanston, 1979)

The DEIR's assumption that increased run-off and erosion will not result from the implementation of SNRAMP does not take into account that **the potential for both run-off and erosion are significantly increased by the steepness of slope.** Some of the planned tree removals will occur in very steep terrain:

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16 (Cont.)

Tree Removal As Related to MA Area and Terrain

Natural Area	MA	Tree Removals	% Trees Removed	% Slope*
Interior Greenbelt	MA-2a	100	28%	67%
Mt. Davidson	MA-1c	1,000	82%	40% - 67.5%
	MA-2c	200	31%	33% - 90%
	MA-2e	400	23%	20% - 70%
Bayview Hill	MA-2a	70	32%	55.6%

*Determined by using topographical maps in SNRAMP for each natural area

These are only examples of the steepness of slopes in many of the natural areas. The EIR should be morally and legally obligated to evaluate the steepness of all of the natural areas in the context of the potential for increased run-off and erosion resulting from the removal of non-native trees.

The potential for increased run-off and erosion is greatly increased by steep slopes. The DEIR has not considered that many of the planned tree removals will occur in very steep locations. Some of these locations are directly uphill from densely populated residential neighborhoods, which would be in the direct path of both run-off and landslides caused by erosion. Yet, the risks to these residential neighborhoods have not been considered by the DEIR. The residential neighborhoods surrounding Mt. Davidson are particularly vulnerable to increased run-off, erosion and landslides.

On 5/23/2012, the State of California sued the US Army Corps of Engineers to challenge a national policy "requiring the removal of virtually all trees and shrubs on federal levees." (http://edfgnews.wordpress.com/2012/05/23/dfg-sues-army-corps-to-protect-fish-and-wildlife-around-levees) Donald H. Gray, Professor of Civil and Environmental Engineering at the University of Michigan, provides the following explanation for why California is fighting this federal requirement:

> "In the long run, cutting of trees on slopes leads to a gradual decrease in mass stability as a result of the decay of roots which previously acted as tensile reinforcements on the slope. Root decay can also lead to the formation of pipes in slopes, which promote internal or seepage erosion. The removal of tree canopy results in the loss of interception and evapo-transpiration, which tends to promote wetter and less secure slopes. Canopy removal also results in less attenuation in the delivery rate of rainfall to the ground surface." (ftp://136.200.241.91/outgoing/FMO/Veg_on_Levees/Literature%20Reviews/Effects%20of%20Tree%20Removal.pdf)

The City and County of San Francisco should consider the implications of this suit. If the State of California is willing to sue to keep trees on its levees in order to prevent erosion and flooding, what are the prospects that the City and County of San Francisco can successfully defend itself against a legal challenge to its plans to remove 18,500 mature trees from the parks managed by the City of San Francisco?

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16 (Cont.) The final EIR must evaluate the risk of increased run-off, erosion and landslides. It must substantiate, using scientific studies, the DEIR's baseless claims that the removal of thousands of trees will not increase this risk. If the final EIR cannot provide scientific evidence that these tree removals will not increase these risks, it must mitigate these risks by decreasing plans for tree removal in natural areas where these risks are great because of steepness and/or the proximity of residential properties potentially endangered by the tree removals.

IV. Aesthetics

While the DEIR acknowledges that Mount Davidson has high natural resource and recreational values for the citizens of San Francisco, including City views, high levels of recreational use, and extensive urban forest, the conclusion that the SNRAMP would have less than significant impact on scenic vistas is incorrect. The DEIR on page 190 states "While the one-to-one replacement ratio would not increase the total trees present … in some locations, trees would be replaced by native scrub or grassland species." This is inconsistent with statements with Table 5, Page 114, and SNRAMP Appendix F page 14 that list a net loss of at least 1600 trees.

17 In addition to the many references to the importance of beauty as a rationale for saving the forest in the previous section on the history of the park, of crucial concern is not only the impact on views of the forest from outside of the park—pictured on page 193-194 of the DEIR – or the impact on distant views to and from the Park, but the **view and experience of the historic forest up close from within the Park by park visitors**: along the trails, roads, and historic monuments within the MA-1 and MA-2 areas, where substantial tree removal is proposed. This concentrated tree removal, up to 82% of the area around the plateau, road, and Juanita trail, will be extremely noticeable. This impact is significant and should be acknowledged in the final EIR, or the scope of the tree removal should be reduced to prevent this adverse effect on the aesthetic experience inside the forest area of the park.

Tree topping and removal from the MA-1c and MA-2e areas has already resulted in unsightly stumps, remnants, and debris along the most accessible and visible areas in the park, which substantially degrade the visual character of this public park. (See Exhibit B attached). The MPIC requests that any trees killed for SNRAMP be totally removed—all the way to the ground—so that no unsightly stumps are left to negatively impact the aesthetic view from within the park. As demonstrated above, the DEIR's argument that leaving the trunks will help stabilize the slopes is a scientific fallacy. Also, to date non-native vegetation and tree parts removed by City staff have been left in unsightly debris heaps along the public trails. This significantly negatively impacts the Park as a scenic resource for those wishing to enjoy the beauty of nature along the Park trails. The MPIC requires that the debris created by the SNRAMP maintenance work be collected and dumped away from public view or removed from the park all together.

V. Recreational Use

18 The DEIR notes that Mt. Davidson Park has high recreational value and trail use by the citizens of San Francisco. The park was originally created for recreational purposes. The SNRAMP proposal subordinates the recreational purposes for which the park was created to conservation

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18 (Cont.) and restoration goals, which is a significant change in the purpose of the park that will negatively impact park uses.

19 The DEIR does not address the fact that, as demonstrated by tree removal to date, the project tree removal plan will foster the invasive growth of native poison oak, and does not describe how this significant negative impact on Park visitors will be mitigated. Where trees have been removed thus far, we have seen a significant increase in poison oak, often along hiking trails, and we believe this proliferation of poison oak will increase substantially as more trees are removed. The MPIC reiterates its request for the project plan to include a policy to keep poison oak at least 10 feet away from all trails at all times.

20 The DEIR also does not address how SNRAMP will limit dog access, whether recreational amenities such as benches will be disallowed, or which trails will be closed in the MA-1 and MA-2 areas. The planned limitation of access in the MA-1 and MA-2 areas of the park would significantly negatively impact recreational experience of this important park area for residents of the West of Twin Peaks District. There is now only one bench in Mt. Davidson Park, and for full enjoyment by recreational users additional benches should be allowed and installed throughout the Park, including MA-1 and MA-2 zones. The EIR should be explicit about what is meant by passive recreation – e.g., does this mean no benches, picnic tables, trashcans, significantly fewer trails in these "native plant" zones – and should analyze the impact of such prohibitions on these recreation facilities most park users would consider to be part of passive recreation.

Because the one trashcan previously in place at the summit of Mt. Davidson has been removed, litter is often left where this trashcan used to be. The EIR should be explicit in stating that the SNRAMP means that there will be no trash cans or litter pick-up in the park and should address the impact of this policy on the aesthetic experience of the park.

21 Which trails will be closed and how dog access will be limited in the park are not clearly stated in the SNRAMP, and are therefore inadequately evaluated in the DEIR. The EIR should answer these questions so the public can truly be informed as to the impact of these plans on recreation.

VI. Noise Pollution

22 The forest in Mt. Davidson Park acts as a significant sound barrier. The DEIR addresses the noise-pollution impact anticipated from the actual tree clearing to residents adjacent to the park. However, the DEIR does not address the MPIC's concern that tree removal will result in a substantial, permanent increase in ambient noise levels heard by visitors **within the park.** The nearby 280 freeway, BART, and Portola Drive are substantial sources of noise currently partly mitigated by trees slated for removal. The final EIR should compare sound readings within the MA-1a area with those in the MA-3a areas to demonstrate the impact of MA-1c and MA-2c area tree removal on noise levels along the Park road and trails surrounding the summit of the mountain.

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VII. Pesticides and Herbicides

The DEIR for the SNRAMP claims that herbicides/pesticides required to implement SNRAMP will not have a significant impact on the environment. It reaches that conclusion by providing inadequate and inaccurate information about the use of herbicides by the NAP in the present and by providing no information about the requirements for more herbicides in the future to kill the roots of thousands of trees that will be destroyed:

- The DEIR provides no information about the frequency of use of herbicides by the NAP.
- The DEIR claims that herbicide applications by the NAP comply with San Francisco's Integrated Pest Management (IPM) Ordinance. In fact, public record contain considerable evidence that herbicide applications by the NAP frequently violate San Francisco's IPM Ordinance.
- The DEIR misstates the facts about the toxicity of the herbicides being used by the NAP.
- The DEIR provides no information about the increased use of herbicides that will be required to prevent the resprouting of the trees that will be destroyed by the implementation of SNRAMP.

Herbicide use by the NAP

23 The DEIR provides no information about the volume of herbicides used by the NAP. The sole sentence in the DEIR pertaining to volume of use of herbicides is this: "In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD." (DEIR, page 365) This statement provides inadequate information regarding NAP's pesticide use because it is 8 years out of date. Because we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?

The claim that NAP's pesticide use is only 10% of total RRPD pesticide use – if in fact that is true – is not reassuring. The public has good reason to expect that parks designated as "natural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

Based on public records requests (see Attachment A), we have the following information about the number of pesticide applications by the NAP:

Number of Pesticide Applications by the Natural Areas Program

Active Ingredient	Year			Increase from 2008 to 2010
	2008	2009	2010	
Triclopyr (Garlon)	17	16	36	212%
Glyphosate (Roundup	7	6	31	443%
Aminopyralid/Imazapyr	2	2	2	0%
Total	26	24	69	265%

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We learn from these official reports of NAP's pesticide use, which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 265% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is 8 years old and pesticide use by the NAP is increasing significantly from year to year, 265% in the past 3 years alone.

From these official reports of NAP's pesticide use it is evident that several other statements in the DEIR are inaccurate. The DEIR claims that "Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity." (DEIR, page 365) However, according to the official reports of NAP's pesticide use, Garlon (active ingredient Triclopyr) was used more often than any other pesticide in all 3 years, including the most recent year. This FACT is inconsistent with a claim that Garlon is being "phased out."

23 (Cont.)

The statement that Garlon is "only used for invasive plants in…grasslands" is contradicted by this statement in the DEIR: "Treatment of tree stumps with San Francisco-approved herbicides (such as Roundup and Garlon) (DEIR, page 386) The DEIR claims that Glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that Triclypyr was used more often than Glyphosate in all 3 years for which we have data.

Herbicide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance

In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use: "Pesticide use…would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant." (DEIR, page 365)

There are two problems with this claim:

NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: Imazapyr and Triclopyr.

24

- Garlon (Triclypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)
- Habitat (Imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)
- Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:

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- NAP's reports of pesticide use are frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports (see Attachment A).
- We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.
- The NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.

24 (Cont.)

- The NAP used Imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.
- The NAP **sprayed** Garlon (Triclopyr) prior to 2011 when only "dabbing and injection" were approved application methods by the IPM policy.
- The NAP sprayed Garlon (Triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in 2011 (see Attachment B).
- The NAP sprayed herbicides containing glyphosate in the water of Lake Merced, which is officially designated red-legged frog habitat, in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.
- Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

<u>The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program</u>.

The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate, e.g.: "*Garlon+ degrades quickly in the environment and has low toxicity to aquatic species (Dow, 2009)." (DEIR, page 365)

25

Following are accurate statements regarding Garlon's biodegradability and toxicity to aquatic life quoted directly from the Material Safety Data Sheet mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency also mandated by federal law (see Attachment C):

- "Persistence and Degradability: Chemical degradation (hydrolysis) is expected in the environment. **Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability**." (emphasis added)

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- "Ecotoxicity: **Material is highly toxic to aquatic organisms** on an acute basis…" (emphasis added)

25 (Cont.) The DEIR's flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the NAP. In the only case in which it provides any information, this information is completely inaccurate.

<u>The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP</u>

The DEIR's claim that the NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which the DEIR does not share with the reader) and on an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR says nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP. This is a very important failing, because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees destroyed will re-sprout if their trunks are not sprayed immediately with Garlon. This initial application of Garlon is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

26

The DEIR acknowledges the need to use Garlon on the stumps of trees that have been destroyed: "Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon)" (DEIR, page 386) However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted a letter with its application to FEMA (obtained using a Freedom of Information Act [FOIA] request) to document the cost of poisoning all of the stumps of the trees with Garlon, which it predicts must be done twice per year for 10 years (see Attachment D). Both UC Berkeley and the East Bay Regional Park District are on record in their "vegetation management plans" as stating that Roundup is not capable of preventing resprouting of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment (see Attachment C).

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Conclusions Re Pesticide Use

The final Environmental Impact Report for the SNRAMP must:

- Provide specific and current data about herbicide use by the NAP
- Provide accurate information about the toxicity of the herbicides being used by the NAP
- Quantify, evaluate, and mitigate the increased herbicide use that will be required as a result of destroying thousands of trees that will re-sprout unless their stumps are treated with pesticides.

23, 24 (Cont.)

If this information is provided in the final EIR it will be unlikely that the EIR could make a believable claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation.

VIII. Wildlife Habitat

The forest in Mt. Davidson Park provides important wildlife habitat. Claims that habitat for animals is improved by the eradication of non-native plants are unsupported by scientific evidence.

The DEIR states repeatedly that habitat will be improved by the eradication of non-native plants and their presumed replacement by native plants. This statement is offered support for most claims in the DEIR that the "restoration" project will not harm the environment. For example, although the DEIR acknowledges that the environment may be harmed by the methods used to eradicate non-native plants, it maintains that this harm will, theoretically, be mitigated by the eventual development of native habitat that will compensate for that harm. This claim is not supported either by the reality of restoration efforts in the past 15 years or by scientific evidence, which does not substantiate a claim that native vegetation provides superior habitat for animals than non-native vegetation.

27

Although non-native vegetation has been removed repeatedly in many natural areas, the native plants that are planted in their place rarely persist for longer than a few months. These newly planted areas are quickly over-run by non-native weeds. More importantly, neither SNRAMP nor the DEIR provide any scientific evidence to support the contention that native vegetation provides superior habitat for animals. In fact, all available scientific evidence contradicts this claim. Eucalyptus trees are one of the primary targets for eradication because of claims that the eucalyptus forest is a "biological desert," that "nothing grows" under eucalypts, and that they provide neither food nor habitat to insects, birds, and other animals. Professor Dov Sax (Brown University) tested these claims while a student at UC Berkeley. **He compared the eucalyptus forest in Berkeley with native oak-bay woodland in the same location and found little difference in species frequency or diversity in these two types of forest.**

Sax studied 6 forests of about 1 hectare each, 3 of eucalypts and 3 of native oaks and bay trees. The sites were not contiguous, but were of similar elevation, slope, slope orientation, and type of

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adjacent vegetation. Inventories in spring and autumn counted species of plants and in the understory and insects in samples of equal size and depth of leaf litter, as well as amphibians, birds, and rodents.

> "Species richness was nearly identical for understory plants, leaf-litter invertebrates, amphibians and birds; only rodents had significantly fewer species in eucalypt sites. Species diversity patterns … were qualitatively identical to those for species richness, except for leaf-litter invertebrates, which were significantly more diverse in eucalypt sites during the spring." (Sax, 2002)

Sax also surveyed the literature comparing biodiversity in native versus non-native forest and reported similar findings for comparisons between non-native forests and local native forests all over the world:

- In Spain, species of invertebrates found in the leaf-litter of eucalyptus plantations were similar to those found in native forests, while species richness of understory plants was greater in the native forests.
- In Ethiopia, the richness of understory species was as great in eucalyptus plantations as in the native forest.
- In Michoacán, Mexico, species richness and abundance of birds were similar in eucalyptus and native forests.
- In Australia, species richness of mammals and of soil microarthropods were similar in native forests and in non-native forests of pine.

27 (Cont.)

The only caveat to these general findings is that fewer species were found in **new** plantations of non-natives less than 5 years old. This illustrates a general principle that is often ignored by native plant advocates, that **nature and its inhabitants are capable of changing and adapting to changed conditions.** Non-native forests in the San Francisco Bay Area have been here for over 100 years. The plants and animals in our forests have "learned" to live in them long ago.

Wildlife does not necessarily benefit from native plant restorations and sometimes is harmed by them. The assumption that native animals are dependent upon native plants underestimates the ability of animals to adapt to changing conditions. Art Shapiro (UC Davis), who has studied California butterflies for over 35 years, has observed along with other scientists that

"…**the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna**, including most of the familiar species of urban, suburban and agricultural environments. Some of these species are now almost completely dependent on exotics and would disappear were weed control more effective than it currently is." (Graves & Shapiro, 2003)

Shapiro explains that this is particularly true on the coast of California, where the highest concentration of introduced species of plants is naturalized and the butterfly population is less diverse because of the cool, foggy climate. There are fewer non-native plants in the desert and alpine regions of California, so butterflies in those regions have not had the opportunity or the need to adapt to new plants.

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Shapiro speculates in this study that **other insects have adapted to non-native plants as well**: "Introduced hosts, having a broader geographic range than native hosts, may permit the expansion of the insect population geographically."

The non-native blackberry provides cover for much wildlife. It is an impenetrable bramble both physically and visually. Birds and small mammals hide and make nests and dens in these thickets. Coyotes are resident in San Francisco. The thick undergrowth removed in some parks by the NAP now allows unleashed dogs to pursue coyotes in areas where they were protected before. If the safe havens of urban wildlife are destroyed, the animals may seek shelter elsewhere, a move that may be dangerous for them.

Birds have adapted to non-native plants and trees. Researchers at UC Davis (Aslan & Rejmanek, 2010) surveyed over 1,000 ornithologists in 4 states, including California, about their observations of native birds and non-native plants. Reports from 173 ornithologists included 1,143 "interactions" of birds with introduced plants considered invasive. Of those interactions, 47% were birds eating the fruit or seeds of non-native plants and trees considered invasive. Other interactions included nesting, perching, gleaning [eating insects], etc. Interactions were frequently reported in non-native blackberry, found in most parks in San Francisco, and one of the most productive food sources for birds in San Francisco. Unfortunately, it is being eradicated by the Natural Areas Program because it is non-native.

27 (Cont.)

Mt. Davidson currently has a large and healthy distribution of birds (114 species found from 5/31/11 - 6/1/12; see Attachment E), 90% of which rely on trees and forest for food, safety, and a place to breed. Because of the nature of their current habitat, none of the species present on Mt. Davidson are threatened or of special concern. The data presented in table 6-2-2 (Sensitive species known to occur at Mount Davidson) of the SNRAMP is incorrect. No empirical data were used and cited in the conclusions of the DEIR. Bird information cited were opinions submitted by the Golden Gate Audubon Society, an amateur lobbying group located in Alameda County that is known to have special interests.

No explanation is provided of the term "Species of Local Concern (SLC)" used in Table 6-2-2. Does the Federal and State or local government recognize this as a legitimate and legal conservation status? None of the 18 species listed in table 6-2-2 is considered either threatened or endangered by Federal, State, or local authorities or experts. All of the 18 species are listed as "Species of Least Concern" by the International Union for the Conservation of Nature (IUCN). San Francisco Field Ornithologists (SFFO), an organization that collects and publishes data about local birds, considers nine of the birds listed in table 6-2-2 as "seen on most bird outings." The other ten species are described as "common; abundant; expected to be seen on every outing in moderate or large numbers." If Table 6-2-2 is meant to convey the impression that birds are doing poorly in the current environment of Mt. Davidson, it fails to demonstrate this factually. On the contrary, Mt. Davidson hosts a habitat where birds are not threatened but live and prosper in abundance.

Native plant restorations also require the use of herbicides to eradicate non-native trees and plants. Herbicides are being sprayed on blackberries and other berry-producing non-native plants that are a major food source for wildlife. **One study performed by the US Forest**

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27

27 (Cont.)

Service for the EPA reported that the use of Garlon significantly reduced the reproductive success of birds (Marin Municipal Water District).

There is a current and local example of scientific evidence that native plants do not provide habitat that is superior to that provided by non-native plants. The California Academy of Sciences found that several years after planting its roof with native plants this roof is now dominated by non-native species of plants in the two quadrants that are not being weeded, replanted, and reseeded with natives. **Their monitoring project recently reported that there were an equal number of insect species found in the quadrants dominated by native plants and those dominated by non-native plants.** Where equal numbers of insects are found, we would expect to find equal numbers of birds and other animals for which insects are food. The final EIR cannot reassure the public that the implementation of SNRAMP will not harm wildlife because the NAP has already violated the laws that theoretically protect wildlife. The final EIR must prohibit the use of herbicides known to be harmful to butterflies on Twin Peaks. where the endangered Mission Blue butterfly has been reintroduced by the Natural Areas Program.

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EXHIBIT A. Plan Map



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-1b	• Maintain rich native scrub • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1c	• Remove approximately 1,000 small and medium sized invasive trees • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2a	• Maintain and enhance grassland-scrub mosaic
MA-2b	• Maintain and enhance grassland
MA-2c	• Remove approximately 200 invasive trees • Maintain and enhance structurally diverse cypress and oak trees, native berry-producing scrub, and Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-2d	• Maintain and enhance a elderberry scrub-Pacific reed grass mosaic • Augment sensitive plant populations • Limit access including dogs to trails

Mgmt Area	Action
MA-2e	• Remove approximately 300 small to medium sized and 100 large invasive trees • Maintain and enhance a Pacific reed grass prairie-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants • Consider creating spring box for wildlife
MA-3a	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 12,589 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 1,600; Total invasive trees to remain: 9,400
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

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EXHIBIT B. Unattractive Tree Maintenance by the Natural Areas Program



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ATTACHMENT A. PESTICIDE APPLICATIONS 2008-2010

APPLICATION NUMBER	Application Comments	PESTICIDE	Amount Used	Units Used	TARGET PEST	EPA Number	HOW APPLIED	APPLICATOR
GARLON								
17642	Monocot city	GARLON 4	2	fl.ozs.	broadleaf weeds	62719-40-ZB-62719	Spray	DE MEO, LICIA
17643	Poison Oak / Oxalis	GARLON 4	2	fl.ozs.	broadleaf weeds	62719-40-ZB-62719	Spray	HAYES, DYLAN
17699	pine lake	GARLON 4	1.8	fl.ozs.	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN
17700	bayview hill	GARLON 4	13.2	fl.ozs.	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN
17701	twin peaks	GARLON 4	5.4	fl.ozs.	oxalis	62719-40-ZB-62719	Spray	annese
17761	east grassland	GARLON 4	8	fl.ozs.	oxalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOL (RANDY)
17762	twin peaks	GARLON 4	21.6	fl.ozs.	oxalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTC
17763	mt. Davidson	GARLON 4	18	fl.ozs.	oxalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTC
17764	Glen canyon	GARLON 4	10	fl.ozs.	oxalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOL (RANDY)
17765	Mc Laren Quail run	GARLON 4	10	fl.ozs.	oxalis-burclover	62719-40-ZB-62719	Spray	DE MEO, LICIA
17883		GARLON 4 ULTRA	2	fl.ozs.	stumps	62719-527	Spray	ANNESE, THOMAS (
18121		GARLON 4 ULTRA	7.5	fl.ozs.	weeds	62719-527	Spray	
18122	Mt. Davidson	GARLON 4 ULTRA	10	fl.ozs.	stump treatment	62719-527	Spray	
18123	Mt. Davidson	GARLON 4 ULTRA	30	fl.ozs.	stump treatment	62719-527	Spray	
18124	sharp park	GARLON 4 ULTRA	12	fl.ozs.	stump treatment	62719-527	Spray	
18125	ggp/ow	GARLON 4 ULTRA	12	fl.ozs.	stump treatment	62719-527	Spray	
18160		GARLON 4 ULTRA	14	fl.ozs.	eucalyptus saplings	62719-527	Spray	
		TOTAL GARLON 2008	**179.5**					
18242	oxalis	GARLON 4 ULTRA	2	fl.ozs.	weeds	62719-527	Spray	
18273		GARLON 4 ULTRA	4.8	fl.ozs.	oxalis	62719-527	Spray	
18274	Brooks park, Orizaba rocks	GARLON 4 ULTRA	4.8	fl.ozs.	oxalis	62719-527	Spray	
18275	BAYVIEW HILL	GARLON 4 ULTRA	28.5	fl.ozs.	oxalis	62719-527	Spray	
18276	Corona	GARLON 4 ULTRA	9.6	fl.ozs.	oxalis	62719-527	Spray	
18329	twin peaks	GARLON 4 ULTRA	3.6	fl.ozs.	oxalis	62719-527	Spray	
18330	Glen Canyon	GARLON 4 ULTRA	6	fl.ozs.	poison oak	62719-527	Spray	

18331	Glen Canyon	GARLON 4 ULTRA	3	fl.ozs.	OXALIS	62719-527	Spray	
18332	Glen Canyon... above seep	GARLON 4 ULTRA	3	fl.ozs.	OXALIS	62719-527	Spray	
18333	billygoat hill	GARLON 4 ULTRA	5.5	fl.ozs.	OXALIS/ invasive pea	62719-527	Spray	
18476		GARLON 4 ULTRA	14.4	fl.ozs.	weeds	62719-527	Spray	
18477		GARLON 4 ULTRA	10	fl.ozs.	weeds	62719-527	Spray	
18510		GARLON 4 ULTRA	2	fl.ozs.	acacia resprouts	62719-527	DAUBER	
18511		GARLON 4 ULTRA	6	fl.ozs.	broadleaf weeds	62719-527	Spray	
18583	Mclaren	GARLON 4 ULTRA	3	fl.ozs.	fennel	62719-527	Daubber	
18584	Mclaren	GARLON 4 ULTRA	3	fl.ozs.	fennel	62719-527	Daubber	
		TOTAL GARLON 2009	**109.2**					
18667	Mt Davidson	Garlon	2	fl.ozs.	oxalis - grasslands	627-1940	Backpack sprayer	Lisa Wayne
18729	Twin Peaks	Garlon	19	fl.ozs.	oxalis	627-1940	Backpack sprayer	Jan Campos, Kirra Sw
18726	Twin Peaks	Garlon 4	10.5	fl.ozs.	N & S peak, scot's garden, top of Mission bowl	62719529	Backpack sprayer	Kirra Swenertor
18727	Twin Peaks	Garlon 4	7.2	fl.ozs.	Mission Ridge & bowl, oxalis	62719529	Backpack sprayer	Kirra Swenertor
18730	Mt Davidson	Garlon 4 Ultra	9	fl.ozs.	Mt Davidson/ Cape Ivy	62719 527	Backpack	Ryan Gerlach
18731	Mt Davidson	Garlon 4 Ultra	3.6	fl.ozs.	oxalis	62719 527	Backpack	Ryan Gerlach
18732	Twin Peaks	Garlon 4 Ultra	8	fl.ozs.	Algerian ivy	62719 527	Backpack	illeg
18733	Twin Peaks	Garlon 4 Ultra	9	fl.ozs.	oxalis	62719 527	Backpack	illeg
18734	Mt Davidson	Garlon 4 Ultra	3.6	fl.ozs.	oxalis	6271940	Backpack	illeg
18728	Grandview	Garlon 4 Ultra	3.6	fl.ozs.	oxalis narrow leaf replant	62719 527	Backpack	Kirra Swenertor
18725	McLaren	Garlon 4 Ultra	3.6	fl.ozs.	East of amphitheater/ flat wet meadow	62719 527	Backpack	Christopher Campl
	Glen Canyon/ O' Shaughnessy	Garlon 4 Ultra	6.5	fl.ozs.	O'Shaughnessy roadside, del Vale to Malta	62719 527	Backpack	Zebell
	Glen Canyon/ Fox meadow, paths, hemlock patch	Garlon 4 Ultra	12.5	fl.ozs.		62719 527	Backpack	DeMeo/ Swenertc
	Glen Canyon/ Fox meadow	Garlon 4 Ultra	5	fl.ozs.	Poison oak, broom, english ivy, hemlock	62719-527	Backpack	DeMeo L
	O'Shaughnessy	Garlon 4 Ultra	3	fl.ozs.	Scabiosa	62719-527	Backpack	Campbell, Chris
	Twin Peaks	Garlon 4 Ultra	3.8	fl.ozs.	Fennel along Burnett	62719-527		(Shelterbelt) Garcia/ V
	Twin Peaks	Garlon 4 Ultra	8	fl.ozs.	Cotoneaster (stump treatment)	62719-527		
	Oak Woodlands (GGP)	Garlon 4 Ultra	4.5	fl.ozs.	Cotoneaster/mayten/ tree of heaven	62719-527		(Shelterbelt) Garcia/ V
	Twin Peaks	Garlon 4 Ultra		fl.ozs.	Cotoneaster	62719-527		(Shelterbelt) Garcia/ V
	McLaren	Garlon 4 Ultra	8	fl.ozs.	Gazania and fennel - Vis Valley overlook	627-1940	Backpack	K Swenerton

	McLaren - University Hill	Garlon 4 Ultra	3.6	fl.ozs.	Above asphalt path at University and Woolsey; fennel	62719-0537	Backpack sprayer	Licia De Meo
	McLaren - tryphzalia (?) area	Garlon 4 Ultra	15	fl.ozs.	Gazania and fennel between 2 paths and grasslands	62719-0537	Backpack sprayer	Lisa Wayne
	McLaren	Garlon 4 Ultra	9	fl.ozs.	Fennel - south of Mansell, east of Visitacion	62719-527	Backpack	Ryan Gerlach, Ventura
	Bayview	Garlon 4 Ultra	24	fl.ozs.	Fennel- grasslands	62719-527	Backpack	Ryan Gerlach, Ventura
	McLaren	Garlon 4 Ultra	6	fl.ozs.	S of Mansell Forest	627-1940	Dauber stump treatment	K Swenerton
	McLaren (Geneva)	Garlon 4 Ultra	1	fl.ozs.	Geneva Ridge fennel	627-1940	Dauber (cut and daub)	Dylan Hayes
	Twin Peaks	Garlon 4 Ultra + spraytech oil	15	fl.ozs.	Poison Oak, Fennel - PO along path and fennel above Crestline	62719-527	Backpack	Ryan Gerlach, Ventura Ben Adamo
	Bayview	Garlon 4 Ultra + spraytech oil	2	fl.ozs.	Fennel along steep access rd	62719-527	Backpack	Ryan Gerlach
	Bernal	Garlon 4 Ultra + Spraytech oil	4	fl.ozs.	fennel on north-facing slope	62719-527	cut stump	Ryan Gerlach, Venny
	Twin Peaks	Garlon 4 Ultra + Spraytech oil	78	fl.ozs.	Slope above Burnett: French Broom, Cotoneaster	62719-527	Cut stump	Ventura Garcia, Ben A Paul Wilson, Jake Ha
	Glen Park	Garlon 4 Ultra + Spraytech oil	2.5	fl.ozs.	Slope above Burnett: French Broom, Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie P
	Glen Park	Garlon 4 Ultra + Spraytech oil	27	fl.ozs.	Monocot City: French Broom, Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie P
	RPD-Glen Park Natural Areas	GARLON 4UL	1	fl.ozs.	Weeds-misc	62719527AA62719		Hayes, D
	RPD-Golden Gate Park-SEC 2	GARLON 4UL	4	fl.ozs.	Weeds-misc	62719527AA62719		Hayes, D
	RPD-Twin Peaks	GARLON 4UL	8	fl.ozs.	Weeds-misc	62719527AA62719		Gerlach, Ryan
	RPD-Twin Peaks	GARLON 4UL	10	fl.ozs.	Weeds-misc	62719527AA62719		Garcia, Shelter Bel
		Total GARLON 2010	**340.169**					
ROUNDUP								
17698	landscape	ROUNDUP PRO DRY	1.8	ozs.	cape ivy	524-505	Spray	HAYES, DYLAN
17767	twin peaks- erharta	ROUNDUP PRODRY	4	ozs.	arctotheca	524-505	Spray	DE MEO, LICIA
17768	west grassland brooks	ROUNDUP PRODRY	9.8	ozs.	weeds	524-505	Spray	HAYES, DYLAN
17769	Edgehill ...erharta	ROUNDUP PRODRY	8	ozs.	weeds	524-505	Spray	ZEBELL, RANDOL (RANDY)
17770	Brooks...erharta	ROUNDUP PRODRY	4.8	ozs.	weeds	524-505	Spray	HAYES, DYLAN
17882		ROUNDUP PRO HERBICIDE	2	fl.ozs.	stumps	524-475-ZA-524	Spray	ANNESE, THOMAS (
17766	Mc Laren marsh area	RODEO AQUATIC HERBICIDE (Glyphosate, Dow)	2.6	fl.ozs.	arctotheca	524-343-AA-524	Spray	DE MEO, LICIA
		TOTAL ROUNDUP 2008	**33**					

18399	gazenia	ROUNDUP PRODRY	1.6	ozs.	weeds	524-505	Spray	
18400	hawk hill	ROUNDUP PRODRY	4.8	ozs.	weeds	524-505	Spray	
18578	upper grassland	ROUNDUP PRODRY	6.4	ozs.	weeds	524-505	Spray	
18579	billy goat hiill	ROUNDUP PRODRY	0.8	ozs.	weeds	524-505	Spray	
18580	edgehill	ROUNDUP PRODRY	9	ozs.	weeds	524-505	Spray	
18581	Mclaren	ROUNDUP PRODRY	4.8	ozs.	weeds	524-505	Spray	
		TOTAL ROUNDUP 2009	**27.4**					
18735	Pine Lake	Aquamaster	16		Pine Lake/ cape ivy	524-343	Backpack	Mark Heath
	Lake Merced	Aquamaster	8		Ludwigia	524-343	sprayer	JC
	Lake Merced	Aquamaster	2		Impound lake - Ludwigia	524-343	Backpack sprayer	R Zebell
	Glen Park	Aquamaster + Spraytech Oil	22		Site C above Silver Tree: French Broom and Poison Oak	524-343	Backpack sprayer	Ventura Garcia, Ben A
	Glen Park	Aquamaster + Spraytech Oil	30		Monocot City: French Broom, Cotoneaster	524-343	Cut stump	Ventura Garcia, Ben A
	Twin Peaks	Aquamaster + Spraytech Oil	8		Slope above Burnett: Jupiter's Beard	524-343	Backpack sprayer	Ventura Garcia, Ben A Paul Wilson, Jake Hai
	McLaren	Roundup Pro	3.6		Arctotheca - Upper meadow, Yosemite Marsh	524-475	Backpack sprayer	L. DeMeo
	Glen Canyon, Fox Meadow	Roundup Pro [Max]	6.4		Fox Meadow - Poison oak and mustard	524-579	backpack sprayer	Licia De Meo, Dylan I
	Sharp Park	Roundup Pro [Max]	1.3		Pampas grass	524-579	hand sprayer	Kirra Swenerton
18668	Mt Davidson	Roundup Pro Dry	1		erhata - grasslands - edge of forest	524-505	Backpack sprayer	Christopher Campl
18722	Mt Davidson	Roundup Pro Dry	3		Erhata	524 505	Backpack	illeg
18724	McLaren	Roundup Pro Dry	6.0		Upper Yosemite Marsh - arctotheca, Kikuyu burclover	524 505	Backpack sprayer	Licia DeMeo/ Christc Campbell
	Hawk Hill	Roundup Pro Dry	3		slope -erhata	524-505	Backpack	Zebell, R
	Glen Canyon/ Fox meadow	Roundup Pro Dry	4.5		Radish, erhata	524-505	Backpack	Swenerton, K
	Edgehill	Roundup Pro Dry	9		Edgehill - planted area/ erhata	524-505	Backpack	R Zebell, C Campt
	Sharp Park	Roundup Pro Dry	1.5		Pampas grass	524-505	hand sprayer	Kirra Swenerton
18721	Mt Davidson	Roundup Pro Max	9		Erhata	524 ?	Backpack	Ryan Gerlach
18723	Glen Canyon	Roundup Pro Max	9.0		Area A - hemlock thistle	524 579	Backpack sprayer	shelterbelt/ Ryan Ge
	Twin Peaks	Roundup Pro Max	4		sprayed French Broom that was missed or too small to pull along Burnett.	524-579		Shelterbelt/ Gerla

Oak Woodlands (GGP)	Roundup Pro Max			cape ivy	524-579		(Shelterbelt) Gerlach/
McLaren	Roundup Pro Max	6.8		Fennel - south of Mansell, east of Visitacion	524-579	Backpack	Ryan Gerlach, Ventura
Bayview	Roundup Pro Max	18		Fennel- grasslands	524-579	Backpack	Ryan Gerlach, Ventura
Twin Peaks	Roundup Pro Max	1		Patch of erhata off Twin Peaks	524-579	Backpack	Ryan Gerlach
McLaren Park	Roundup Pro Max	3		Patch of pampas grass off Visitacion	524-579	Backpack	Venny Garcia
RPD-Mt Davidson	AQUAMASTER	34.432		Weeds-erharta	524343ZF524		Gerlach, Ryan
RPD-Golden Gate Park-SEC 1	AQUAMASTER	14.3646		Weeds-ivy	524343ZF524		Gerlach, Ryan
RPD-Mt Davidson	AQUAMASTER	2.8514		Weeds-blackberry	524343ZF524		
RPD-John McLaren Park	ROUNDUP PR	5.844		Weeds-misc	524579AA524		Taylor, Zack
RPD-Lake Merced Park	AQUAMASTER	1.883		Weeds-misc	524343ZF524		Zebell, R
RPD-Twin Peaks	ROUNDUP PR	0.2435		Weeds-pampas grass	524579AA524		Garcia, Shelter Bel
RPD-Glen Park Natural Areas	ROUNDUP PR	4.383		Weeds-misc	524579AA524		Garcia, Shelter Bel
	TOTAL ROUNDUP/ AQUAMASTER 2010	**240.102**					

OTHER STUFF							
18088		SAPPHIRE (Penoxsulam fm Dow)	96	fl.ozs.	english daisy	62719-547	Boom Spray
18089		HABITAT (Imazapyr from BASF)	5.8	fl.ozs.	invasive weeds	241-426	Spray
18334	oak woodlands	MILESTONE (aminopyralid from Dow)	10.8	fl.ozs.	cape ivy	62719-519	Spray
18582	lake merced at impound lake	HABITAT (Imazapyr from BASF)	4	fl.ozs.	ludwegia	241-426	Spray
18736	Pine Lake	MILESTONE (aminopyralid from Dow)	1	fl.ozs.		62719-537	backpack
	RPD-Golden Gate Park-SEC 1	MILESTONE	0.6496		Weeds-ivy	62719537AA62719	Gerlach, Ryan

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ATTACHMENT B. APPLICATION OF GARLON WITHOUT A RESPIRATOR

From: Mary McAllister
To: Lisa Wayne
Cc: Chris.Geiger@sfgov.org ; Ralph.Montana@sfgov.org
Sent: Wednesday, February 09, 2011 9:03 AM
Subject: Violation of City's IPM policy

Dear Lisa, Attached are photos of a pesticide application on February 3rd on Twin Peaks, near the reservoir. According to the corresponding Notice of Pesticide Application, the person was spraying Garlon 4 Ultra. It appears that the person doing the spraying is not wearing a respirator.

As you know, the IPM policy that was approved on January 25th by the Commission on the Environment has approved the restricted use of Garlon 4 and Garlon 4 Ultra as follows: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible, and **only with use of a respirator**. HIGH PRIORITY TO FIND ALTERNATIVE." (emphasis added). Therefore, the person photographed spraying Garlon 4 Ultra was not in compliance with the city's IPM policy.

I hope, for the safety of your staff and your sub-contractors, that those who are responsible for spraying this toxic chemical will be informed that they must wear a respirator in the future. As you know, the City's IPM policy classifies this chemical as "Tier I Most Hazardous." The Material Safety Data Sheet for this chemical reports that OSHA classifies this chemical as both an "Immediate" and a "Delayed Health Hazard."

Thank you for your attention to this important matter.

Mary McAllister



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ATTACHMENT C. DOW GARLON SAFETY SHEET

Product Name: Garlon* 4 Herbicide **Issue Date:** 2011.09.14 TM * Trademark of Dow AgroSciences LLC **Page** 1 of 9 Dow AgroSciences Canada Inc. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

Material Safety Data Sheet
Dow AgroSciences Canada Inc.
1. Product and Company Identification
Product Name
Garlon* 4 Herbicide

COMPANY IDENTIFICATION
Dow AgroSciences Canada Inc.
A Subsidiary of The Dow Chemical Company
Suite 2100, 450 1st Street SW,
Calgary, AB T2P 5H1
Canada
For MSDS updates and Product Information: 800-667-3852

Prepared By: Prepared for use in Canada by EH&S, Hazard Communications.
Revision 2011.09.14

Customer Information Number: 800-667-3852
solutions@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 613-996-6666
Local Emergency Contact: 613-996-6666

2. Hazards Identification
Emergency Overview
Color: Yellow
Physical State: Liquid
Odor: Gasoline-like
Hazards of product:
DANGER! Combustible liquid and vapor. May cause allergic skin reaction. May cause eye irritation. May cause skin irritation. Harmful or fatal if swallowed; can enter lungs and cause damage. Isolate area. Toxic fumes may be released in fire situations. Highly toxic to fish and/or other aquatic organisms.
Potential Health Effects
Eye Contact: May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. Corneal injury is unlikely.

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Skin Contact: Brief contact may cause moderate skin irritation with local redness. Repeated contact may cause severe skin irritation with local redness and discomfort. May cause drying and flaking of the skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.
Inhalation: Mist may cause irritation of upper respiratory tract (nose and throat).
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Cancer Information: In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.
Birth Defects/Developmental Effects: For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother.
Reproductive Effects: For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition/information on ingredients

Component	**CAS #**	**Amount W/W**
Triclopyr-2-butoxyethyl ester	64700-56-7	61.6 %
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %
Ethylene glycol monobutyl ether	111-76-2	0.5 %
Balance	Not available	>= 6.9 - <= 19.3 %

Amounts are presented as percentages by weight.

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Skin Contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before

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reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.
Eye Contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.
Indication of immediate medical attention and special treatment needed
The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin contact may aggravate preexisting dermatitis.
5. Fire Fighting Measures
Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Special hazards arising from the substance or mixture
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phosgene. Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.
Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.

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Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay, Dirt, Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance.

7. Handling and Storage

Handling

General Handling: Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Storage

Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Kerosene (petroleum)	Dow IHG	TWA as total hydrocarbon vapor	10 mg/m3 SKIN
	CAD BC OEL	TWA Non-aerosol, as total hydrocarbon vapor	200 mg/m3 SKIN

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ACGIH	TWA Non-aerosol, as total hydrocarbon vapor	200 mg/m3 P: Application restricted to conditions in which there are negligible aerosol exposures.
CAD ON OEL	TWAEV as total hydrocarbon vapor	200 mg/m3 SKIN
CAD AB OEL	TWA Vapor, as total hydrocarbon vapor	200 mg/m3
CAD AB OEL	SKIN Vapor, as total hydrocarbon vapor	Can be absorbed through the skin.

Triclopyr-2-butoxyethyl ester Dow IHG TWA 2 mg/m3 D-SEN

Ethylene glycol monobutyl ether CAD ON OEL TWAEV 20 ppm SKIN

ACGIH	TWA	20 ppm
CAD AB OEL	TWA	97 mg/m3 20 ppm SKIN
CAD BC OEL	TWA	20 ppm

OEL (QUE) TWA 97 mg/m3 20 ppm
OEL (QUE) TWA 97 mg/m3 20 ppm

Consult local authorities for recommended exposure limits.
RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.
A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.
It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.
A D-SEN notation following the exposure guideline refers to the potential to produce dermal sensitization, as confirmed by human or animal data.
Personal Protection
Eye/Face Protection: Use safety glasses (with side shields).
Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or

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"vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.
Engineering Controls
Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
9. Physical and Chemical Properties
Appearance

Physical State	Liquid
Color	Yellow
Odor	Gasoline-like
Odor Threshold	No test data available
pH	6.4 *pH Electrode*
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available
Flash Point - Closed Cup	65.5 °C *Closed Cup*
Evaporation Rate (Butyl Acetate = 1)	No test data available

Flammable Limits In Air **Lower**: No test data available
Upper: No test data available

Vapor Pressure	No test data available
Vapor Density (air = 1)	No test data available

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Specific Gravity (H2O = 1)	1.08 23 °C/4 °C *EC Method A3*
Solubility in water (by weight)	emulsifiable
Partition coefficient, n-octanol/water (log Pow)	4.09 *Measured*
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Kinematic Viscosity	11.2 cSt @ 20 °C

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use temperatures.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Phosgene. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

LD50, Rat 1,338 mg/kg

Dermal

LD50, Rabbit > 2,000 mg/kg

Inhalation

LC50, 4 h, Aerosol, Rat > 5.2 mg/l

No deaths occurred at this concentration.

Eye damage/eye irritation

May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. Corneal injury is unlikely.

Skin corrosion/irritation

Brief contact may cause moderate skin irritation with local redness. Repeated contact may cause severe skin irritation with local redness and discomfort. May cause drying and flaking of the skin.

Sensitization

Skin

Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.

Respiratory

No relevant information found.

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Repeated Dose Toxicity
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Chronic Toxicity and Carcinogenicity
Active ingredient did not cause cancer in laboratory animals. In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin.
by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.
Carcinogenicity Classifications:

Component	List	Classification
Kerosene (petroleum)	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3
Ethylene glycol monobutyl ether	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3

Developmental Toxicity
For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.
Reproductive Toxicity
For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For kerosene: Limited data in laboratory animals suggest that the material does not affect reproduction.
Genetic Toxicology
Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.
12. Ecological Information
Toxicity
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).
Fish Acute & Prolonged Toxicity
LC50, rainbow trout (Oncorhynchus mykiss), flow-through, 96 h: 0.984 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, flow-through, 48 h, immobilization: 0.35 mg/l
Aquatic Plant Toxicity
EbC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 72 h: 10.6 mg/l
Toxicity to Above Ground Organisms

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oral LD50, bobwhite (Colinus virginianus)
oral LD50, Honey bee (Apis mellifera)
contact LD50, Honey bee (Apis mellifera)
Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia foetida, adult, 14 d: 2,552 mg/kg
Persistence and Degradability
Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).
Bioaccumulative potential
Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient, n-octanol/water (log Pow): 4.09 Measured
Bioconcentration Factor (BCF): Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). 505
Mobility in soil
Mobility in soil: No relevant data found.
13. Disposal Considerations
If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.
14. Transport Information
TDG Small container
NOT REGULATED
TDG Large container
NOT REGULATED
IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
EMS Number: f-a,s-f
Marine pollutant.: Yes
ICAO/IATA
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
Cargo Packing Instruction: 964
Passenger Packing Instruction: 964
15. Regulatory Information
CEPA - Domestic Substances List (DSL)

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All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Hazardous Products Act Information: CPR Compliance

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

This product is exempt under WHMIS.

Pest Control Products Act Registration number: 21053

National Fire Code of Canada

Class IIIA

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	2	1

Recommended Uses and Restrictions

Identified uses

Product use: End use herbicide product

Revision

Identification Number: 50683 / 1023 / Issue Date 2011.09.14 / Version: 5.0

DAS Code: XRM-4714

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

Dow AgroSciences Canada Inc. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of

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sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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ATTACHMENT D. LETTER FROM UC BERKELEY TO FEMA

PROJECT MAINTENANCE COSTS

The University of California, Berkeley, Associate Director of Physical Plant, Robert Costa, completed an estimate of life-cycle maintenance costs for 2 UC projects. The letter containing Mr. Costa's Opinion follows.

February 15, 2005

TOM KLATT, MANAGER
Fire Mitigation Program
#1 Sproul Hall
University of California
Berkeley, CA 94720-1159

RE: Professional Opinion on Fire Project Maintenance Costs

Per your request, I've reviewed the scope of work proposed for the two fire-fuel management projects you've proposed for Strawberry Canyon and Claremont Canyon and have prepared a cost estimate for ongoing maintenance of these sites over the expected life-cycle.

In each location, the site is covered with heavy stands of bluegum eucalyptus trees, with an understory of smaller, natives (Bay, Oak, Maple) and various shrubs, forbs and grasses. The project will involve the removal of the eucalyptus and the retention of the remaining plant coverage. Ongoing maintenance for the next ten years is to ensure that the eucalyptus does not re-sprout (coppice) from cuts stumps and to ensure that any seedlings from the latent seed stock are removed on a continuing basis, until the latent seed stock is exhausted.

I would recommend that two chemical treatments be made to both sites each year for 10 years, with the objective of treating sprouts with herbicide. A basal bark treatment is recommended for the sapients and a low volume foliar spray is recommended for seedlings. Based on the terrain and stand density, and assuming an initial treatment effectiveness during felling of 70%, I estimate that 1.5 hours of labor will be required to treat each acre per visit, totaling to 3 hours of labor, per year, per acre. Standard recharge labor rate, which includes benefits and indirect overhead, is currently $49.75 hr. Based on using a mixture of Triclopyr and Imazapyr in hazen oil, I would allow for $35 per acre per year unmaterial costs. To account for planning, reporting, application prescriptions and supervision, I've proposed an allowance of $4000/site/year.

Please refer to the below chart for life cycle costing.

Project Site	Acreage	Labor (hrs/yr)	Management	Material ($/yr)	Total ($/yr)
Strawberry Canyon	66 Acres	$ 9850	4000	$1650	$ 16,500
Claremont Canyon	45 Acres	$ 6716	4000	$ 1125	$ 11,841

Sincerely,

Robert Costa, Assoc. Director
PP-CS Grounds

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ATTACHMENT E. 114 BIRD SPECIES FOUND BY LOCAL BIRDERS ON MT. DAVIDSON FROM 5/31/11 TO 6/1/12

Date Range	Jun 1, 2011 - May 31, 2012	Total Number of Species	114
Locations	Mt. Davidson	Total Number of Checklists	138

	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12
Number of Species	69	45	46	60	54	48	27	30	37	45	71	55
Number of Individuals	1,377	748	613	950	628	969	421	314	140	314	1,191	569
Number of Checklists	25	19	8	12	5	10	3	2	4	11	21	18

	Jun-11	Jun-11	Jul-11	Jul-11	Aug-11	Aug-11	Sep-11	Sep-11	Oct-11	Oct-11	Nov-11	Nov-11
Species Name	Species Count	Sample Size	Species Count	Sample Size	Species Count	Sample Size	Species Count	Sample Size	Species Count	Sample Size	Species Count	Sample Size
Double-crested Cormorant - Phalacrocorax auritus	--		--		--		--		1	1	--	
Turkey Vulture - Cathartes aura	1	1	--		--		--		--		--	
Northern Harrier - Circus cyaneus	--		--		--		--		--		1	1
Sharp-shinned Hawk - Accipiter striatus	--		--		--		--		2	2	--	
Cooper's Hawk - Accipiter cooperii	--		--		--		--		--		--	

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											51	
Red-shouldered Hawk - Buteo lineatus	1	1	--		1	1	--		--		1	1
Red-tailed Hawk - Buteo jamaicensis	19	13	11	8	11	8	6	4	--		11	5
Buteo sp. - Buteo sp.	--		--		--		1	1	--		--	
American Kestrel - Falco sparverius	--		--		--		1	1	3	3	4	4
Merlin - Falco columbarius	--		--		--		--		1	1	--	
Ring-billed Gull - Larus delawarensis	--		--		--		--		--		2	1
Western Gull - Larus occidentalis	12	3	--		--		--		--		2	1
California Gull - Larus californicus	--		--		--		--		--		6	1
Herring Gull - Larus argentatus	--		--		--		--		--		--	
Glaucous-winged Gull - Larus glaucescens	--		--		--		--		--		--	
gull sp. - Larinae sp.	--		18	2	--		2	1	--		--	
Rock Pigeon - Columba livia	93	7	60	2	15	1	28	4	2	1	11	3
Band-tailed Pigeon - Patagioenas fasciata	43	10	53	6	3	1	6	2	116	2	283	3
Eurasian Collared-Dove - Streptopelia decaocto	1	1	--		--		1	1	--		--	
Mourning Dove - Zenaida macroura	21	8	18	4	28	4	75	8	54	3	68	5
Red-masked Parakeet - Aratinga erythrogenys	--		--		22	2	4	2	8	1	13	2
Great Horned Owl - Bubo virginianus	--		--		--		--		--		2	1
Vaux's Swift - Chaetura vauxi	--		--		--		--		52	1	--	

											52	
White-throated Swift - Aeronautes saxatalis	2	2	--		--		--		--		--	
Anna's Hummingbird - Calypte anna	50	10	36	7	14	3	46	5	14	2	15	2
Rufous Hummingbird - Selasphorus rufus	--		2	2	3	2	--		--		--	
Allen's Hummingbird - Selasphorus sasin	33	9	18	5	--		--		--		--	
Rufous/Allen's Hummingbird - Selasphorus rufus/sasin	14	3	15	5	41	4	4	2	1	1	--	
hummingbird sp. - Trochilidae sp.	10	2	--		--		37	5	--		--	
Nuttall's Woodpecker - Picoides nuttallii	--		3	3	--		--		--		--	
Downy Woodpecker - Picoides pubescens	3	3	2	2	2	2	4	4	1	1	1	1
Hairy Woodpecker - Picoides villosus	4	4	7	7	3	3	2	2	1	1	--	
Northern Flicker - Colaptes auratus	--		--		--		--		7	4	1	1
Olive-sided Flycatcher - Contopus cooperi	38	20	14	14	8	6	--		1	1	--	
Western Wood-Pewee - Contopus sordidulus	20	13	35	17	4	3	2	2	--		--	
Willow Flycatcher - Empidonax traillii	1	1	--		--		--		--		--	
Hammond's Flycatcher - Empidonax hammondii	--		--		--		--		--		--	
Gray Flycatcher - Empidonax wrightii	2	2	--		--		--		--		--	
Pacific-slope Flycatcher - Empidonax difficilis	9	8	--		--		4	3	--		--	

MPIC-2

MPIC-2

53

Pacific-slope/Cordilleran Flycatcher	2	2	--		--		--		--		--	
Empidonax sp. - Empidonax sp.	1	1	--		--		--		--		--	
Black Phoebe - Sayornis nigricans	--		1	1	4	3	6	6	2	2	2	2
Say's Phoebe - Sayornis saya	--		--		--		6	4	2	1	--	
Western Kingbird - Tyrannus verticalis	--		--		--		--		--		--	
Cassin's Vireo - Vireo cassinii	1	1	--		--		--		--		--	
solitary vireo sp. - Vireo plumbeus/cassinii/solitarius	1	1	--		--		--		--		--	
Hutton's Vireo - Vireo huttoni	6	4	2	2	1	1	2	2	--		2	2
Warbling Vireo - Vireo gilvus	18	7	--		3	2	13	4	--		--	
Steller's Jay - Cyanocitta stelleri	7	4	13	7	--		21	5	1	1	3	3
Western Scrub-Jay - Aphelocoma californica	26	9	9	3	--		12	4	--		4	2
American Crow - Corvus brachyrhynchos	6	1	--		--		--		2	1	1	1
Common Raven - Corvus corax	4	3	2	1	--		11	5	--		18	3
Tree Swallow - Tachycineta bicolor	3	3	--		--		--		--		--	
Violet-green Swallow - Tachycineta thalassina	--		--		--		--		--		--	
Barn Swallow - Hirundo rustica	1	1	--		--		--		--		--	
swallow sp. - Hirundinidae	--		--		--		--		--		--	

MPIC-2

											54	
sp.												
Chestnut-backed Chickadee - Poecile rufescens	34	7	13	4	--		32	4	--		12	2
Bushtit - Psaltriparus minimus	20	3	14	3	--		--		--		23	2
Red-breasted Nuthatch - Sitta canadensis	--		--		--		1	1	--		--	
Pygmy Nuthatch - Sitta pygmaea	25	8	33	5	--		42	4	--		--	
Brown Creeper - Certhia americana	--		--		--		1	1	--		--	
Bewick's Wren - Thryomanes bewickii	1	1	3	3	9	6	6	5	2	2	3	2
House Wren - Troglodytes aedon	--		1	1	4	3	7	7	3	3	4	2
Pacific Wren - Troglodytes pacificus	14	5	29	6	--		29	5	--		15	3
Blue-gray Gnatcatcher - Polioptila caerulea	--		--		--		4	3	--		--	
Ruby-crowned Kinglet - Regulus calendula	--		--		--		1	1	4	2	17	2
Swainson's Thrush - Catharus ustulatus	33	15	4	2	--		1	1	--		--	
Hermit Thrush - Catharus guttatus	--		--		--		--		2	2	10	2
American Robin - Turdus migratorius	94	11	40	6	--		14	4	19	2	54	3
Varied Thrush - Ixoreus naevius	--		--		--		--		20	3	1	1
Northern Mockingbird - Mimus polyglottos	8	4	6	4	1	1	--		3	3	1	1
Sage Thrasher -	1	1	--		--		--		--		--	

MPIC-2

										55		
Oreoscoptes montanus												
European Starling - Sturnus vulgaris	--		10	2	--		--		--		--	
American Pipit - Anthus rubescens	--		--		--		--		1	1	--	
Cedar Waxwing - Bombycilla cedrorum	7	2	--		2	2	2	1	21	3	7	1
Orange-crowned Warbler - Oreothlypis celata	9	6	2	2	13	4	9	6	1	1	1	1
Nashville Warbler - Oreothlypis ruficapilla	--		--		--		--		--		--	
MacGillivray's Warbler - Geothlypis tolmiei	--		--		--		3	3	--		--	
Northern Parula - Setophaga americana	1	1	--		--		--		--		--	
Yellow Warbler - Setophaga petechia	12	5	--		7	2	45	5	8	2	--	
Yellow-rumped Warbler - Setophaga coronata	--		--		--		4	3	98	4	82	6
Black-throated Gray Warbler - Setophaga nigrescens	3	2	--		--		--		2	2	--	
Townsend's Warbler - Setophaga townsendi	11	5	--		7	2	8	3	12	4	24	4
Hermit Warbler - Setophaga occidentalis	--		--		--		3	3	--		--	
Wilson's Warbler - Cardellina pusilla	74	13	17	9	18	6	18	9	1	1	--	
California Towhee - Melozone crissalis	17	9	3	3	--		--		--		2	2
Chipping Sparrow - Spizella passerina	--		--		--		--		--		--	
Savannah Sparrow -	--		--		--		2	1	--		--	

MPIC-2

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Passerculus sandwichensis												
Fox Sparrow - Passerella iliaca	--		--		--		12	3	16	3	23	4
Song Sparrow - Melospiza melodia	81	9	13	5	--		40	4	10	3	6	1
Lincoln's Sparrow - Melospiza lincolnii	--		--		--		3	3	--		--	
White-throated Sparrow - Zonotrichia albicollis	--		--		--		--		--		--	
White-crowned Sparrow - Zonotrichia leucophrys	118	10	40	5	20	1	82	5	50	1	124	4
Golden-crowned Sparrow - Zonotrichia atricapilla	--		--		--		--		8	1	43	4
Dark-eyed Junco - Junco hyemalis	27	8	12	3	--		6	4	--		17	2
Western Tanager - Piranga ludoviciana	20	10	1	1	1	1	51	7	8	2	--	
Black-headed Grosbeak - Pheucticus melanocephalus	46	14	7	7	6	3	20	8	1	1	--	
Lazuli Bunting - Passerina amoena	70	12	--		2	2	3	3	--		--	
Indigo Bunting - Passerina cyanea	5	5	--		--		--		--		--	
Western Meadowlark - Sturnella neglecta	--		--		--		--		1	1	1	1
Brewer's Blackbird - Euphagus cyanocephalus	10	6	--		--		5	2	--		--	
Brown-headed Cowbird - Molothrus ater	5	3	--		--		--		--		--	
Hooded Oriole - Icterus cucullatus	1	1	--		--		--		--		--	
Bullock's Oriole - Icterus bullockii	--		--		--		--		--		--	

MPIC-2

57

oriole sp. - Icterus sp.	1	1	--		--		--		--		--	
blackbird sp. - Icteridae sp.	--		--		--		--		7	1	--	
Purple Finch - Carpodacus purpureus	10	3	1	1	3	3	--		11	3	8	3
House Finch - Carpodacus mexicanus	87	10	136	7	300	5	160	4	12	1	--	
Red Crossbill - Loxia curvirostra	2	1	1	1	--		--		--		--	
Pine Siskin - Spinus pinus	3	3	1	1	2	2	9	4	24	3	7	1
Lesser Goldfinch - Spinus psaltria	37	6	40	7	46	5	33	5	11	2	15	2
American Goldfinch - Spinus tristis	7	3	--		9	2	--		1	1	--	
Spinus sp. (goldfinch sp.) - Spinus sp. (goldfinch sp.)	--		--		--		--		--		--	
House Sparrow - Passer domesticus	30	6	2	1	--		--		--		18	2

NGCOA-1

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DEC 01 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

NATIONAL GOLF COURSE OWNERS ASSOCIATION

Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural resource Areas, etc. DEIR No. 2005.1912E.

Dear San Francisco Planning Department,

01 We are writing to you to inform you that we support the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. As you know, this course was one of the final designs by Alister MacKenzie prior to his death. He is regarded by many as the finest golf course architect in the history of the game with courses like Augusta National and Pasatiempo in Santa Cruz to his credit. Unlike those courses, Sharp Park is affordable and accessible to all people from all walks of life from the community and beyond. There have been many great players like San Francisco's own Ken Venturi and Johnny Miller who developed their games on municipal courses. Take away the public course option and many great and not so great players will never have the chance to pursue this great lifetime sport. In an urban environment, golf courses provide a unique venue for healthy outdoor recreation. Unlike other sports, golf is one that can be pursued by anyone regardless of age, size, or speed. Entire multi-generational families can play this game together.

Sharp Park is a significant contributor to the local economy as a provider of local jobs. Golf courses also positively impact the local economy because they support many local vendors and service providers. Sharp Park, like virtually all golf courses, is a significant contributor through the innumerable charitable events and fundraisers it has hosted over the years.

Golf facilities are tremendous environmental assets that are managed by highly trained and educated agronomists who are careful stewards of the environment. Golf courses provide green space and varied habitat for many species.

In short, this golf course is important to the community in many and varied ways and once eliminated cannot be replaced. We hope that this letter, along with the other expressions of support from both your local community and the other voices in the golf industry will convince you of the historical importance of this irreplaceable community asset.

Sincerely,

Michael K. Hughes
CEO
National Golf Course Owners Association

291 Seven Farms Drive, 2nd Floor, Charleston, South Carolina 29492 • Phone: (800) 933-4262 • Fax: (843) 881-9958 • www.ngcoa.org

NTC-1

Nature in the City
PO Box 170088
San Francisco CA 94117
www.natureinthecity.org

Tuesday, November 1, 2011

Bill Wycko
SF Planning Department
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco CA 94103

Dear Mr. Wycko:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP).

By now you are well aware that this has become an incredibly complex issue, not only because the document covers 32 distinct natural areas, each with its own community and environmental context, but also because one of them is Sharp Park, a wholly different animal from the rest. We advocated in 2009 when the Initial Study was released, and we are advocating again, that for many reasons, environmental analysis of Sharp Park should be separated out from the rest of the environmental analysis of the Natural Areas Plan.

01 The Natural Areas Plan goals are excellent. The DEIR describes accurately the environments of the 32 natural areas, and with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan. However, we are concerned that the analysis neglects to fully address the long-term impact of invasive plants from the retention of invasive weed-nurturing eucalyptus groves in the MA-3 areas. The true impacts (and benefits!) of the maximum restoration alternative – one which presumably would restore significant portions of the MA-3 areas - cannot be properly evaluated against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about relative impacts from invasive plants, i.e., the degree to which they remain a threat to biodiversity, as a function of that alternative versus the Proposed Plan, can be made by the public because there is no substance to the alternative. It is completely general.

02 That the recreation and maintenance alternatives are the "environmentally superior alternatives" and neither the *restoration* nor the proposed project are, may be a function of a misinterpretation of the intent of CEQA, where the protection of wildlife and our natural environment are central to the intent of the legislation. The assumptions made about what defines recreation for this particular DEIR are subjective and not based on best available science about recreation (there are plenty of citations on the web). For the purposes of the SNRAMP DEIR, recreation should include community stewardship, a legitimate form of recreation, practiced by thousands of people every week all over the Bay Area. This could change the balance of purported impacts to

NTC-1

02 (Cont.)

recreation, and could, for example, lead to the proposed project being considered to be the environmentally superior alternative.

The analysis of Sharp Park in Pacifica should be separated from the rest of the analysis of the Natural Areas Plan for the following reasons:

Geography - Sharp Park is in a different county, has a different user group, and has a wholly different regional environmental context.

Proposed Jurisdictional Changes – Some in the community, including Nature in the City, are advocating for Sharp Park to become part of the Golden Gate National Recreation, which currently effectively surrounds Sharp Park on three boundaries.

03

Ecological Distinction – Sharp Park is the only RPD Significant Natural Resource Area with two federally listed endangered species; it possesses a much larger flora and fauna than the rest of the 31 areas; and it is the only one with an acute threat of sea-level rise to protected species, valuable wetland habitat, and local communities.

Financial – Sharp Park Golf Course is in a state of uncertainty and instability in terms of whether it can be maintained as a viable and affordable public resource. The problems of dependence on pumping freshwater out of endangered species habitat, on the existence of an old and vulnerable sea wall, and on financial subsidy for golf course function are not sustainable.

Legal – If Sharp Park is not separated from the environmental analysis of the Natural Areas Plan, then litigation is going to hold up finalization and implementation of the Plan for a much longer, indefinite period of time. This is unfair to San Franciscans, who have been waiting for 15 years for the completion of the Significant Natural Resource Areas Management Plan process.

Sincerely,

Peter Brastow
Founding Director
Nature in the City
San Francisco, California

NTC-2

From: Bill Wycko
To: Jessica Range; Sarah B Jones
Cc: Linda Avery; John Rahaim
Subject: Fw: Natural Areas Plan DEIR
Date: 09/30/2011 10:30 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 09/30/2011 10:29 AM -----

Peter Brastow <pcb123@natureinthecity.org>

09/30/2011 10:06 AM

To bill.wycko@sfgov.org
cc Linda Shaffer <ljshaffer1@comcast.net>, Peter Brastow <pcb123@natureinthecity.org>, Noreen Weeden <nweeden@goldengateaudubon.org>, Jennifer Clary <jenclary@sbcglobal.net>, Steven Krefting <skrefting@igc.org>, Arthur Feinstein <arthurfeinstein@earthlink.net>, Ruth Gravanis <gravanis@earthlink.net>, Greg Gaar <dunetansy@yahoo.com>, Brent Plater <bplater@wildequity.org>
Subject Natural Areas Plan DEIR

Mr. Wycko,

My, our, frame of reference is the sector of the public who are the stakeholders for a particular DEIR, who, in this case, are overwhelmed with the confluence of environmental documents which have recently hit the streets, including - but not limited to - those associated with:

America's Cup
GGNRA GMP
GGNRA/PORE Air Tour MP
PORE DEIR for Drakes Bay Oyster Company

Thus, the CUMULATIVE effect on the stakeholder public is to be overwhelmed by the necessity to participate in all of these processes, thereby potentially diluting effective public participation. Unfortunately, the public is not well-represented in any of these situations because funding for public-serving non-profits is in the toilet.

01

Thus, your determination is detrimental to the optimization of a robust public process for the Significant Natural Resource Areas Management Plan, the single most important conservation document in the City's history.

Regards,

Peter Brastow
Founding Director, **Nature in the City**

PO Box 170088

NTC-2

San Francisco CA 94117
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pcb123@natureinthecity.org

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On Sep 30, 2011, at 9:02 AM, bill.wycko@sfgov.org wrote:

> We are not the lead agency for the GGNRA/PORE Air Tour Management Plan, and its public comment period is therefore not relevant. Our frames of reference are extensive established practices for the numerous complex DEIRs which we prepare as well as California statutes and guidelines which identify a total period for DEIR review of sixty days as exceptional and appropriate only in unusual circumstances. As I indicated to Mr. Sigg, you can address any further requests for a DEIR review period extension to the San Francisco Planning Commission.

Peter Brastow
<pcb123@natureinthecity.org>
09/29/2011 04:34 PM

To: bill.wycko@sfgov.org
cc:
Subject: Fwd: ATMP - Comment Period Extended to October 21 - WHY NOT FOR THE SNRAMP?

NTC-2

Greetings Bill,

I found your response to Jake Sigg's request for an extension of the comment period for the SNRAMP to be a bit offensive, rude and patronizing. Not that I even want to address any of your specific points, but do you think that the GGNRA/PORE Air Tour Management Plan is more complex than the Significant Natural Resource Areas Management Plan DEIR, considering the confounding effects of Sharp Park?

I would urge you to reconsider this request at the staff level.

Thank you.

Peter Brastow
Founding Director, Nature in the City

PO Box 170088
San Francisco CA 94117
415-845-0087
pcb123@natureinthecity.org

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Begin forwarded message:

> From: Samantha at GGNRA <goga_planning@nps.gov>
> Date: September 29, 2011 3:40:37 PM PDT
> To: pcb123@natureinthecity.org
> Subject: ATMP - Comment Period Extended to October 21
> Reply-To: goga_planning@nps.gov

This email best viewed with images displayed.

> You are receiving this email because you have expressed an interest in Golden Gate National Recreation Area. Don't forget to add goga_planning@nps.gov to your address book so we'll be sure to land in your inbox!

NTC-2

You may unsubscribe if you no longer wish to receive our emails.

(Embedded image moved to file: pic14605.jpg)GGBridge banner

Air Tour Management Plan
Comment Period Extended to October 21

Quick Links
Project Documents
FAA Website
GGNRA Home Page

NTC-2

How to Submit Comments
Online

Or,

By Mail To:
Keith Lusk
ATMP Program Manager
Special Programs Staff AWP-1SP, FAA
P.O. Box 92007
Los Angeles, CA 90009-200

Like us on Facebook(NPS, not GGNRA)

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(Embedded image moved to file: pic06617.jpg)
News Release
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(Embedded image moved to file: pic14429.gif)Join Our
Mailing List

Dear Park Friend,

The Federal Aviation Administration (FAA) and National Park Service (NPS) announced today the extension of the public scoping period to inform the development of Air Tour Management Plans (ATMPs) for Golden Gate National Recreation Area (GGNRA) and for Point Reyes National Seashore (the Seashore).

Comments will now be accepted through October 21, 2011.

NTC-2

If you experience difficulty submitting comments online please send an email to goga_planning@nps.gov with "ATMP" in the subject line.

About the Project
(Embedded image moved to file: pic26749.jpg)View of GG Bridge from bluffs.
The FAA, in cooperation with the NPS, has initiated development of an ATMP for GGNRA and the Seashore. The ATMP for GGNRA will include Muir Woods National Monument and Fort Point National Historic Site, both directly managed by GGNRA, and the San Francisco Maritime National Historical Park.

The objective of an ATMP is to develop acceptable and effective measures to mitigate or prevent significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences and tribal lands within or directly adjacent to GGNRA and the Seashore.

The public, agencies, tribes, and other interested parties are invited to provide comments, suggestions, and input on the scope of issues and range of alternatives to be addressed in the environmental process.

NTC-2

This correspondence can be made available in alternative formats. Please email goga_planning@nps.gov, call (415) 561-4734 or the TTY phone number, (415) 556-2766 to submit a request or to obtain more information on accessibility assistance.

Forward Email

This email was sent to pcb123@natureinthecity.org by goga_planning@nps.gov | Update Profile/Email Address | Instant removal with SafeUnsubscribe™ | Privacy Policy.
Golden Gate National Recreation Area - Planning | Building 201 - Fort Mason | San Francisco | CA | 94123

(Embedded image moved to file: pic24373.gif)
<pic14605.jpg><pic06617.jpg><pic14429.gif><pic26749.jpg><pic24373.gif>

PGA-1

PGA

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Allen Wronowski, PGA
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Jim Remy, PGA
Honorary President

Joseph P. Steranka
Chief Executive Officer

September 27, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural Resource Areas, etc. DEIR No. 2005.1912E

Dear San Francisco Planning Department,

01 We are writing to you today to voice The PGA of America's wholehearted support for the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. We feel strongly that as one of renowned architect Alister MacKenzie's final designs prior to his death, it holds true historic value not only for your region but for the U.S. golf industry as well.

02 We also feel strongly that as a provider of local jobs and as an attraction that can bring golfers to your area from outside your region, there are considerable economic reasons to continue operating Sharp Park Golf Course. The PGA of America is proud to present golf as an important component of local and regional economies as well as a healthy and fun recreational activity that can be enjoyed by young and old, men and women, as a family activity, with friends or business associates, no matter their economic or ethnic background.

Furthermore, municipal golf facilities such as Sharp Park Golf Course are critical to keeping golf affordable and accessible to all who want to participate in this wonderful game. Some of the biggest names in professional golf are products of municipal and military-operated golf courses, as are countless other professional and amateur players. Take away the municipal course option, and many of these highly-successful golfers may never have had the chance to pursue their passion for the game.

Finally, golf facilities across the country have proven themselves to be good stewards of the environment, providing green space and habitat for plants and animals while using considerably less water per acre than developed tracts of land.

THE PROFESSIONAL GOLFERS' ASSOCIATION OF AMERICA
100 Avenue of the Champions | Palm Beach Gardens, Florida 33418
T: (561) 624-8400 | www.pga.com

PGA-1

In closing, we hope that this letter, along with the wide-ranging support from both your local community and golf industry, will convince you of the importance of the historical designation as well as the benefits of continuing to operate Sharp Park Golf Course.

Very Respectfully,

Allen Wronowski, PGA
President
The PGA of America

Joseph P. Steranka
Chief Executive Officer
The PGA of America

cc: Congresswoman Jackie Speier
Hon. Ed Lee, Mayor, City and County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
David Chiu, President, San Francisco Board of Supervisors
Carole Groom, President, San Mateo County Board of Supervisors
Philip Ginsburg, General Manager, San Francisco Recreation and Park Department
Charles Edwin Chase, AIA, President, San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

SCBC-1

26 September 2011

To: Bill Wycko
Environmental Review Officer
San Francisco Planning Dept.

RE: Request for comment deadline extension

We have reviewed the Significant Natural Resource Areas Management Plan DEIR, a large and complex document covering 32 natural areas, including areas with ancillary complicating issues, such as Sharp Park. All of the signatories to this letter have long and extensive involvement with these lands and expert knowledge and familiarity with their management problems. We find discrepancies, even contradictions, in the DEIR.

01 We appreciate the great amount of work that went into preparing this document, particularly when its preparation coincided with that of other documents such as the America's Cup DEIR. We, too, are heavily involved in commenting on these issues, as well as on the proposed revision of the Recreation & Open Space Element of the General Plan, and we find that their adequate address is beyond our capabilities in the time allowed.

We therefore request that we be given an additional two months to process the large volume of information and form thoughtful and useful comments.

(Signed)

Arthur Feinstein
Sierra Club Bay Chapter

SCBC-1

Casey Allen, President
California Native Plant Society Yerba Buena Chapter

Noreen Weeden, Volunteer Coordinator
Golden Gate Audubon Society

Jennifer Clary, President
San Francisco Tomorrow

Brent Plater, Executive Director
Wild Equity Institute

Peter Brastow, Executive Director
Nature in the City

Steven Krefting
San Francisco League of Conservation Voters

SFDOG-1

RECEIVED AT CPC HEARING 10/6/11
2005.1912E J. Range

NAP EIR
San Francisco Planning Commission
October 6, 2011

My name is Sally Stephens and I am the Chair of the San Francisco Dog Owners Group. Urban parks are for people. They are our collective backyards, places where we go to play with our kids and our dogs, or simply to sit in the sun. We have so little open space in San Francisco, we cannot afford to lock 1/3 of it away in plant museums – you can look but you cannot enter – which is what the Project and the Maximum Alternatives would do. SFDOG supports the Maintenance or Maximum Recreation Alternatives because they protect existing natural areas yet preserve access for people.

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The EIR incorrectly states the number and total acreage of off-leash Dog Play Areas (or DPAs). There are actually 29, which cover about 120 acres total. But 80% of that total is either within or adjacent to a natural area and is therefore at risk of future closure if NAP claims impacts from the dogs. Many were designated as DPAs years before NAP came around, yet, with a simple stroke of a planner's or a NAP staffer's pen, they can be gone.

02

If you're going to force people out of their parks, you better have a good reason. The NAP EIR repeatedly says dogs MAY have an impact, but there is no evidence cited in the EIR that dogs are now or ever have done so. EIR's must be based on documented impacts, not hypothetical conjectures. Specific proof of impacts, not just claims of "observations" with no details, must be added to the NAP EIR. Give us unbiased, proven facts or don't kick us out.

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NAP has become a way to get rid of DPAs in city parks, since the only real remedy from the alleged impacts from dogs is closure of the DPA. As such, the EIR must consider the impact of those closures on the human and urban environments, not just the natural environment. Throughout the EIR, dogs are described solely as "nuisances." The EIR does not consider any benefits of dogs and off-leash dog walking to people and communities. The NAP EIR must consider impacts on the physical and emotional health

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04 (Cont.)

of people who can no longer walk their dogs in closed DPAs, and on the sense of neighborhood and park community that will be impacted if DPAs are closed or significantly reduced. Yet it does not.

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This is particularly important with the Maximum Restoration Alternative that will essentially close DPAs at McLaren Park, Bernal Hill, Buena Vista Park, and Lake Merced. These DPAs constitute roughly 75% of the total legal off-leash area in SF city parks. The EIR does not adequately analyze the impact of that level of closure on the remaining DPAs and other nearby parks, especially when combined with the Golden Gate National Recreation Area's plan to close 90% of its off-leash space. The dogs and dog people aren't going to just go away, or be quietly forced out of our city parks.

These are just a few of our concerns. We're still analyzing the EIR, and will submit an expanded, detailed written comment next week.



Sally Stephens
Chair, SFDOG
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San Francisco Dog Owners Group

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

October 30,2011

Bill Wycko, Environmental Review Officer
SF Planning Dept
1650 Mission St., Suite 400
San Francisco, CA 94103

RE: COMMENT ON SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN EIR

I am writing this public comment on the Significant Natural Resource Areas Management Plan EIR (NAP EIR) as Chair and representative of the San Francisco Dog Owners Group. SFDOG is the largest citywide dog owners/guardians group in the city, with a thousand active members, and at least a thousand more that we reach regularly through our emailed newsletters and listserves. SFDOG pushes for responsible dog guardianship, and advocates for off-leash recreation for dogs that are under voice control. We are a 501(c)(3) nonprofit, and work to educate dog guardians, non-dog people, and elected and appointed officials about responsible dog guardianship and the benefits of having a dog in our modern, often isolated, society.

01 SFDOG is very concerned about poor outreach by the Planning Department and the Recreation and Park Department to the public about the NAP EIR. There was no mention of the NAP EIR on either the SF Recreation and Park Department website, nor on the Natural Areas Program website. Neither site had a link to the Planning Dept website where the NAP EIR was located. We heard frequently from people who tried to find the NAP EIR to read it, couldn't find it on the Rec and Park website, and had no idea where else to look for it. In addition, there was no official notice posted in parks most affected by the NAP, for example, on Bernal Hill (where part of the DPA will be closed by NAP).

02 In addition, the Planning Commission's hearing on the NAP EIR on October 6 was another case of poor outreach. The Planning Department's website (where the EIR was posted) listed the hearing as beginning at 1:30 pm. This start time was posted even on October 6th itself. The only way to find out that the hearing time had been changed was to look at the meeting agenda. While the original agenda that was posted had the 1:30 pm starting time, at some point the agenda was changed to reflect the noon starting time. I happened to check the agenda on Monday, October 4 and noticed the change. But many people did not. I was at the Commission meeting and the NAP EIR item was over largely by 1:30 pm, the original starting time. Many people showed up for the Planning Commission meeting just after 1:30 pm, intending to speak about the NAP EIR but, because the agenda item was already over, they were denied the chance to give oral public comment. It is important for decision makers and Commission members to *hear* public comment, not just read it, to hear the passion in people's voices as they speak. By changing the starting time of its October 6th meeting and not letting people know, the Commission essentially denied people the chance to give oral public comment on the NAP EIR.

When the problems with the hearing time are combined with the poor outreach described above, it is clear that the Planning Department cannot continue with the EIR process. Planning should re-start the public comment process with better outreach to ensure the comment process is fair and accurately reflects the public's opinions. I shall continue, however, with this comment.

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SFDOG feels that the NAP EIR is inadequate for the following reasons:

1) The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. In its comment on the Initial Study, SFDOG noted that there is no scientific consensus that dogs have any impact on plants and wildlife, including nesting birds, in city parks and listed scientific citations for research that showed no impacts from dogs. There is no indication in the NAP EIR that those studies were included, since the NAP EIR accepts the premise, without any evidence to support the premise, that dogs cause impacts. There was no acknowledgment that studies that show otherwise were ever considered in the NAP EIR. In addition, our comment on the Initial Study warned about considering studies that claim impacts from "free-roaming" dogs, since that means dogs that are running without any human control (for example, a dog that accidentally got loose without its owners knowing so there was no human in the park to handle or control the dog). Off-leash dogs are NOT free-roaming, since they come to parks WITH humans who can control their behavior and activities. There is no indication in the NAP EIR that this warning was heeded, since we don't know what research the EIR used to back its premise that dogs cause impacts. An EIR should be based on scientific evidence, and there is little presented here to justify any claims of impacts. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is incorrect and inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

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2) The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there is no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

03 (Cont.)

3) In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by "observers" biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is the case here as well? We do not know, since the NAP EIR provides no information about them.

In our comment on the Initial Study, SFDOG pointed out the EIR should re-analyze any data provided by NAP staff, especially data not published in a peer-reviewed journal, to ensure that conclusions against dogs are actually supported by the data. Because no data – only the word "observations" – is included in the NAP EIR, we don't know if there was any analysis of the observations to ensure they say what NAP staff claim they do.

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This is not just paranoia. In May 2006, Point Reyes National Seashore (PRNS) management claimed that an oyster farm in Drakes Bay was harming marine wildlife and causing significant negative impacts on the environment and, therefore, should be closed. A PRNS report stated that the oyster farm workers disturbed seals, causing a huge decline in seal population, and that sediment from oyster feces was harming eelgrass beds. Therefore, the oyster farm did not belong in a national seashore. Corey Goodman, a microbiologist at UC Berkeley, member of the National Academy of Sciences, and a former Chair of the National Research Council's Board of Life Sciences, analyzed the raw data used in the studies cited by PRNS staff and found that the data did not support nearly every negative impact claimed.

On the September 27, 2007 episode of the KQED-FM program "Quest", Goodman said, about the published claims by PRNS staff: "Essentially every one of the scientific claims that they made are

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refuted by their own scientific data.... They have made intentionally misleading claims, statements about data that are untrue, claims of cause and effect that are untrue. I think this is serious because they have misused science to mislead the public."

An Interior Dept's Inspector General report and a second report by the National Academy of Sciences agreed with Goodman's analysis. Yet, convinced that the oyster farm did not belong there, PRNS staff misrepresented their data to support that conclusion.

Similar concerns have been raised about government claims of impacts of dogs on wildlife in the context of native plant restoration. For example, two reports (in 1996 and 2006) by Daphne Hatch, an employee of the Golden Gate National Recreation Area, argued that off-leash dogs should be restricted to protect Western Snowy Plovers at Ocean Beach (in the context of restoration of Ocean Beach). Data presented in both studies show no impact of off-leash dogs on the numbers of plovers. Indeed the maximum number of plovers observed on Ocean Beach (54) was recorded in 1994, a time when off-leash dogs were not restricted on Ocean Beach. Yet the conclusion drawn in the report is that off-leash dogs have to be restricted to "protect" the plovers.

Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If an EIR is based on anecdotal evidence, its analysis cannot be trusted and is inadequate.

05 (Cont.)

4) The NAP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. Do people in the natural areas with dogs cause significantly more impacts than people in the natural areas without dogs? Clearly a 200-pound person walking on a trail will have a much more significant impact on plants than a 20-pound dog walking (or even running) on the same trail. Because this was not evaluated in the EIR, the analyses presented in the NAP EIR are inadequate. If there is little difference in impacts, then the EIR cannot be used to justify banning dogs from the natural areas and this point should be clearly stated.

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5) The NAP EIR considers only the NAP plans to close roughly 15% of the legal off-leash space in SF city parks (closure of Lake Merced DPA and reductions in DPAs at McLaren Park and Bernal Hill) when considering impacts on the remaining DPAs and on recreation. However, the NAP plan also calls for expanding the most sensitive areas within natural areas, and monitoring the DPAs in four parks – McLaren and Buena Vista parks, Bernal Hill, and the Golden Gate Park Oak Woodlands – to look for any impacts from dogs on the natural areas in these parks. These DPAs, combined with the one at Lake Merced that will be closed by NAP and DPAs at Pine Lake and Corona Heights that are located immediately adjacent to a natural area), constitute roughly 80% of the total off-leash area in SF city parks. Therefore, NAP claims of impacts from dogs could result in the closure of up to 80% of the legal off-leash space in city parks. These added closures will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts from the loss of 80% of legal off-leash space were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate. All analyses of impacts on recreation, transportation, global warming, and climate change (from increased driving because of DPA closures) must be done using the 80% loss that is quite possible, given NAP's historic antipathy toward dogs and dog walkers.

07

6) The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures (especially the possible closure of 80% of DPAs) can and should be analyzed in the NAP EIR. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more

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dogs than on a normal weekday (normally about 20 dogs at one time) and more than 3 times the maximum numbers of dogs seen on busy weekends (about 60 dogs at a time). This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The effects of Tsunami Friday were mentioned in an article in the March 2011 issue of the *West Portal Monthly*. The analysis presented in the EIR, which does not contain this, is inadequate.

08 (Cont.)

7) The number of DPAs in city parks listed in the NAP EIR is wrong. Page 155 says there are 19 DPAs, when the actual number is 29. To get such a basic fact wrong is shocking and calls into question other information about dogs, such as their alleged "impacts' on plants and wildlife.

09

8) The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct a citywide survey. While the survey was being conducted, the DAC was told, there would be a temporary hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." The Commission was only called upon to agree to sunset the DAC. The hold on new DACs was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones is absurd. Any analysis of alternatives that does not include this possible mitigation is inadequate.

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9) The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the proposed immediate closures in those parks (13% at McLaren, 29% at Bernal Hill) will not cause a significant number of people to drive to other parks to walk their dogs. People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs. Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. Topography must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate.

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10) The NAP EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is walked on- or off-leash). In a paper on the effects of Garlon, the Marin Municipal Water District (http://www.marinwater.org/documents/Chap4_Triclopyr_8_27_08.pdf) notes that Garlon can cause kidney problems in dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this inability). The NAP's reliance on repeated use of herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it is applied. This is especially true in Glen Canyon, where NAP sprays Garlon in places where children, seniors and dogs walk regularly. In addition, there is concern that the coyotes who make Glen Canyon their home may have similar kidney problems from exposure to Garlon (indeed their exposure would likely be higher than for dogs because they cannot read the signs that tell people to stay out of areas when pesticides are applied and so will walk through these areas soon after applications). The health impact on dogs of repeated exposure to

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Garlon was not considered in the Hazards and Hazardous Materials section and should be included.

11) The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the immediate closures of the roughly 15% of the total off-leash space in city parks (at Lake Merced, Bernal Hill, and McLaren Park) will be less than significant because there will remain sufficient off-leash space in those parks (except for Lake Merced, which will be completely closed). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs (80% of the total off-leash areas in city parks are located either within or adjacent to natural areas). This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows.

07 (Cont.)

12) The NAP EIR refers to dogs as "nuisances". The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are reduced or closed, and this is not included in the NAP EIR. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections.

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14 (Cont.)

13) The NAP EIR does not adequately analyze mitigations other than closing the DPA should any impacts from dogs be proven. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR. Other mitigations – education, signage, more extensive fencing, etc. – are not discussed. NAP seems to go straight from a single impact to closing the DPA.

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14) The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most common and most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate.

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15) The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant

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17 (Cont.) impact on families and the sense of shared community that access to parks fosters in our urban setting.

16) The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people (and dogs). The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species. There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks to give people a sense of what San Francisco's historical habitat was like. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives.

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17) The NAP EIR does not consider the impact on public safety if DPAs are closed, and especially if 80% of the legal off-leash space is ultimately closed. People with dogs are major park users in nearly every park. They are in the parks at all hours of the day (and often into the night), in rain or shine. Public safety officials have known for years that a well-used park is a safe park. People (and especially those with dogs) convince drug dealers, gang bangers, rapists, robbers and other "bad actors" to go somewhere else to commit their crimes. By kicking out people with dogs, the parks will have significantly fewer people in them, and criminals will have less fear of being observed. Prospect Park in New York City was a well known drug dealing haven in the early 1970s (there were even movies made about it). In an article in the September 29, 2005 edition of the *New York Daily News*, Tupper Thomas, who was appointed the New York City Parks Administrator in 1980, was quoted as saying, "Everybody was terrified of Prospect Park. I remember going around to several schools with a park ranger and telling the principals that if they brought their schoolchildren to the park, I would assign them their own personal ranger to make sure nothing happened to them." Today, Prospect Park hosts several million visitors annually. According to the article, dogs deserve a lot of the credit for the turnaround. Despite the threat of muggings, people with dogs still used the park. In 1982, the NYC Parks Department started ticketing people with dogs in Prospect Park. They complained and in response, the Parks Department came up with a timed-use policy – dogs could be off-leash in the park from 9 pm to 9 am. In the article Thomas goes on to say," That dog group became a symbol that it was safe to come to the park. It made an enormous difference. Runners started seeing people in the park, so people started running in the park rather than around it. Over time, because there were people coming to the park, the park came back to the people." The NAP EIR has to consider the negative impacts on public safety of forcing major park users out of large portions of city parks, especially with the potential 80% closures of DPAs. Force the people with dogs out, and there will be no one in the parks to challenge the drug dealers, gang bangers, and others who pose a real public safety threat, and the parks will ultimately become less safe.

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18) The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area is designated as MA-1 and MA-2, with resulting significant restrictions on access to the entire park by everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider the impact of this large-scale denial of access on recreation and people (not just those with dogs) having to drive to another park to play catch with their kids when analyzing the Project Alternative and other alternatives.

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19) The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned

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is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland (1/3 if you add in Sharp Park in Pacifica). The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis. This must be considered in the NAP EIR when considering aesthetics and maintenance.

21 (Cont.)

20) The NAP EIR does not consider the negative impact on aesthetics of NAP management decisions. For many people, brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing. For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green not brown half the year. Because these impacts were not considered, the NAP EIR is inadequate.

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21) The NAP plans call for cutting down over 18,000 healthy trees simply because they are not native. The NAP EIR does not adequately consider the long-term impacts on climate change and global warming of the conversion of land covered by trees with grasslands. Trees are much better at carbon sequestration than grasslands, and the long-term consequences of this difference are not adequately considered in the NAP EIR.

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22) The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (nor tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time considering that the climate has changed since that time, and will be continuing to change in the near future. The environmental consequences (for example, more herbicides, etc.) of trying to force the old habitat into today's (and tomorrow's) climate should be analyzed more thoroughly.

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The cumulative impact of all the issues identified above show that the NAP EIR is inadequate. It must be redone. The process to take public comment on the NAP EIR was also inadequate. It too must be redone.

Sincerely,

Sally Stephens
Chair

SFFA-1

Lynch, Laura

From: eric <emiller1@gmail.com>
Sent: Tuesday, May 15, 2012 9:00 PM
To: Range, Jessica
Subject: Deficiencies in DIER notification for Natural Resources Area Management Plan - Corrective Action Required
Attachments: ltr wycko range sf planning 5-14-12.pdf

Dear Ms. Range--

01 Attached is a letter from the San Francisco Forest Alliance requesting that you amend your notice for the Draft DER for the SNRAMP. We have asked for a formal response by no later than Friday, given the short comment period just established. We would be happy to discuss our proposal for resolving our concerns about the previous notice by telephone this week if that would be helpful to you.

We look forward to hearing from you.

Eric Miller
President
San Francisco Forest Alliance

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San Francisco Forest Alliance

Preserving Public Parks for the Public

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May 14, 2012

Via Email and U.S. Mail

Bill Wycko
Jessica Range
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear All:

The San Francisco Forest Alliance is a nonprofit group that was recently formed to give a unified voice to neighborhood groups and citizens in matters relating to the stewardship of San Francisco's park and recreation lands. In that regard, we are writing to ask you to rectify immediately deficiencies in the notice of completion for the Draft Environmental Impact Statement ("DEIR") prepared for the Natural Resources Area Management Plan Project (Planning Dept. File No. 2005.0912E) (the "DEIR Notice").

1. Notice - What The Law Requires[1]

(a) CEQA

01 (Cont.)

CEQA requires public involvement to ensure that environmental impacts are considered in governmental-decisionmaking *before* action is taken. Public agencies are required to have in place procedures that will ensure wide public involvement, both formal and informal, in order to receive and evaluate public reactions to environmental issues related to the agency's activities.[2] Notice must be given in sufficient time so that the public has notice of the full review period.[3]

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[1] The below description of relevant laws is illustrative only, not exhaustive.

[2] *See* Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm'rs, 91 Cal. App. 4th 1344 (2001); Rural Land Owners Ass'n v. City Council, 143 Cal. App. 3d 1013 (1983); Sutter Sensible Planning Inc. v. Board of Supervisors, 122 Cal. App. 3d 813 (1981); Cleary v. County of Stanislaus, 118 Cal. App. 3d 348 (1981).

[3] Gilroy Citizens for Responsible Planning v. City of Gilroy, 140 Cal. App. 4th 911, 922 (2006).

SFFA-1

CEQA's statutory and regulatory provisions set for the *minimum* notice requirements for government projects that may have an impact on the environment. CEQA provides that notice of a DEIR comment period can be accomplished through: (1) publication in the newspaper of largest circulation in the areas affected; (2) posting of notice on and off the site in the area where the project is to be located; (3) direct mailing to owners and occupants of parcels contiguous to the project parcel. In some cases, one form of notice may be sufficient, but in others, all three forms of notice may be required. In addition, other laws also impose additional notice requirements. In light of this and CEQA's goals of meaningful public participation, CEQA also provides that "the lead agency may also employ any other means of notification it desires to use."[4]

(b) Due Process

01 (Cont.)

In instances where a project substantially affects constitutionally protected interests, due process requirements also must be met. In such cases, due process require that notice be "reasonably calculated to afford affected persons the realistic opportunity to protect their interests."[5] Such notice must "occur sufficiently prior to a final decision to permit a 'meaningful' predeprivation hearing to affected landowners."[6]

(c) San Francisco Forestry Ordinance

San Francisco's Urban Forestry Ordinance provides that before the City removes a tree, it must give 30 days' prior written notice to all interested San Francisco organizations and all owners and occupants of properties that abut, or are on or across from the block face where the affected tree is located. If any person appeals the notice, the City must hold a hearing to consider public testimony on the tree removal. Written notice of the date, time and place of the hearing must be posted on the affected tree, provided in a newspaper of general circulation, and sent to the objecting party, the owner of the property abutting the tree, and all interested organizations.[7]

(d) San Francisco Planning Code

The San Francisco Planning Code requires that neighboring property owners be notified of projects that involve property demolition and alteration. Neighborhood notification is mailed to neighbors within 150 feet of the subject property and relevant neighborhood groups for a 30-day public review period.[8]

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[4] *See* CEQA statute and guidelines.

[5] Horn v. County of Ventura, 24 Cal. 3d 605, 617-18 (1979).

[6] *Id.*

[7] *E.g.*, San Francisco Public Works Code, Section 806.

[8] *E.g.*, San Francisco Planning Code, Sections 311 and 312.

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2. Why The Notice Procedures Followed For The DEIR Are Inadequate

We are aware that notice of the completion of the DEIR was published in October 2011 and more recently noticed again in late April, but we believe such notice is, in light of the facts of the proposed project, legally deficient.

The DEIR contemplates *major* changes to parks that are used daily by thousands of San Francisco residents, and yet, according to our own research, very few park users know that the City has systematic and wide-scale plans to actively and permanently alter the landscape, recreational features, public uses and flora and fauna of the parks they visit every day. In addition, adjacent and other nearby property occupants and owners have not been notified of completion of the DEIR, despite the fact that the project will have a significant impact on them and their property interests.

Thirty-one parks, including a total of over 2,700 acres, and representing (with the exception of Golden Gate Park and areas managed by the federal government) substantially *all* of the recreational space of San Francisco's more than 800,000 residents are, according to the DEIR, slated to undergo radical change in pursuit of the misguided utopian goal of returning these areas to their natural pre-colonial state.

The impacts of the proposed project are significant and too varied to list here, but include cutting down over 18,000 trees, closing or relocating over 54,000 feet of trails, increasing use of pesticides to kill "invasive" species and protect "native" plants, and diversion of City funds from other recreational programs (e.g., kids' educational activities) and improvements, such as renovation of neighborhood restrooms, playgrounds, and clubhouses. Such actions will impact not only park users, but also resident bird, animal and plant species.

01 (Cont.)

The potential impact of the proposed project on neighboring property owners is nothing short of devastating. Owners who purchased homes in view of city parks stand to have their homes devalued by deforestation. Other owners, for example those abutting the west side of Mount Davidson, are likely to face significant drainage and erosion problems as a result of alterations to the landscape. For other owners, property values (and enjoyment of life in the City) may be decreased by the loss of neighborhood trails, trees, play areas and dog-accessible areas.

The City has done virtually nothing to inform residents near affected areas about the proposed project. By comparison, when UCSF developed plans to remove trees in Mount Sutro Forest, it notified affected neighborhoods with flyers detailing the proposed nature and timing of the work, and held a neighborhood meeting at which they took comment from interested parties.

While we appreciate that the City has made efforts to notify neighborhood groups of the proposed project, we do not believe that such groups adequately represent the interests of those who live and recreate in San Francisco. In this regard, it is important to remember that the resources that are to be altered as part of the project are in fact legally *owned* by San Francisco residents. The City is a mere *trustee* for these resources, on their behalf.

SFFA-1

01 (Cont.)

3. Correcting The Deficient DEIR Notice

We recommend and request that the following steps be taken to correct the deficient DEIR Notice:

1. Revise the notice mailed out on April 27th to include Table 5 (Summary of Natural Areas Management Plan) from page 114 of the DEIR,[9] a copy of which is enclosed with this letter.

2. Hold at least one public hearing on a date approximately halfway through the comment period, and include time and place for the hearing in the revised notice.

3. Mail the revised notice to property owners and occupants within 150 feet of parks impacted by DEIR, and all others who, prior to issuance of the new notice, express, or have in the past expressed, an interest in the DEIR.

4. Post notice at all affected park trail and road entrances and exits, and in other highly visible locations such as at playgrounds, and near restrooms and dog run areas.

5. Extend the comment period to 60 days after the notice will have been accomplished pursuant to 3 and 4 above.

We would like to discuss these requests with you at your earliest convenience, especially in light of the fact that under the April 27th notice, the period for comments is set to expire on June 11th. We would like a written commitment from the City by May 18th that it will comply with the steps outlined above.

We would be happy to meet with you to discuss these steps further or discuss them by telephone or email.

Sincerely,

Eric Miller
President, San Francisco Forest Alliance

cc: San Francisco Mayor Edwin M. Lee
San Francisco Supervisor Mark Farrell
San Francisco Supervisor Carmen Chu
San Francisco Supervisor Jane Kim
San Francisco Supervisor Scott Wiener
San Francisco Supervisor Malia Cohen
San Francisco Supervisor Eric Mar
San Francisco Supervisor David Chiu
San Francisco Supervisor Christina Olague
San Francisco Supervisor Sean Elsbernd
San Francisco Supervisor David Campos
San Francisco Supervisor John Avalos

[9] It is acceptable to us to remove the table "Acreage of Significant Natural Areas and Total Park Acreage" from the revised notice in favor of including Table 5.

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Table 5
Summary of Natural Areas Management Plan

Natural Area Site	Park Acreage	Natural Area Acreage	Management Area (acres)				Invasive Trees			Trails (feet)				Dog Play Areas (acres)			
			MA-1	MA-2	MA-3	Total MA[1]	Existing	To Remove	To Remain	Existing	To Close/ Relocate	To Create	Resulting	Existing	To Remove	To Remain	Monitor**
Balboa	1.8	1.8	1.1	0.7	0	1.8	0	0	0	637	90	0	547				
Bayview Park	43.9	43.9	8.2	15.8	19.7	43.7	6,000	511	5,489	8,496	1,439	1,020	8,077				
Bernal Hill	24.3	24.3	7.6	5.8	10.7	24.1	100	0	100	12,239	4,544	464	8,159	21.0	6.0	15.0	No
Billy Goat Hill	3.5	3.5	0.6	1.1	1.6	3.3	20	0	20	2,600	745	0	1,855				
Brooks Park	3.5	2.0	0.8	0.9	0.3	2.0	20	3	17	1,340	456	0	884				
Buena Vista Park	36.1	6.1	0	6.1	0	6.1	140	10	130	3,741	0	0	3,741	1.0	0	1.0	Yes
Corona Heights	12.6	9.6	2.9	2.5	4.2	9.6	200	15	185	6,701	1,845	0	4,856	0.4	0	0.4	No
Dorothy Erskine Park	1.5	1.5	0.2	0.3	1.0	1.5	100	14	86	771	0	0	771				
Duncan-Castro	0.5	0.5	0.3	0.1	0.1	0.5	0	0	0	333	0	0	333				
Edgehill Mountain	2.3	2.3	0	0.9	1.4	2.3	300	0	300	747	0	438	1,185				
Everson/Digby	1.2	1.2	0.9	0.1	0.2	1.2	0	0	0	0	0	0	0				
Fairmount Park	0.7	0.7	0	0	0.7	0.7	100	0	100	187	0	0	187				
Glen Canyon Park and O'Shaughnessy Hollow	72.6	63.8	8.1	33.0	22.4	63.5	6,000	120	5,880	23,242	3,653	0	19,589				
Golden Gate Heights	6.0	0.8	0.2	0.5	0.1	0.8	30	0	30	559	390	188	357				
Golden Gate Park Oak Woodlands	1,021.0	26.2	0.7	25.5	0	26.2	900	82	818	24,844	12,381	0	12,463	2.8	0	2.8	Yes
Grandview Park	4.0	4.0	0.9	2.4	0.7	4.0	25	5	20	1,722	409	0	1,313				
Hawk Hill	4.5	4.5	1.4	3.0	0	4.4	10	0	10	1,609	692	0	917				
India Basin Shoreline Park	11.8	6.2	3.2	2.8	0	6.0	0	0	0	1,885	0	0	1,885				
Interior Greenbelt	19.4	16.5	0	1.8	14.7	16.5	5,800	140	5,660	935	0	620	1,555				
Kite Hill	2.7	2.7	0.6	0.5	1.6	2.7	10	0	10	1,957	398	0	1,559				
Lake Merced	614.0	395.0	60.8	101.8	231.5	394.1	12,000	134	11,866	11,106	3,319	365	8,152	5.0	5.0	0	
Lakeview/Ashton Mini Park	0.5	0.5	0.1	0.2	0.2	0.5	0	0	0	651	0	0	651				
McLaren Park	312.6	165.3	34.9	68.3	61.4	164.6	19,500	809	18,691	59,185	15,681	0	43,504	61.7	8.3	53.4	Yes
Mount Davidson	40.2	40.2	8.8	11.0	20.1	39.9	11,000	1,600	9,400	15,456	2,867	0	12,589				
Palou-Phelps	2.5	2.1	0.8	0.4	0.8	2.0	40	2	38	1,049	527	496	1,018				
Pine Lake	30.3	8.4	1.0	3.8	3.6	8.4	1,000	0	1,000	3,157	608	13	2,562	3.3	0	3.3	No
Rock Outcrop	1.6	1.6	0.8	0.7	0	1.5	0	0	0	0	0	0	0				
Tank Hill	2.9	2.9	1.5	0.6	0.7	2.8	50	0	50	2,672	1,411	0	1,261				
Twin Peaks	34.1	31.1	12.6	14.3	3.8	30.7	88	3	85	8,741	2,303	501	6,939				
15th Avenue Steps	0.3	0.3	0	0.2	0	0.2	0	0	0	0	0	0	0				
San Francisco Subtotal	**2,312.9**	**869.5**	**159.0**	**305.1**	**401.5**	**865.6**	**63,433**	**3,448**	**59,985**	**196,562**	**53,758**	**4,105**	**146,909**	**95.2**	**19.3**	**75.9**	
Sharp Park (Pacifica)	411.0	237.2	35.0	125.1	76.5	236.6	54,000	15,000	39,000	14,741	653	1,792	15,880				
Total	**2,723.9**	**1,106.7**	**194.0**	**430.2**	**478.0**	**1,102.2**	**117,433**	**18,448**	**98,985**	**211,303**	**54,411**	**5,897**	**162,789**	**95.2**	**19.3**	**75.9**	

[1]The total acreages for the management areas do not exactly match the Natural Areas acreages. The Natural Areas acreages are based on vegetation series within each Natural Area where the geographic information system data was precisely clipped to the Natural Area boundary. Management areas were created by mapping their boundaries in the field with a GPS unit. This data was then edited by Natural Areas Program staff to match Natural Areas boundaries. This process created minor errors when the management area appeared to line up with the Natural Area boundary but in fact was off by a small amount. The average error is about 0.1 acre and never more than 0.8 acre. As would be expected, the error is largest in the larger Natural Areas because they have relatively longer boundaries.

**The SFRPD would monitor dog use and impacts on oak woodlands at Buena Vista and Golden Gate Park Oak Woodlands and impacts on small wildflower meadows in McLaren Park.

***Glen Canyon Park and O'Shaughnessy Hollow are two different Natural Areas, they are grouped together in this table, as they are in the SNRAMP.

SFFA-2

Lynch, Laura

From: eric <emiller1@gmail.com>
Sent: Friday, May 18, 2012 7:05 AM
To: Wycko, Bill; Range, Jessica
Subject: Response requested for City's position on state and federal law and city ordinances (other than CEQA)

Dear Mr. Wycko,

Thank you again for your prompt response, which our group has now reviewed. We appreciate your sending information about the steps the City has undertaken to attempt compliance with CEQA's notice-and-comment procedures; however, we continue to believe that the City's actions to date have been inadequate.

In that regard, we would appreciate receiving a further response to our letter addressing the deficiencies we identified under California law other than CEQA, including due process requirements under state and federal law, as well as the San Francisco Forestry Ordinance and the Planning Department's neighborhood notification requirements. Specifically, we would like to understand the City's position that posting in and near the affected parks (rather than at McLaren Lodge, where most park users may not visit) and mailing notice to adjacent and other nearby property owners is not required for this project.

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Since these issues were part of our original letter, and especially in light of the fact that the current DEIR notice period expires so soon, we respectfully request that you respond today.

We greatly appreciate your responsiveness in this matter.

Thank you,

Eric Miller
President
San Francisco Forest Alliance

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SFFA-3



San Francisco Forest Alliance

Preserving Public Parks for the Public

June [illegible]

MAIL
P.O. Box [illegible], SF, CA [illegible]
EMAIL
[illegible]
FACEBOOK
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WEB
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RECEIVED

JUN 08 2012

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

Bill Wycko, Environmental Officer
Planning Department
City/County of San Francisco
San Francisco, CA 94103

RE: File No. 2005.0912E Draft Environmental Impact Report for Significant Natural Resources Area Management Plan

Dear Mr. Wycko:

Enclosed you will find the public comment of the San Francisco Forest Alliance on the Draft Environmental Impact Report for the Significant Natural Resources Area Management Plan (SNRAMP). Our comment is organized into the following topics:

Part I: Environmental impact of destroying trees
Part II: Environmental impact of herbicide use
Part III: Impact of SNRAMP on wildlife
Part IV: Impact of SNRAMP on recreational access
Part V: Support for the Maintenance Alternative which is the environmentally superior alternative
Part VI: Flaws in the public comment process
Part VII: Debunking the myth of flammability of non-native plants and trees

Our comment is written within the context of the legal requirements of CEQA with regard to Environmental Impact Reports. However, for the record we wish to state our long-term goals for the Natural Areas Program:

- Mature park trees must not be destroyed in attempts to create native plant gardens. Non-native forests are a vital resource and must be protected, maintained and, restored.
- Herbicide use in our public parks for the sole purpose of eradicating non-native species of plants is not justified. The public's health and safety should be San Francisco's highest priority.
- The wholesale destruction of existing habitat is harmful to wildlife. There is no scientific evidence to support the claim that native plants provide superior habitat to that which exists in San Francisco.
- Restrictions on recreational access in urban parks cannot be justified by the creation of native plant gardens, which have not been sustainable on a small scale since the inception of the Natural Areas Program.
- The use of taxpayers' money for the sole purpose of eradicating non-native plants and trees is not justified at a time of extreme budgetary limitations.

Thank you for this opportunity to comment on the Draft Environmental Impact Report for the Significant Natural Resources Area Management Plan.

Sincerely,

E. Miller

Eric Miller
President

SFFA-3

Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for Natural Resource Areas Management Plan
Part I: Environmental Impact of Destroying Trees

The Significant Natural Resource Areas Management Plan (SNRAMP) which is evaluated by the Draft Environmental Impact Report (DEIR) documents plans to destroy thousands of trees in the parks managed by the City of San Francisco in San Francisco and Pacifica. This planned tree destruction will release significant amounts of carbon dioxide into the atmosphere. The DEIR reaches the conclusion that the removal of these trees will have no impact on the environment and will not violate California State law regarding greenhouse gas emissions (AB32). This conclusion is based on these fictional premises:

1. That all the trees that are removed will be replaced within the natural areas by an equal number of trees that are native to San Francisco.
2. That only dead, dying, hazardous, or unhealthy trees will be removed.
3. That trees are being destroyed because they are non-native and invasive.
4. That tree removals will not alter wind conditions, causing the trees that remain to fail.
5. That tree removals will not cause erosion or increased run-off and sedimentation
6. That these tree removals will not result in reduced air quality or the loss of carbon stored in the urban forest

This comment will document that these are fictional premises. They are:

- Contradicted by the horticultural requirements of trees native to San Francisco
- Contradicted by the actual plans as documented by SNRAMP and the "Assessment of Urban Forestry Operations"
- Contradicted by the actual health status of the existing forest
- Contradicted by the actual past practices of the Natural Areas Program with respect to tree removals
- Contradicted by scientific studies and actual experience with tree removals and non-native trees
- Contradicted by the science of the terrestrial carbon cycle

1. Trees destroyed by implementation of SNRAMP cannot/will not be replaced

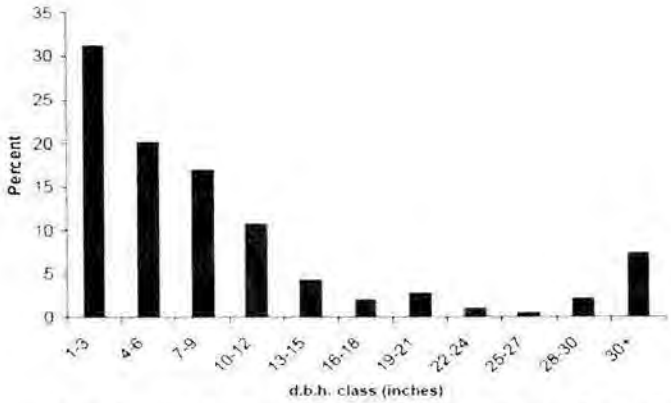
The DEIR claims that all trees removed in San Francisco will be replaced "one-to-one" by trees that are native to San Francisco. The SNRAMP supports this fictional premise by falsely reducing the number of trees that will be removed:

01

- By not counting trees less than 15 feet tall which it intends to destroy, despite the fact that the US Forest Service survey of San Francisco's urban forest reports that the trunks of most (51.4%) trees in San Francisco are less than 6 inches in diameter at breast height, the functional equivalent of trees less than 15 feet tall. (Nowak 2007)
- By not counting the hundreds of healthy trees that have already been destroyed by the Natural Areas Program in "natural areas" at Tank Hill, Pine Lake, Lake Merced, Bayview Hill, Glen Canyon parks, etc., prior to the approval of SNRAMP. (see pages 5-8 for details)

1

SFFA-3



Size of trees in San Francisco's Urban Forest, US Forest Service Survey

However, even artificially reducing the number of trees removed by the implementation of SNRAMP does not make "one-to-one" replacement a realistic goal.

<u>The natural history of trees in San Francisco</u>

The primary reason why we know that it will not be possible to grow native trees in the natural areas in San Francisco is that there were few native trees in San Francisco before non-native trees were planted by European settlers in the late 19th century. San Francisco's "Urban Forest Plan" which was officially adopted by the Urban Forestry Council in 2006 and approved by the Board of Supervisors, describes the origins of San Francisco's urban forest as follows:

01 (Cont.)

> "**No forest existed prior to the European settlement of the city** and the photographs and written records from that time illustrate a lack of trees...Towards the Pacific Ocean, one saw vast dunes of sand, moving under the constant wind. While there were oaks and willows along creeks, San Francisco's urban forest had little or nothing in the way of native tree resources. The City's urban forest arose from a brief but intense period of afforestation, which created forests on sand without tree cover."



San Francisco in 1806 as depicted by artist with von Langsdorff expedition

2

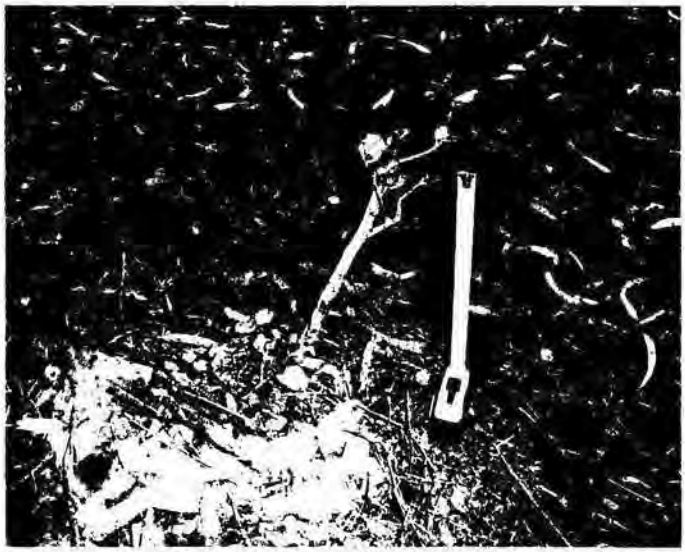
SFFA-3

The horticultural reality of trees native to San Francisco

More importantly, the reality is that even if we want to plant more native trees in San Francisco, they will not grow in most places in San Francisco because they do not tolerate San Francisco's climate and growing conditions: wind, fog, and sandy or rocky soil, etc. We know that for several reasons:

- There are few native trees in San Francisco now. According to the US Forest Service survey of San Francisco's urban forest only two species of tree native to San Francisco were found in sufficient numbers to be counted in the 194 plots they surveyed: Coast live oak was reported as .1% (one-tenth of one percent) and California bay laurel 2.1% of the total tree population of 669,000 trees. (Nowak 2007)
- The City of San Francisco maintains an official list of recommended species of trees for use by the Friends of the Urban Forest and the Department of Public Works. (CCSF Resolution No. 003-11-UFC)
    - The most recent list (2011) categorizes 27 species of trees as "Species that perform well in many locations in San Francisco." There is not a single native tree in that category.
    - Thirty-six tree species are categorized as "Species that perform well in certain locations with special considerations as noted." Only one of these 36 species is native to San Francisco, the Coast live oak and its "special considerations" are described as "uneven performer, prefers heat, wind protection, good drainage."
    - The third category is "Species that need further evaluation." Only one (Holly leaf cherry) of the 22 species in that category is native to San Francisco.
- Finally, about 25 native trees were planted on Tank Hill to placate neighbors who objected to the removal of the trees by the Natural Areas Program (NAP). About 10 years later only 5 have survived and only one shows any growth.

01 (Cont.)



One of five oak trees that survive 10 years after 25 trees were planted on Tank Hill.
This is the sapling in the best shape.

3

SFFA-3

SNRAMP documents that there is no intention to plant "replacement" trees

In fact, the SNRAMP documents that the Natural Areas Program (NAP) does not intend to plant replacement trees for the thousands of trees it proposes to destroy.

- The majority of trees over 15 feet tall designated for removal by SNRAMP (15,000 trees) are in Sharp Park. The DEIR acknowledges that these trees will not be replaced because this area will be converted to native coastal scrub.
- The DEIR makes no commitment to replace the trees less than 15 feet tall that will be removed but are not quantified by SNRAMP because they are not defined by SNRAMP as trees. There are probably thousands of trees less than 15 feet tall in the "natural areas" that will be removed and not replaced.
- Because most of the natural areas are rock outcrops and sand hills that were treeless prior to the arrival of Europeans, there is little acreage within the "natural areas" that is capable of supporting trees that are native to San Francisco: "Two native forest series...comprise approximately 17 acres, 2 percent of total vegetation [in the natural areas]" (SNRAMP, Setting, page 3-11). Obviously, it would not be physically possible to plant thousands of native trees in the small areas in which they would be able to survive.
- SNRAMP documents the intention to convert all MA-1 and MA-2 areas, comprising 58% of the total acres of "natural areas" to grassland and scrub: "Within MA-1 and MA-2, these sites [of tree removals] would then be replanted with native shrub and grassland species." (SNRAMP, Forestry Statement, page F-3)
- Only MA-3 areas, comprising 42% of total acreage will continue to support the urban forest: "Within MA-3, urban forest species would be planted or encouraged (see Section 5, GR-15)" (SNRAMP, Forestry Statement, page F-3). However, the Forestry Statement also documents the intention to thin the urban forest in MA-3 areas to a basal area of 60-200 trees per acre (our estimate based on the formula for basal area in SNRAMP). That represents a significant thinning of the urban forest when compared to the tree density of the eucalyptus forest on Mount Sutro documented by UCSF as 740 trees per acre.
- The "Urban Forestry Statements" in Appendix F of the management plan contain the long-term plans for the natural areas in which trees will be destroyed. All but one of these specific plans is some variation of "conversion of some areas of forest to scrub and grasslands." The exception is Corona Heights for which the plans are "converted gradually to oak woodland." The Corona Heights natural area is 2.4 acres, making it physically impossible to plant thousands of oaks in that location.
- "Oak woodland" is the only vegetation goal in SNRAMP which foresees the planting of native trees. Yet, the DEIR says nothing about the potential for Sudden Oak Death (SOD) to decimate the oak population in the San Francisco Bay Area. Ironically, the DEIR acknowledges that one of the comments on the Initial Study raised this question. Yet, despite that question, the DEIR remains silent about the potential for oaks to be killed by SOD. Since the publication of the Initial Study, our local expert (Matteo Garbelotto, UC Berkeley) has reported the rampant spread of SOD and its deadly consequences: "...experts predict as many as 90% of California live oaks and black oaks could die from the disease within 25 years." [1]

01 (Cont.)

2. The trees that have been designated for removal are NOT dead, dying, or hazardous

We have many reasons to challenge the truth of the claim in the DEIR that only dead, dying, hazardous or unhealthy trees will be removed by the implementation of SNRAMP:

[1] Fimrite, Peter, "Sudden oak death cases jump, spread in the Bay Areas," San Francisco Chronicle, October 2, 2011

SFFA-3

- SNRAMP documents that young, non-native trees less than 15 feet tall will be removed from the "natural areas." By definition these young trees are not dead or unhealthy because they are young and actively growing.
- SNRAMP did **not** designate only dead, dying, hazardous trees for removal. Trees have been selected for removal only in so far as they support the goal of expanding and enhancing areas of native plants, especially grasslands and scrub.
- The predominant non-native tree in San Francisco, blue gum eucalyptus lives in Australia from 200-400 years, depending upon the climate. (Jacobs 1955, page 67) In milder climates, such as San Francisco, the blue gum lives toward the longer end of this range. The trees over 15 feet tall that have been designated for removal are almost exclusively blue gum.
- However, there are many natural predators in Australia that were not imported to California. It is possible that the eucalypts will live longer here: "Once established elsewhere, some species of eucalypts are capable of adjusting to a broader range of soil, water, and slope conditions than in Australia...once released from inter-specific competitions and from native insect fauna..." (Doughty 2000, page 6)
- The San Francisco Presidio's Vegetation Management Plan reports that eucalypts in the Presidio are about 100 years old and they are expected to live much longer: "blue gum eucalyptus can continue to live much longer..." (Vegetation Management Plan, page 28)
- The Hort Science "Assessment of Urban Forestry Operations" for the Recreation and Park Department states that, "the life-span of the blue gum, the most common eucalyptus species, is unknown." In other words, although they have lived in San Francisco more than 100 years, they have not lived in San Francisco long enough to know how long they will live here.
- The Natural Areas Program has already destroyed hundreds of non-native trees in the past 15 years. We can see with our own eyes that these trees were not unhealthy when they were destroyed.
- The claim that only unhealthy and/or hazardous trees will be destroyed in the natural areas is contradicted by the "Assessment of Urban Forestry Operations" of the Recreation and Park Department, July 2010.
- Neither written plans nor EIRs are required to remove hazardous trees. The City has the right and an obligation to remove hazardous trees when they are identified as such by qualified arborists.

01 (Cont.)

Trees have been designated for destruction solely to benefit native plants

The DEIR claims that only dead, dying, hazardous trees will be removed from the natural areas. This claim is contradicted by the SNRAMP that the DEIR is supposedly evaluating. Not a single explanation in the SNRAMP of why trees have been selected for removal is based on the health of the trees.

- Lake Merced: The explanation for removing 134 trees is "To maintain and enhance native habitats, it is necessary to selectively remove some trees."
- Mt. Davidson: The explanation for removing 1,600 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas. Coastal scrub and reed grass communities require additional light to reach the forest floor in order to persist "
- Glen Canyon: The explanations for removing 120 trees are: "to help protect and preserve the native grassland" and "to increase light penetration to the forest floor"
- Bayview Hill: The explanation for removing 505 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas."

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- McLaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."
- Interior Greenbelt: The explanation for removing 140 trees is: "In order to enhance the seasonal creek and sensitive species habitat that persists in the urban forest understory, invasive blue gum eucalyptus trees will be removed in select areas."
- Dorothy Erskine: The explanation for removing 14 trees is: "In order to enhance the grassland and wildflower community, removal of some eucalyptus trees is necessary."

In not a single case does the management plan for the Natural Areas Program corroborate the claim made in the DEIR that only dead, dying, diseased, or hazardous trees will be removed. In every case, the explanation for the removal of eucalypts is that their removal will benefit native plants, specifically grassland and scrub. In other words, the explanation provided by the DEIR for tree removals in the natural areas is a misrepresentation of the SNRAMP which it is supposedly evaluating.

<u>The trees that have already been destroyed in the "natural areas" were NOT dead, dying, or diseased.</u>

Although it's interesting and instructive to turn to the written word in SNRAMP for the Natural Areas Program to prove that the DEIR is based on fictional premises, the strongest evidence is the track record of tree removals in the past 15 years. The trees that have been destroyed in the "natural areas" in the past 15 years were NOT dead, dying, or diseased.

01 (Cont.)

Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub.



Some of the approximately 1,000 girdled trees on Bayview Hill, 2010

- The first tree destruction by the Natural Areas Program and/or its supporters took the form of girdling about 1,000 healthy trees in the natural areas about 10 to 15 years ago. Girdling a tree prevents water

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01 (Cont.)

and nutrients from traveling from the roots of the tree to its canopy. The tree dies slowly over time. The larger the tree, the longer it takes to die. None of these trees were dead when they were girdled. There is no point in girdling a dead tree.



One of about 50 girdled trees on Mt. Davidson, 2003

- Many trees that were more easily cut down without heavy equipment were simply destroyed, sometimes leaving ugly stumps several feet off the ground.



Stumps of small trees destroyed on Bayview Hill, 2002

- About 25 young trees were destroyed on Tank Hill about 10 years ago. We can see from those that remain that the trees—which were planted around the same time—were young. They don't look particularly healthy in the picture because they were severely limbed up to bring more light to the native plant garden for which the neighboring trees were destroyed. All of the trees would have been destroyed if the neighbors had not come to their defense. About 25 oaks were provided to the neighbors by NAP to plant as "replacement" trees. Only 5 are still alive. Only one has grown. The remainder are about 36" tall and their trunks about 1" in diameter, as when they were planted.

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Tank Hill, 2002

- About 25 young trees were destroyed at the west end of Pine Lake to create a native plant garden that is now a barren, weedy mess surrounded by the stumps of the young trees that were destroyed. These trees were destroyed after all the trees in Stern Grove/Pine Lake had been evaluated by Hort Science. The trees that were cut down to create this new native plant garden had not been judged to be hazardous. They were cut solely for the purpose of expanding the native plant garden.

01 (Cont.)



West end of Pine Lake, July 2011

- About 25 trees of medium size were destroyed at the southern end of Islais Creek in Glen Canyon Park about 6 years ago in order to create a native plant garden. They were replaced with shrubs.
- Many young trees were recently destroyed in the "natural area" called the Interior Greenbelt. These trees were destroyed in connection with the development of a trail, which has recently become the means by which the Natural Areas Program has funded tree removals with capital funding.

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Interior Greenbelt, 2010

- In 2008, the Public Utilities Commission completed a seismic upgrade to the water tank on Mt. Davidson. Because the existing pipe to the tank from the reservoir was "located under sensitive habitat areas" according to the PUC announcement of the project, the pipe was relocated at the insistence of the Natural Areas Program and its supporters. The relocation of the pipe through the non-native forest required the destruction of approximately 100 healthy, mature trees and substantially increased the cost of the project. Only five replacement trees were planted.

01 (Cont.)



100 hundred trees were destroyed on Mt. Davidson to benefit native plants

There was nothing wrong with any of these trees before they were destroyed. Their only crime was that they were not native to San Francisco. There are probably many other trees that were destroyed in the natural areas in the past 15 years. We are reporting only those removals of which we have personal knowledge.

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01 (Cont.)

The claim that only unhealthy and/or hazardous trees will be destroyed in the natural areas is contradicted by the "Assessment of Urban Forestry Operations" of the Recreation and Park Department.

The "Assessment of Urban Forestry Operations"[2] of the Recreation and Park Department was conducted by the professional arborists of Hort Science and published in July 2010. It states that:

- No risk assessments of trees in parks, squares, and golf courses for health and safety hazards had been conducted in San Francisco with the exception of Stern Grove and Park Presidio Blvd at the time the report was published. The hazards identified in those two assessments had been only partially mitigated by the time the report was published.
- All tree maintenance conducted in San Francisco's parks is reactive, i.e., done in response to specific requests for tree removals or pruning. There was a backlog of "some 450" such requests at the time the report was written.
- The "Assessment" recommends that trees be evaluated in 18 parks considered "high priority." None of these 18 parks are natural areas. In the few parks that contain natural areas, only the "park perimeter streets" will be evaluated.
- There is no reforestation in San Francisco's parks, squares and golf courses outside of Golden Gate Park. The number of trees removed in parks and squares exceeds the number of trees planted. The ratio of removals to plantings is significantly higher in golf courses, particularly Sharp Park.

These observations by certified arborists and written in consultation with the Recreation and Park Department contradicts these claims in the DEIR for the Natural Areas Program:

- **The trees in the natural areas had not been evaluated for health or safety when they were designated for removal by SNRAMP in 2006. Therefore, the DEIR cannot claim that the trees designated for removal in the natural areas are unhealthy and/or hazardous.**
- **There is no reforestation effort outside of Golden Gate Park. Therefore, the DEIR cannot claim that all trees removed in the natural areas will be replaced.**

02

3. There is no evidence that non-native trees are "invasive"

The DEIR also justifies the destruction of thousands of trees on the grounds that they are non-native and "invasive:"

> *Further, most of the trees within the Natural Areas are nonnative and most are also invasive. The invasive forests within the Natural Areas are predominantly eucalyptus, although cypress, pine, and acacia also occur.* (DEIR, page 456)

In fact, there is no evidence that any of these trees are "invasive." Although, the California Invasive Plant Council has classified eucalyptus as "moderately invasive," there is no scientific evidence to support this claim. According to the US Forest database of plants and trees, "It [Blue gum eucalyptus] does not spread far and rarely invades wildlands."[3]

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[2] http://sf-recpark.org/Modules/ShowDocument.aspx?documentid=88

[3] http://www.fs.fed.us/database/feis/plants/tree/eucglo/all.html

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William Russell (USGS) and Joe McBride (UC Berkeley) (Russell and McBride 2003) used aerial photos of Bay Area parks taken over a 60 year period from 1939 to 1997, to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Pt Reyes, Bolinas Ridge), and one on the Peninsula (Skyline).

These photos revealed that grasslands are succeeding to shrubland, dominated by native coyote brush and manzanita. (They also noted that this conversion increases fire hazards.) **Eucalyptus and Monterey pine forests actually decreased during the period of study.** In those cases in which forests increased in size, they were native forests of oaks or Douglas fir. In other words, **they found no evidence that non-native trees are invading native trees or shrubs in open spaces in the Bay Area.**

02 (Cont.) The California Invasive Plant Council classifies *Acacia dealbata* (Silver wattle) as "moderately invasive" and the impact of *Acacia melanoxylon* (Black acacia) as "limited" and adds "impacts are low in most areas." In fact, acacia does not spread unless it is cut down when it then resprouts vigorously from the roots unless it is poisoned repeatedly or the roots are dug out of the ground with heavy equipment.

Neither Monterey cypress nor Monterey pine are invasive. Even the California Invasive Plant Council agrees with that assessment. And both are California natives with fossil evidence that they existed on the San Francisco peninsula in the distant past.

On Mt. Davidson, plans to destroy 1,600 trees over 15 feet tall include many Monterey cypresses. In this particular "natural area," it is therefore not accurate to say that "most" trees that will be removed are invasive. Table 6.2-1 in SNRAMP claims that only .10 acres of Mt. Davidson are forested with Monterey cypress. This is not accurate. Acres of Monterey cypress on Mt. Davidson are much greater. Since these species are also native to California and have existed in San Francisco in the past, it is an exaggeration to call them non-native.

The final EIR must provide scientific evidence that the trees that will be destroyed by SNRAMP are invasive or it must delete this justification for their destruction.

4. Tree removals will change wind patterns, causing tree failures

The DEIR does not evaluate wind impacts of removing thousands of trees in the natural areas because:

03 *"This section does not address wind impacts in certain Natural Areas because trees targeted for removal are isolated individuals or small groups scattered throughout these Natural Areas, and this removal is not expected to have noticeable wind effects."* (DEIR, page 243)

It is patently false that "trees targeted for removal are isolated individuals or small groups scattered throughout" the natural areas. Here are a few examples of the large number of trees that will be removed from small areas (SNRAMP, Forestry Statement, Appendix F-14-F-17):

- Mt. Davidson: 1,000 trees will be removed from MA-1c (3.5 acres)

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- Glen Canyon: 100 trees will be removed from MA-2e (.6 acres)
- Sharp Park: 1,476 trees will be removed from MA-2j (5.6 acres)
- Corona Heights: 10 trees will be removed from MA2C (less than .01 acre)
- Bayview Park: 140 trees will be removed from MA-1d (.02 acres)
- McLaren Park: 600 trees will be removed from MA-2b (9.9 acres)
- Interior Greenbelt: 100 trees will be removed from MA-2a (1 acre)

Tree removal on this scale cannot be done piecemeal, taking only a few individual trees on separate occasions. The game of "pick-up-sticks" is a good metaphor to understand the problem. Felling one tree will impact those in close proximity. Whether intended or not, neighboring trees are likely to be felled by the falling tree.

Removing that individual tree will not be possible unless its neighbors are also removed. One can't pick up that felled tree when other standing trees surround it. Felled trees must be dragged out. As a qualified arborist said, when expressing his opinion of the proposed selective method of tree removal, "I don't have tweezers to pick these trees out of the forest."

Leaving the felled trees on the ground until they are all destroyed is not an option because the restoration objective is to plant the bared ground with native plants, which can't be accomplished if the ground is covered with dead trees.

03 (Cont.)

Furthermore, destroying a large number of trees slowly, over time substantially increases the cost of such tree removals. Even if it were physically possible to remove them piecemeal, it would not be a responsible use of the limited resources of the Recreation & Park Department which frequently justifies the poor quality of its service and the maintenance of San Francisco's parks on the grounds that their budget is insufficient.

Even if it were true that only "small groups of trees" will be removed, it does not follow that tree removal would not include wind-toughened edge trees nor that removals "would not result in increased wind hazards or expose trees...to high winds." In fact, most of the tree removals will occur on the edge of the existing forest, which is consistent with the stated goal of the removals to expand the adjacent native scrub and grassland (SNRAMP, Forestry Statement, pages F-8-F-11):

- Mt. Davidson: "Additional removals will occur...on the eastern edge of the forest."
- Bayview Park: "Tree removal will focus on the existing edge of forests..."
- McLaren Park: "...removal will occur along forest edges..."
- Interior Greenbelt: "Tree removal will focus on the eastern border and the western tip of this Natural Area..."

In addition to these narrative descriptions of the location of tree removals, SNRAMP contains detailed maps of the natural areas in Section 6 that indicate the location of the tree removals. These maps reveal the vulnerability of the remaining trees as a consequence of some of the tree removals.

In their "Assessment of Urban Forestry Operations" for the Recreation and Park Department, Hort Science reminds us of the vulnerability of the trees that remain after their neighbors are gone and they are exposed to more wind than they have developed defenses against: "As individual trees die or fall, it exposes remaining trees to higher wind loads and increases the overall failure rate." (page 27)

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In December 2011, Hort Science provided us with a specific example of such an occurrence in their "Stern Grove-Pine Lake Park, Parkside Square tree risk assessment." This report was written as an update of Hort Science's comprehensive assessment of all trees in Stern Grove-Pine Lake in 2003, in preparation for finally removing the hundreds of trees that had been evaluated as hazardous 8 years before. Here is what Hort Science found at the "West end of the park, near Wawona and 33rd Ave:"

> "**This area had a number of trees removed by the Natural Areas Program. Subsequently a large Monterey pine failed at the edge of the newly exposed woodland.** Concern was expressed about the exposed nature of the edge and potential for additional failures. This area of Pine Lake Park is exposed to westerly winds. There is still, however, significant tree canopy at street-edge. Pines have been declining for some time. Tree #1057 is posted for removal. Mid-slope is a standing dead pine #347, also recommended for removal."

These trees were cut down in order to expand the native plant garden around Pine Lake. Hort Science had evaluated all trees in Stern Grove/Pine Lake for hazards about one year before these trees were removed. We know those trees were not hazardous, because they had not been judged to be hazardous by the Hort Science evaluation done in 2003.

In other words, as a result of trees removed at the west end of Stern Grove by the Natural Areas Program, a large Monterey pine fell across the path around the lake. Hort Science doesn't mention where the tree fell, but park visitors remember this failure well. It was not a tree that had been previously designated by Hort Science as hazardous. It became hazardous because its wind break was compromised by the removal of trees by the Natural Areas Program.

03 (Cont.)

The removal of 1,600 trees over 15 feet tall on Mt. Davidson will substantially increase windthrow hazards. Although the DEIR denies this risk, the Forestry Statement in SNRAMP acknowledges it:

> *"Because of this, removal of edge trees on the northwest side of the park (MA-1c and MA-2c) could increase the rate of windthrow within the stand.* ***Substantial tree removal in these areas should not occur.*** *A significant number of mature trees should remain at the park edge to minimize the effects of wind on this stand."* (SNRAMP, Appendix F, page F-11)

Despite this warning that "substantial tree removal...should not occur" in MA-1c and MA-2c areas, just three pages later in Table F-1, SNRAMP reports these tree removals in these areas on Mt. Davidson::

MA	Acres	Existing Trees	Removed	Percent
MA-1c	3.5	1221	1000	82%
MA-2c	1.8	644	200	31%

In other words, SNRAMP predicts tree failures on Mt. Davidson from removal of as many as 82% of all trees on 3.5 acres on the northwest side of Mt. Davidson, yet it plans to remove 1,200 trees from those areas anyway.

The Forestry Statement of SNRAMP also attempts to minimize the danger of windthrow on the grounds that the trees are not near residential neighborhoods: "In general, potential windthrow hazard to people is minimal because there are no residential areas near the stands where the tree removals will occur." (Forestry

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03 (Cont.)

Statement, Appendix F-11). This irresponsible excuse for endangering the public does not acknowledge that there are people visiting these parks and taking their lives in their hands by doing so. The death of a park visitor to Stern Grove in 2008, is apparently insufficient testimony to the way the public is being endangered by these tree removals.

Either the planned tree removals must be decreased to reduce the risk of tree failures caused by windthrow or the final EIR must acknowledge the significant risk of these tree removals.

5. Tree removals will increase run-off, resulting in erosion and landslides

The DEIR concludes that the implementation of SNRAMP will not cause increased sedimentation, reduced water quality, erosion, or increased run-off, for example:

> *"The potential for erosion would be less than significant through implementation of the GR-12a (revegetate steep slopes) and GR-12b (phased invasive species removal to reduce erosion), erosion control measures and the erosion and sediment control BMPs described in M-HY-1."* (DEIR, page 374)

We will examine each of these assumptions in the light of scientific studies and our actual experience with the Natural Areas Program.

Revegetating steep slopes will **not** prevent erosion and increased run-off

The DEIR claims that increased run-off and erosion will be prevented by revegetating areas in which non-native plants and trees are eradicated. **This claim is based on these erroneous assumptions**:

04

- That native plants will quickly occupy the bare ground on which they are planted.
  - In the 15 years in which the Natural Areas Program has been engaged in its enterprise, it has not successfully vegetated the bare ground created by eradicating non-native plants and trees. Denuded areas are quickly occupied by annual grasses that die back to leave bare ground during the dry season.
- That grassland and dune scrub and non-native trees are equally capable of absorbing run-off and stabilizing soil.
  - **This assumption is contradicted by the following scientific studies**:
    - "Results indicate that **smoothing of precipitation intensities may translate into overall greater stability of hillslopes under forest canopies**. In general, peak intensities of through-fall were damped in intensity and lagged in time relative to peak intensities of rainfall. Damping and lagging of rainfall intensity at both study sites generally increased modeled slope stability relative to openings (areas with no canopy)." (Keim & Skaugset 2003)
    - "The **reinforcement of the main body of a dike by a grove of trees is much higher** and effective in comparison to the reinforcement of the top soil layer by a grass sward. The increase in stability against landslides was found to be at least ten times higher." (Lammeranner & Meixner 2009)

Leaving tree stumps in the ground will **not** prevent erosion.

The DEIR also claims that the removal of trees will not result in erosion because: "...tree removal would be selective, would be implemented gradually over several years, would involve limb-by-limb removals, and would leave tree stumps and root balls intact." (DEIR, page 364) These claims are inconsistent with SNRAMP, incredible, and/or contradicted by scientific studies:

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- As we have already discussed, trees have been selected for removal by SNRAMP in large groups wherever they shade native plants. Some of these groups are as large as 1,000 trees on 3.5 acres (Mt. Davidson). Such removals cannot be accurately described as "selective."
- It is simply not believable that 18,500 large trees will be removed "limb-by-limb." What public entity would ever be in a position to pay for such a laborious removal? How is it even physically possible to remove 15,000 trees in Sharp Park "limb-by-limb?"
- Nor is it believable that 18,500 trees will be taken down piecemeal over a long period of time. This would be both physically difficult and prohibitively expensive.
- **Leaving "tree stumps and root balls intact" does not prevent erosion. There is considerable scientific evidence that erosion results when the roots die**:
    - "The immediate effect of deforestation is, therefore, favorable, but **adverse effects become evident when root systems decay** and when a drop in evapo-transpiration causes a rise in the ground water table." (Brown & Sheu 1975)
    - "Measurement of the decline in tensile strength of small roots in coastal British Columbia after death of the parent tree indicates that **over half the strength is lost within 3 to 5 years after cutting.**" (O'Loughlin 1974)
    - "**Soil strength increased linearly as root biomass increased. Forests clear-felled 3 years earlier contained about one-third of the root biomass of oldgrowth forests.**" (Ziemer 1981)
    - "**Decay of tree roots subsequent to logging was found to cause a reduction in the shear strength of the soil-root system.**" (Wu, McKinnell & Swanston 1979)

04 (Cont.)

The DEIR's assumption that increased run-off and erosion will not result from the implementation of SNRAMP does not take into account that **the potential for both run-off and erosion are significantly increased by the steepness of slope.** Some of the planned tree removals will occur in very steep terrain:

Natural Area	MA	Tree Removals	% Trees Removed	% Slope*
Interior Greenbelt	MA-2a	100	28%	67%
Mt. Davidson	MA-1c	1,000	82%	40% - 67.5%
	MA-2c	200	31%	33% - 90%
	MA-2e	400	23%	20% - 70%
Bayview Hill	MA-2a	70	32%	55.6%

*Determined by using topographical maps in SNRAMP for each natural area

These are only examples of the steepness of slopes in many of the natural areas. The DEIR should be morally and legally obligated to evaluate the steepness of all of the natural areas in the context of the potential for increased run-off and erosion resulting from the removal of non-native trees.

The potential for increased run-off and erosion is greatly increased by steep slopes. The DEIR has not considered that many of the planned tree removals will occur in very steep locations. Some of these locations are directly uphill of densely populated residential neighborhoods which are in the direct path of both run-off and landslides caused by erosion. Yet, the risks to these residential neighborhoods have not been considered by the DEIR. The residential neighborhoods surrounding Mt. Davidson are particularly vulnerable to increased run-off, erosion and landslides.

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On May 23, 2012, the State of California sued the US Army Corp of Engineers to challenge a national policy "requiring the removal of virtually all trees and shrubs on federal levees."[4] Donald H. Gray, Professor of Civil and Environmental Engineering at the University of Michigan, explains why California is fighting this federal requirement in this summary of his literature search about the role trees play in stabilizing soil:

> "In the long run, cutting of trees on slopes leads to a gradual decrease in mass stability as a result of the decay of roots which previously acted as tensile reinforcements on the slope. Root decay can also lead to the formation of pipes in slopes which promote internal or seepage erosion. The removal of tree canopy results in the loss of interception and evapo-transpiration which tends to promote wetter and less secure slopes. Canopy removal also results in less attenuation in the delivery rate of rainfall to the ground surface."[5]

The City and County of San Francisco should consider the implications of this suit. If the State of California is willing to sue to keep trees on its levees in order to prevent erosion and flooding, what are the prospects that the City and County of San Francisco can successfully defend itself against a legal challenge to its plans to remove 18,500 mature trees from the parks managed by the City of San Francisco?

04 (Cont.)

The City and County of San Francisco is particularly vulnerable to legal challenges from the City of Pacifica regarding its plans for Sharp Park. SNRAMP plans the removal of over 15,000 trees over 15 feet tall in Sharp Park. In many management areas 75% of the trees will be removed. These trees will be replaced by dune scrub. The majority of these trees will be removed from the steep watershed at the eastern end of the park. The park slopes from 750 feet above sea level at its eastern end to sea level at its western end. The golf course, archery course, Laguna Salada, and horse pond are downstream from this steep watershed.

- Tree removals will violate Pacifica's logging ordinance. The DEIR claims that the City of San Francisco is exempt from this law, but provides no explanation for or evidence to support this claim. The final EIR must explain why San Francisco is not subject to Pacifica's laws.
- The final EIR must provide evidence that it is physically possible to remove tens of thousands of trees from a steep watershed without causing sedimentation, erosion, and landslides.
- The final EIR must provide evidence that the endangered species that exist in Sharp Park will not be harmed by increased sedimentation, erosion, and landslides resulting from the removal of 75% of the trees in the watershed.

The final EIR must evaluate the risk of increased run-off, erosion and landslides. It must substantiate its baseless claims that the removal of thousands of trees will not increase this risk, using scientific studies. If the final EIR cannot provide scientific evidence that these tree removals will not increase these risks, it must mitigate these risks by decreasing plans for removal in natural areas where the risks are great because of steepness and/or the proximity of residential properties endangered by the tree removals.

05

6. The implementation of SNRAMP will result in a significant loss of stored carbon and increased air pollution

[4] http://cdfgnews.wordpress.com/2012/05/23/dfg-sues-army-corps-to-protect-fish-and-wildlife-around-levees/

[5] ftp://136.200.241.91/outgoing/FMO/Veg_on_Levees/Literature%20Reviews/Effects%20of%20Tree%20Removal.pdf

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05 (Cont.)

The urban forest of San Francisco stores 196,000 tons of carbon and adds to that accumulated store of carbon at an annual rate of 5,200 tons per year according to the US Forest Service survey. (Nowak 2007) About 25% of the annual rate of sequestration and the accumulated storage of carbon are accomplished by the blue gum eucalyptus, the chief target for destruction by SNRAMP. When a tree is destroyed, it releases the carbon that it has accumulated throughout its lifetime into the atmosphere as Carbon Dioxide (CO_2) as it decays. Carbon Dioxide is the predominant greenhouse gas that is causing climate change.

Since greenhouse gases are regulated in California by a law that commits the state to reduce greenhouse gas emissions, the Draft Environmental Impact Report (DEIR) for the Natural Areas Program (NAP) goes to great lengths to make the case that destroying thousands of trees will not violate California law. The DEIR's claim that the implementation of SNRAMP will not contribute to greenhouse gas emissions is based on:

- Fabricating facts by misrepresenting scientific studies. The facts are:
  - Grassland in San Francisco does NOT lower ground temperature
  - Grassland does NOT store more carbon than forests
- The DEIR confuses the RATE of carbon sequestration with the total accumulated carbon storage in the plant or tree as it continues to grow. While a young tree may sequester carbon at a faster RATE while it is growing rapidly that does not alter the fact that a mature tree stores more carbon over its lifetime as the carbon accumulates.
- Replacing mature trees with ANY plant or tree will never compensate for the loss of the carbon stored in the trees that will be destroyed.
- Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in mature trees

Grassland in the San Francisco Bay Area does NOT lower ground temperature

The DEIR claims:

> *"According to a study presented at the American Geophysical Union's meeting,* ***grasslands above 50 degrees latitude*** *reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsuis."* (DEIR, page 457, cited study[6])

This statement in the EIR does not apply to the San Francisco Bay Area and the reference used to support it misrepresents the cited study:

- **The entire continental United States, including the San Francisco Bay Area, is below 50 degrees latitude. In other words, this statement—even if it were true—does not apply to the San Francisco Bay Area.**

[6] Jha, Alok. 2006. The Guardian. "Planting Trees to Save Planet is Pointless, Say Ecologists." Friday, December 15, 2006.

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- The statement is taken out of the context of the article. The entire sentence in which this statement appears actually says, "Grassland or **snowfields**, however, reflected more sun, keeping temperatures lower. **Planting trees above 50 degrees latitude, such as in Siberia, could cover tundras normally blanketed in heat-reflecting snow.**" It does not snow in the San Francisco Bay Area. Therefore, this statement does not apply to the San Francisco Bay Area.
- The article being quoted by the DEIR is NOT the scientific study, but rather a journalistic article in The Guardian, a newspaper in England, in which the author of the study has been misquoted and his study misrepresented.
- The day after this article appeared in The Guardian (and also in the New York Times), The Guardian published an op-ed (which also appeared in the New York Times) by the author of the scientific study, Ken Caldeira in which he objected to the misrepresentation of his study:

05 (Cont.)

*"I was aghast to see our study reported under the headline "Planting trees to save planet is pointless, say ecologists." (December 15). Indeed, our study found that **preserving and restoring tropical forests is doubly important**, as they cool the earth both by removing the greenhouse gas carbon dioxide from the atmosphere and by helping produce cooling clouds. We did find that preserving and restoring forests outside the tropics does little or nothing to help slow climate change, but nevertheless **these forests are a critical component of Earth's biosphere and great urgency should be placed on preserving them.**"* (Caldeira 2006)

As if this misrepresentation of the facts weren't bad enough, we find in Appendix A of the DEIR that this isn't the first time that someone has informed the authors of the DEIR that this statement is not accurate. One of the public comments submitted in 2009 in response to the Initial Study quotes Ken Caldeira's op-ed in the New York Times. Yet, two years later, the DEIR persists in repeating this misrepresentation of Professor Caldeira's (Stanford University) research.

Grassland does NOT store more carbon than forests

The DEIR also claims:

"Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink." (DEIR, page 457, cited studies[7])

[7]Conant, L., Paustian K, and Elliot E. 2001. "Grassland Management and Conversion into Grassland Effects on Soil Carbon." Natural Resource Ecology Laboratory. Colorado State University. Fort Collins, USA. Sponsor: US Environmental Protection Agency, Ruminant Livestock Efficiency Program. 2001, and

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05 (Cont.)

Once again, **the cited study does not support the statement in the EIR:**

- Again, the statement has been taken out of context. The entire sentence reads, "We conclude that grasslands can act as a significant carbon sink **with the implementation of improved management**." This sentence appears in the abstract for the publication. (Conant 2001)
- One wonders if the authors of the DEIR read the entire article or just the abstract. The point of the study is that land management techniques such as fertilization, irrigation, introduction of earthworms, plowing and fallow methods, etc., can improve the sequestration of carbon in the soil of croplands and pastures. This is obviously irrelevant to the Natural Areas Program, which is not engaged in agriculture or pasturage.
- However, the study is relevant in one regard. It reports that **when forest is converted to grassland, no amount of "management techniques" compensates for the loss of the carbon in the trees that are destroyed**:

  "Though more than half of the rain forest conversion studies (60%) resulted in increased soil Carbon content, ***net ecosystem Carbon balance...decreased substantially due to the loss of large amounts of biomass carbon.***" (Conant 2001)

The second study cited in support of the claim about carbon storage in grassland reports that increased levels of Carbon Dioxide **in the air** increases carbon accumulation in the soil. This study tells us nothing about the relative merits of grassland and forests with respect to carbon storage. (Hu 2001) Another study reports a similar relationship between global warming and carbon storage in trees: "...warmer temperatures stimulate the gain of carbon stored in trees as woody tissue, partially offsetting the soil carbon loss to the atmosphere." (Melillo 2011)

The DEIR confuses the RATE of carbon sequestration with the total accumulated storage over the life of the tree

The DEIR claims that because a young tree, growing at a faster rate than a mature tree, sequesters carbon at a faster rate than a mature tree, it follows that replacing mature trees with young trees will result in a net carbon benefit. This is NOT a logical conclusion, as illustrated by this graph from the US Forest Service survey of San Francisco's urban forest (Nowak 2007):

Hu, S., Chapin, Firestone, Field, Chiariello. 2001. "Nitrogen limitation of microbial decomposition in a grassland under elevated C02," Nature 409: 188-191.

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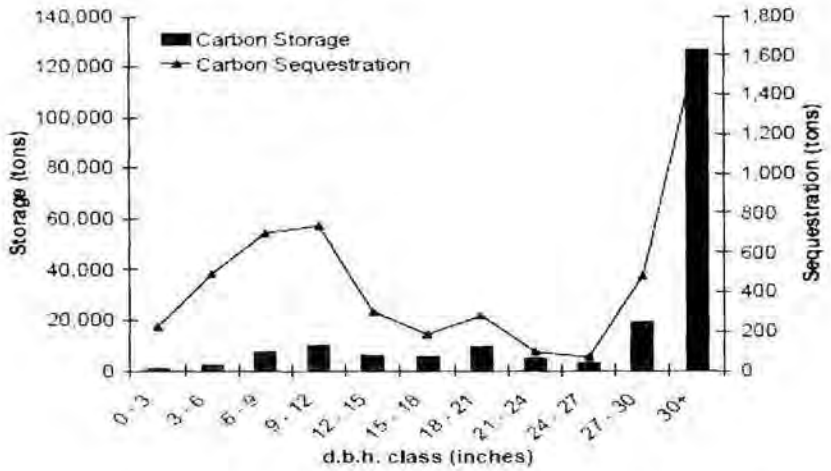

This graph tells us that although trees sequester carbon faster when they are very small, the large, most mature trees are also sequestering carbon and they store far more carbon than the smaller trees. This is as we would expect, because **the total amount of carbon stored within the plant or tree is proportional to its biomass, both above ground (trunk, foliage, leaf litter, etc.) and below ground (roots).**

05 (Cont.)

Even IF it were possible replace the non-native trees with native trees—and it's NOT--the native trees would be significantly smaller than the trees that will be destroyed. The few trees that are native to San Francisco are ALL small trees, compared to the trees that will be destroyed. The Natural Areas Program reports that they have planted 8 species of native trees in the "natural areas" since 2008. Of those 8 species, only one (Red Alder) is classified as a tree by the USDA plant database. The other 7 species are classified as "tree/shrub," indicating their small stature and low branching habit. Since the amount of carbon stored within the tree is proportional to its biomass, the native trees would never sequester as much carbon as the trees that will be destroyed by the implementation of SNRAMP.

In its zeal to exonerate SNRAMP from releasing carbon stored in the trees it proposes to destroy, it contradicts itself, i.e., that SNRAMP proposes to destroy all non-native trees less than 15 tall. These are the very same young trees that the DEIR says are capable of sequestering more carbon than mature trees. If, indeed, carbon storage could be preserved by a forest of exclusively young trees—and it CAN'T—what is the point of destroying all the young non-native trees?

The DEIR does not account for the loss of the carbon in the trees that will be destroyed

If we were starting with bare ground, it might be relevant to compare carbon sequestration in various types of vegetation, but we're not. We're talking about a specific project which will require the destruction of thousands of non-native trees. Therefore, we must consider the loss of carbon associated with destroying those trees. **It doesn't matter what is planted after the destruction of those trees, nothing will compensate for that loss because of how the trees will be disposed of.**

The fate of the wood in trees that are destroyed determines how much carbon is released into the atmosphere. For example, if the wood is used to build houses the loss of carbon is less than if the wood is allowed to decompose on the forest floor. And that is exactly what this project proposes to do: chip the wood from the trees and distribute it on the forest floor, also known as "mulching." **As the wood decomposes, the carbon stored in the wood is released into the atmosphere as carbon dioxide**: "Two common tree disposal/utilization scenarios were modeled: 1) mulching and 2)

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landfill. Although no mulch decomposition studies could be found, studies on decomposition of tree roots and twigs reveal that 50% of the carbon is lost within the first 3 years. The remaining carbon is estimated to be lost within 20 years of mulching. Belowground biomass was modeled to decompose at the same rate as mulch regardless of how the aboveground biomass was disposed" (Nowak 2002)

Furthermore, the process of removing trees releases stored carbon into the atmosphere, regardless of the fate of the destroyed trees: "Even in forests harvested for long-term storage wood, more than 50% of the harvested biomass is released to the atmosphere in a short period after harvest." (Anderson 2008)

The DEIR claims to have run a model of carbon loss resulting from the project in Sharp Park: "The model returns the CO_2 emission rates for all equipment deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use." (DEIR, page 455). The CO_2 emissions resulting from the destruction of 15,000 trees over 15 feet tall in Sharp Park is conspicuously absent from their analysis.

05 (Cont.)

Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in the trees that will be removed.

The DEIR claims that improving the health of the urban forest by thinning and reforestation with young trees—which will NOT be physically possible--will result in a net benefit of carbon storage.

In fact, the more open canopy of an urban forest with less tree density results in greater growth rates. (EPA 2010) Although more rapid growth is associated with greater rates of carbon sequestration, rates of storage have little effect on the net carbon storage over the life of the tree. (Nowak 1993) **Net carbon storage over the life of the tree is determined by how long the species lives and how big the tree is at maturity. These characteristics are inherent in the species of tree and are little influenced by forest management practices such as thinning.** (Nowak 1993)

More importantly, even if there were some small increase in carbon storage of individual trees associated with thinning, this increase would be swamped by the loss of the carbon in the trees that will be destroyed.

The destruction of thousands of trees will increase air pollution

According to the US Forest Service survey of San Francisco's urban forest, "It is estimated that trees and shrubs [of San Francisco] remove 260 tons of air pollution (CO, NO2, O3, PM10, SO2) per year with an associated value of $1.3 million (based on estimated national median externality costs associated with pollutants). **Trees remove about 19 percent more air pollution than shrubs in San Francisco**." (emphasis added)

06

The DEIR provides us with no information about the increase in air pollution which will result from removing thousands of trees over 15 feet tall, untold numbers of trees less than 15 feet tall, thinning the remaining urban forest in the natural areas from approximately 740 trees per acre to less than 200 trees per acre and replacing all those trees with grassland and shrubs which are significantly less capable of reducing air pollution.

Conclusion

01 (Cont.)

The final EIR must correct the following errors of FACT in the DEIR:

- The final EIR cannot claim that all non-native trees that will be destroyed will be replaced with an equal number of native trees because that is neither consistent with the SNRAMP, nor is it physically possible.

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01 (Cont.)
04 (Cont.)
05 (Cont.)

- The final EIR cannot claim that all non-native trees that will be destroyed are dead, dying, diseased, or hazardous because they are NOT and the claim contradicts the SNRAMP.
- The final EIR must evaluate the risk of failure of the trees that remain after removal of thousands of trees
- The final EIR must evaluate the risk of increased run-off, erosion and landslides
- The citations used to make bogus claims regarding carbon sequestration must be removed because they are not relevant and they have been misrepresented by the DEIR.
- The DEIR's presentation of the terrestrial carbon cycle must be corrected because it is inaccurate:
    - RATES of carbon sequestration must not be confused with the total accumulated stored carbon in mature trees.
    - The final EIR cannot claim that there will be a net carbon benefit of the proposed tree destruction because that claim is inconsistent with the science of the terrestrial carbon cycle

The DEIR has not quantified the carbon stored in the current landscape; has not quantified the carbon released by the planned tree destruction; has not quantified the carbon stored in the resulting grassland and scrub. The claimed "qualitative analysis" does not tell us how much carbon will be released into the atmosphere by the implementation of SNRAMP.

As required by CEQA and California Law AB 32, the final EIR must quantify the loss of carbon resulting from the destruction of thousands of healthy trees, compare that loss to the resulting vegetation (grassland and scrub) and mitigate for the net loss of carbon that is the inevitable outcome of the implementation of SNRAMP.

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Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
Part II: Herbicides required to implement SNRAMP

The Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) claims that the herbicides required to implement SNRAMP will not have a significant impact on the environment. It reaches that conclusion by providing inadequate and inaccurate information about the use of herbicides by the Natural Areas Program (NAP) in the present and by providing no information about the requirements for more herbicides in the future to kill the roots of thousands of trees that will be destroyed. In this public comment we will document these issues as follows:

1. **The DEIR provides no information about the frequency of use of herbicides by the Natural Areas Program**
2. **The DEIR provides no information about imazapyr which is currently the herbicide the Natural Areas Program uses most frequently**
3. **The DEIR claims that herbicide applications by the Natural Areas Program comply with San Francisco's Integrated Pest Management (IPM) Ordinance. In fact, the public record contains considerable evidence that herbicide applications by the Natural Areas Program frequently violate San Francisco's IPM Ordinance.**
4. **The DEIR misstates the facts about the toxicity of the herbicides being used by the Natural Areas Program**
5. **The use of herbicides on Twin Peaks that are known to be harmful to butterflies violates the Endangered Species Act**
6. **The DEIR provides no information about the increased use of herbicides that will be required to prevent the resprouting of the trees that will be destroyed by the implementation of SNRAMP.**

07

1. Herbicide use by the Natural Areas Program

The Draft Environmental Impact Report (DEIR) provides no information about the volume of herbicides used by the Natural Areas Program (NAP). The sole sentence in the DEIR pertaining to volume of use of herbicides is this:

> *"In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD."* (DEIR, page 365)

This statement provides inadequate information regarding NAP's pesticide use because:

- It is eight years out of date.
- Since we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?
- We aren't reassured by the claim that NAP's pesticide use is only 10% of total RRPD pesticide use—if in fact that is true. The public has good reason to expect that parks designated as "natural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

Based on public records requests, we have the following information about the number of pesticide applications by the Natural Areas Program (See Attachment II-A):

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Number of pesticide applications by the Natural Areas Program

Active Ingredient	2008	2009	2010	2011	Percent Increase
Triclopyr (Garlon)	17	16	36	3	
Glyphosate (Roundup)	7	6	31	39	
Imazapyr (Habitat)	1	1	1	39	
Aminopyralid (Milestone)	1	1	1	4	
Total	26	24	69	86	330%

We learn from these official reports of NAP's pesticide use which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 330% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is eight years old and pesticide use by the Natural Areas Program is increasing significantly from year to year, 330% in the past four years alone.

07 (Cont.)

We also learn from these official reports of NAP's pesticide use that several other statements in the DEIR are inaccurate:

- The DEIR claims that "*Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity.*" (DEIR, page 365)

  According to the official reports of NAP's pesticide use, Garlon (active ingredient triclopyr) was used more often than any other pesticide until 2011. While use of Garlon decreased in 2011, it is still being used according to Pesticide Application Notices posted in the natural areas in 2012.

- The statement that Garlon is *"only used for invasive plants in...grasslands"* is contradicted by this statement in the DEIR:

  "*Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon)* (DEIR, page 386)

- The DEIR claims that glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that triclypyr was used more often than glyphosate until 2011 when imazapyr was used as frequently as glyphosate.

2. The DEIR provides no information about imazapyr which is currently the most frequently used herbicide

For the most part NAP substituted a mixture of glyphosate and imazapyr for Garlon in 2011. Is this an improvement? Maybe not. Although glyphosate and imazapyr are assigned a lower hazard rating of "More Hazardous" by the Department of the Environment, the Natural Areas Program increased their pesticide applications in 2011 at least 20% compared to 2010. But more importantly, little is known about the toxicity of imazapyr and nothing is known about the toxicity of combining glyphosate and imazapyr.[1] Imazapyr was approved for use in California in 2005, so only the minimal tests required by law have been done on it.

08

<u>The Natural Areas Program is using imazapyr for a purpose different from that for which imazapyr was evaluated.</u>

The "Aquatic Pesticide Application Plan for the San Francisco Estuary Invasive Spartina Project" [1]is cited by San Francisco's IPM program as the evaluation upon which it based its decision to add imazapyr to the list of pesticides

[1] http://www.spartina.org/project_documents/2010_APAP_FINAL_ALL.pdf

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approved for use in San Francisco in 2010. Was it appropriate for the city's IPM program to use the evaluation of imazapyr for the Spartina project as the basis of their decision to approve its use by the Natural Areas Program? We don't think so. The circumstances of the Spartina project are substantially different from those of its use by the Natural Areas Program.

Imazapyr is used to eradicate non-native Spartina in a tidal estuary. For that reason the evaluation of its use assured the public that this herbicide would not accumulate in the environment because it would be flushed away from the ground by the tide twice each day.

The evaluation also said that when imazapyr was used in a pond or stable water source, it persisted in the ground for a longer period of time. In fact, that's exactly how imazapyr is being used by the Natural Areas Program. It has been used at Lake Merced and at Pine Lake, both stable water sources. It is also being used in Glen Canyon Park, which is a watershed.

We don't assume that imazapyr is being used safely to eradicate Spartina. However, even if it is, it does NOT follow that it is safe for use in watersheds that are not tidal, such as those being sprayed by the Natural Areas Program.

The Natural Areas Program is combining imazapyr and glyphosate which is both inappropriate and unnecessary

08 (Cont.)

The manufacturer's labels for imazapyrh and glyphosate suggest that combining them is not an approved use. The manufacturer's label for Aquamaster (glyphosate) does not include imazapyr on the list of pesticides with which it can be safely combined. And the Polaris (imazapyr) label says that it should not be combined with another pesticide unless it is expressly recommended by the manufacturer of that pesticide.

The evaluation of imazapyr for the Spartina eradication project explained why imazapyr is being combined with glyphosate by the non-native Spartina eradication project. Imazapyr is apparently slow acting. It can take some months to kill the plant on which it is sprayed. Glyphosate, on the other hand, is fast acting. The plant on which it is sprayed begins to yellow and die within a few weeks. Glyphosate is therefore used by the Spartina eradication project to provide quicker feedback to those spraying the herbicide. They know within a few weeks if they have sprayed in the right place. They don't have to wait for the next season to spray again if necessary.

However, glyphosate should be applied to perennial broadleaf plants during their reproductive stage of growth, when they are budding in the late spring and summer, according to the manufacturer. In Glen Canyon Park, a mixture of glyphosate and imazapyr was sprayed on ivy in December 2011, clearly not the recommended time period for spraying. A month later, there was no indication that the ivy was damaged by this spraying. This suggests that it was unnecessary to combine glyphosate and imazapyr in this application. The public was exposed to the unnecessary risk of combining these herbicides, with no potential benefit of taking that risk.

3

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The Natural Areas Program is spraying imazapyr under trees which is likely to kill the trees

Glyphosate is a non-selective herbicide. That is, it kills any plant it is sprayed on at the right stage of its growth. But imazapyr is far more insidious as a killer of plants because it is known to travel from the roots of the plant that has been sprayed to the roots of other plants. For that reason, the manufacturer cautions the user NOT to spray near the roots of any plant you don't want to kill. For example, the manufacturer says explicitly that **imazapyr should not be sprayed under trees, because that tree is likely to be killed, whether or not that was the intention.**

08 (Cont.)



Pesticide Application Notice under trees, Glen Canyon, December 2011

Much of the ivy that was sprayed by the Natural Areas Program in Glen Park in December 2011 was sprayed under willow trees. The willow trees are native, so it seems unlikely that they intended to kill them.

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Plants that are repeatedly sprayed with imazapyr are likely to develop a resistance to that herbicide.

The Federal Drug Administration recently banned some use of antibiotics in domesticated animals because the bacteria antibiotics are intended to kill are developing resistance to the antibiotics. This resistance is becoming increasingly dangerous to humans who are also the victims of those bacteria. Antibiotics are being rendered useless by overuse on domesticated animals. When humans need them, they won't work because bacteria have developed a resistance to them.

Likewise, plants and animals are also capable of developing resistance to pesticides. Glyphosate is the most heavily used herbicide in agriculture. Recent research indicates that weeds are developing resistance to glyphosate.[ii]

The manufacturer of imazapyr says explicitly that repeated use of this herbicide is likely to result in resistance to it over the long term: "When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same application site, naturally occurring resistant weed biotypes may survive...propagate and become dominant in that site." So, does it make sense to use imazapyr on a plant as persistent as ivy?

08 (Cont.)

The GGNRA reported spending $600,000 over 3 years trying to eradicate ivy from 127 sites. They were successful in only 7 of the sites.[iii] Obviously eradicating ivy is not a one-shot deal.

If it is indeed necessary to eradicate ivy—and we doubt that it is--pesticides do not have to be used to do it. The Audubon Canyon Ranch in Bolinas Lagoon reported "qualified" success using hand-pulling methods on 5 acres over 5 years "utilizing 2375 volunteer hours." Biannual monitoring of resprouts will be required for the foreseeable future. It's a big commitment, but at least it is safe.

To conclude this section, we do not believe that imazapyr should be used in non-tidal watersheds. Nor do we believe it should be combined with glyphosate. In any case, the manner in which it has been used by the Natural Areas Program is not consistent with the manufacturer's recommendations regarding its use.

3. Pesticide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance

In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use:

> *"Pesticide use...would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant."* (DEIR, page 365)

09

There are two problems with this claim:

- NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: imazapyr and triclopyr.
    - Garlon (tricloypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)

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- Habitat (imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)

- Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:
  - NAP's report of pesticide use is frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports. (See Attachment II-A)
  - We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.
  - NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.
  - NAP used imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.
  - NAP **sprayed** Garlon (triclopyr) prior to 2011 when only "dabbing and injection" were approved application methods by the IPM policy.
  - NAP sprayed Garlon (triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in 2011. (see Attachment II-B)
  - NAP sprayed herbicides containing glyphosate in the water of Lake Merced which is officially designated red-legged frog habitat in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.
  - Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

4. The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program

The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate:

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> *"[Garlon] degrades quickly in the environment and has low toxicity to aquatic species (Dow2009)."* (DEIR, page 365)

The following are the accurate statements regarding biodegradability and toxicity to aquatic life quoted directly from the Material Safety Data Sheet which is mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency which are also mandated by federal law (see Attachment II- C):

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10 (Cont.)

"Persistence and Degradability
Chemical degradation (hydrolysis) is expected in the environment. ***Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.***"
(emphasis added)

"Ecotoxicity
Material is highly toxic to aquatic organisms *on an acute basis..."* (emphasis added)

This flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the Natural Areas Program. In the only case in which it provides any information, it resorts to egregious lies.

5. The use of herbicides known to be harmful to butterflies on Twin Peaks violates the Endangered Species Act

The Mission Blue butterfly is a federal endangered species which existed historically on Twin Peaks in San Francisco. San Francisco's Natural Areas Program has been trying to reintroduce the Mission Blue to Twin Peaks for several years, so far with limited success. This reintroduction effort is reported by the DEIR.

Herbicides are being sprayed on Twin Peaks to control non-native vegetation. **Twin Peaks was sprayed with herbicides 16 times in 2010 and 19 times in 2011.**

A recently published study reports[iv] that the reproductive success of the Behr's metalmark butterfly was significantly reduced (24-36%) by herbicides used to control non-native vegetation. Two of those pesticides are used on Twin Peaks, imazapyr and triclopyr. Triclopyr was used most often on Twin Peaks in 2010 and imazapyr in 2011.

The study does not explain how this harm occurs. It observes that the three herbicides that were studied work in different ways. It therefore speculates that the harm to the butterfly larva may be from the inactive ingredients of the pesticides which they have in common, or that the harm comes to the larva from the plant which is altered in some way by the herbicide application. Either theory is potentially applicable to the herbicides used on Twin Peaks and consequently harmful to the Mission Blue.

The Endangered Species Act requires that the Natural Areas Program stop spraying these herbicides on Twin Peaks because they are known to be harmful to the reproductive success of butterflies. Unless further scientific study exonerates these herbicides, the law obligates us to prohibit their use where the endangered Mission Blue butterfly is known to exist.

6. The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP

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The DEIR's claim that NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which it does not share with the reader) and an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR tells us nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP.

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This is the most significant failing of the DEIR because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees that will be destroyed will resprout if their trunks are not sprayed immediately with Garlon. This initial application of Garlon is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

The DEIR acknowledges the need to use Garlon on the stumps of trees that have been destroyed: *"Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon)* (DEIR, page 386)

11 (Cont.) However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. We turn to the University of California at Berkeley for this information. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted the attached letter with its application to FEMA (obtained with a FOIA request) to document the cost of poisoning all of the stumps of the trees with Garlon. UC predicts Garlon must be applied to resprouts twice per year for 10 years. (See II- D) Both UC Berkeley and East Bay Regional Park District are on record in their "vegetation management plans" that Roundup is not capable of preventing the resprouts of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment. (See Attachment II- D)

Conclusion

09, 10 (Cont.) **The final Environmental Impact Report for the SNRAMP must:**

- **Provide specific and current data about pesticide use by the Natural Areas Program**
- **Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program**

11 (Cont.)

- **Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.**

09 (Cont.) **If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation.**

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[i] "Aquatic Pesticide Application Plan for the San Francisco Estuary Invasive Spartina Project," August 2010, page 32.

[ii] http://www.stltoday.com/business/local/article_f01139be-ace0-502b-944a-0c534b70511c.html

[iii] Liston, Heather, "Reuniting old adversaries can beat back exotic invaders," California Wild, Winter 2006

[iv] John D. Stark, Xue Dong Chen, Catherina S. Johnson, "Effects of herbicides on Behr's metalmark butterfly, a surrogate species for the endangered butterfly, Lange's metalmark," Elsevier, 1/11/12.

8

Attachment II-A

APPLICATION NUMBER	ApplicationComments	PESTICIDE	Amount Used	UnitsUsed	TARGET PEST	EPA Number	HOW APPLIED	APPLICATOR	DATE OF APPLICATION	DATE OF NOTIFICATION	SITE MANAGER	NOTIFIER
GARLON												
17642	Monocot city	GARLON 4	2	fl ozs	broadleaf weeds	62719-40-ZB-62719	Spray	DE MEO, LICIA	16-Jan-08			
17643	Poison Oak / Oxalis	GARLON 4	2	fl ozs	broadleaf weeds	62719-40-ZB-62719	Spray	HAYES, DYLAN	16-Jan-08			
17699	pine lake	GARLON 4	1.8	fl ozs	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN	14-Feb-08			
17700	bayview hill	GARLON 4	13.2	fl ozs	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN	26-Feb-08			
17701	twin peaks	GARLON 4	5.4	fl ozs	oxalis	62719-40-ZB-62719	Spray	annese	26-Feb-08			
17761	east grassland	GARLON 4	8	fl ozs	oxalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOLPH (RANDY)	6-Mar-08			
17762	twin peaks	GARLON 4	21.6	fl ozs	oxalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTOPHER	6-Mar-08			
17763	mt. Davidson	GARLON 4	16	fl ozs	oxalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTOPHER	6-Mar-08			
17764	Glen canyon	GARLON 4	10	fl ozs	oxalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOLPH (RANDY)	7-Mar-08			
17765	Mc Laren Quail run	GARLON 4	10	fl ozs	oxalis-burclover	62719-40-ZB-62719	Spray	DE MEO, LICIA	7-Mar-08			
17883		GARLON 4 ULTRA	2	fl ozs	stumps	62719-527	Spray	ANNESE, THOMAS (TOM)	13-Jun-08			
18121		GARLON 4 ULTRA	7.5	fl ozs	weeds	62719-527	Spray		1-Oct-08		Lias Wayne	
18122	Mt. Davidson	GARLON 4 ULTRA	10	fl ozs	stump treatment	62719-527	Spray		7-Oct-08		Lias Wayne	
18123	Mt. Davidson	GARLON 4 ULTRA	30	fl ozs	stump treatment	62719-527	Spray		22-Oct-08		Lias Wayne	
18124	sharp park	GARLON 4 ULTRA	12	fl ozs	stump treatment	62719-527	Spray		28-Oct-08		Lias Wayne	
18125	ggplow	GARLON 4 ULTRA	12	fl ozs	stump treatment	62719-527	Spray		30-Oct-08		Lias Wayne	
18160		GARLON 4 ULTRA	14	fl ozs	eucalyptus saplings	62719-527	Spray		25-Nov-08	20-Nov-08	Lisa Wayne	
		TOTAL GARLON 2008	**179.5**									
18242	oxalis	GARLON 4 ULTRA	2	fl ozs	weeds	62719-527	Spray		30-Jan-09		LISA WAYNE	
18273		GARLON 4 ULTRA	4.8	fl ozs	oxalis	62719-527	Spray		4-Feb-09	15-Jan-09	LISA WAYNE	
18274	Brooks park, Orizaba rocks	GARLON 4 ULTRA	4.8	fl ozs	oxalis	62719-527	Spray		10-Feb-09	15-Jan-09	LISA WAYNE	
18275	BAYVIEW HILL	GARLON 4 ULTRA	28.5	fl ozs	oxalis	62719-527	Spray		19-Feb-09	15-Jan-09	LISA WAYNE and KIRRA SWENERTON	
18276	Corona	GARLON 4 ULTRA	9.6	fl ozs	oxalis	62719-527	Spray		27-Feb-09	15-Jan-09	LISA WAYNE	
18329	twin peaks	GARLON 4 ULTRA	3.6	fl ozs	oxalis	62719-527	Spray		5-Mar-09	02-Mar-09	Lisa Wayne	
18330	Glen Canyon	GARLON 4 ULTRA	6	fl ozs	poison oak	62719-527	Spray		12-Mar-09	02-Mar-09	Lisa Wayne	
18331	Glen Canyon	GARLON 4 ULTRA	3	fl ozs	OXALIS	62719-527	Spray		13-Mar-09	02-Mar-09	Lisa Wayne	
18332	Glen Canyon above seep	GARLON 4 ULTRA	3	fl ozs	OXALIS	62719-527	Spray		19-Mar-09	02-Mar-09	Lisa Wayne	
18333	billygoat hill	GARLON 4 ULTRA	5.5	fl ozs	OXALIS/ invasive pea	62719-527	Spray		27-Mar-09	22-Mar-09	Lisa Wayne	
18476		GARLON 4 ULTRA	14.4	fl ozs	weeds	62719-527	Spray		2-Jul-09		Lisa Wayne	
18477		GARLON 4 ULTRA	10	fl ozs	weeds	62719-527	Spray		14-Jul-09		Lisa Wayne	
18510		GARLON 4 ULTRA	2	fl ozs	acacia resprouts	62719-527	DAUBER		18-Aug-09		Lisa Wayne	
18511		GARLON 4 ULTRA	6	fl ozs	broadleaf weeds	62719-527	Spray		20-Aug-09		Lisa Wayne	
18583	Mclaren	GARLON 4 ULTRA	3	fl ozs	fennel	62719-527	Daubber		1-Oct-09		Lisa Wayne	
18584	Mclaren	GARLON 4 ULTRA	3	fl ozs	fennel	62719-527	Daubber		1-Oct-09		Lisa Wayne	
		TOTAL GARLON 2009	**109.2**									
18667	Mt Davidson	Garlon	2	fl ozs	oxalis - grasslands	627-1940	Backpack sprayer	Lisa Wayne	3-Feb-10		10,000 sq ft	
18729	Twin Peaks	Garlon	19	fl ozs	oxalis	627-1940	Backpack sprayer	Jan Campos, Kirra Swenetor	18-Mar-10			
18726	Twin Peaks	Garlon 4	10.5	fl ozs	N & S peak, scot's garden top of Mission bowl	62719529	Backpack sprayer	Kirra Swenertor	4-Mar-10			
18727	Twin Peaks	Garlon 4	7.2	fl ozs	Mission Ridge & bowl, oxalis	62719529	Backpack sprayer	Kirra Swenertor	17-Mar-10			
18730	Mt Davidson	Garlon 4 Ultra	9	fl ozs	Mt Davidson/ Cape Ivy	62719 527	Backpack	Ryan Gerlach	15-Mar-10			
18731	Mt Davidson	Garlon 4 Ultra	3.6	fl ozs	oxalis	62719 527	Backpack	Ryan Gerlach	16-Mar-10			

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18732	Twin Peaks	Garlon 4 Ultra	8	fl ozs	Algerian ivy	62719-527	Backpack	illeg	17-Mar-10	
18733	Twin Peaks	Garlon 4 Ultra	9	fl ozs	oxalis	62719.527	Backpack	illeg	17-Mar-10	
18734	Mt Davidson	Garlon 4 Ultra	3.6	fl ozs	oxalis	6271940	Backpack	illeg	18-Mar-10	
18728	Grandview	Garlon 4 Ultra	3.6	fl ozs	oxalis narrow leaf replant	62719 527	Backpack	Kirra Swenerton	19-Mar-10	
18725	McLaren	Garlon 4 Ultra	3.6	fl ozs	East of amphitheater/ flat wet meadow	62719 527	Backpack	Christopher Campbell	24-Mar-10	2500 sq ft
	Glen Canyon/ O' Shaughnessy	Garlon 4 Ultra	6.5	fl ozs	O'Shaughnessy roadside, del/Vale to Malta	62719 527	Backpack	Zebell	8-Apr-10	
	Glen Canyon/ Fox meadow, paths hemlock patch	Garlon 4 Ultra	12.5	fl ozs		62718 527	Backpack	DeMeo/ Swenerton	8-Apr-10	
	Glen Canyon/ Fox meadow	Garlon 4 Ultra	5	fl ozs	Poison oak, broom, english ivy hemlock	62719-527	Backpack	DeMeo L	22-Apr-10	
	O'Shaughnessy	Garlon 4 Ultra	3	fl ozs	Scabiosa	62719-527	Backpack	Campbell, Chris	22-Apr-10	
	Twin Peaks	Garlon 4 Ultra	3.6	fl ozs	Fennel along Burnett	62719-527		(Shellerbelt) Garcia/ Wilson	26-Apr-10	0.5 acres
	Twin Peaks	Garlon 4 Ultra	8	fl ozs	Cotoneaster (stump treatment)	62719-527			26-Apr-10	0.25 acres
	Oak Woodlands (GGP)	Garlon 4 Ultra	4.5	fl ozs	Cotoneaster/mayten/ tree of heaven	62719-527		(Shelterbelt) Garcia/ Wilson	30-Apr-10	0.5 acres
	Twin Peaks	Garlon 4 Ultra		fl ozs	Cotoneaster	62719-527		(Shelterbelt) Garcia/ Wilson	30-Apr-10	
	McLaren	Garlon 4 Ultra	8	fl ozs	Gazania and fennel - Vis Valley overlook	627-1940	Backpack	K Swenerton	19-May-10	
	McLaren - University Hill	Garlon 4 Ultra	3.6	fl ozs	Above asphalt path at University and Woolsey, fennel	62719-0537	Backpack sprayer	Licia De Meo	17-Jun-10	
	McLaren - tryphzalia (?) area	Garlon 4 Ultra	15	fl ozs	Gazania and fennel between 2 paths and grasslands	62719-0537	Backpack sprayer	Lisa Wayne	17-Jun-10	
	McLaren	Garlon 4 Ultra	9	fl ozs	Fennel - south of Mansell, east of Visitacion	62719-527	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10	
	Bayview	Garlon 4 Ultra	24	fl ozs	Fennel- grasslands	62719-527	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10	
	McLaren	Garlon 4 Ultra	6	fl ozs	S of Mansell Forest	627-1940	Dauber stump treatment	K Swenerton	16-Sep-10	
	McLaren (Geneva)	Garlon 4 Ultra	1	fl ozs	Geneva Ridge fennel	627-1940	Dauber (cut and daub)	Dylan Hayes	13-Oct-10	
	Twin Peaks	Garlon 4 Ultra + spraytech oil	15	fl ozs	Poison Oak, Fennel - PO along path and fennel above Crestline	62719-527	Backpack	Ryan Gerlach, Ventura Garcia, Ben Adamo	29-Jun-10	
	Bayview	Garlon 4 Ultra + spraytech oil	2	fl ozs	Fennel along steep access rd	62719-527	Backpack	Ryan Gerlach	29-Jun-10	
	Bernal	Garlon 4 Ultra + Spraytech oil	4	fl ozs	fennel on north-facing slope	62719-527	cut stump	Ryan Gerlach, Venny Garcia	23-Aug-10	
	Twin Peaks	Garlon 4 Ultra + Spraytech oil	75	fl ozs	Slope above Burnett: French Broom, Cotoneaster	62719-527	Cut stump	Ventura Garcia, Ben Adamo, Paul Wilson, Jake Harrower	20-Oct-10	
	Glen Park	Garlon 4 Ultra + Spraytech oil	2.5	fl ozs	Slope above Burnett: French Broom Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie Prescott	21-Oct-10	
	Glen Park	Garlon 4 Ultra + Spraytech oil	27	fl ozs	Monocot City, French Broom, Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie Prescott	22-Oct-10	
	RPD-Glen Park Natural Areas	GARLON 4UL	1	fl ozs	Weeds-misc	62719527AA62719		Hayes, D	4-Nov-10	
	RPD-Golden Gate Park-SEC 7	GARLON 4UL	4	fl ozs	Weeds-misc	62719527AA62719		Hayes, D	12-Nov-10	
	RPD-Twin Peaks	GARLON 4UL	8	fl ozs	Weeds-misc	62719527AA62719		Gerlach, Ryan	24-Nov-10	
	RPD-Twin Peaks	GARLON 4UL	10	fl ozs	Weeds-misc	62719527AA62719		Garcia,Shelter Belt	16-Dec-10	
		Total GARLON 2010	**340.169**							
ROUNDUP										
17698	landscape	ROUNDUP PRO DRY	1.8	ozs	cape ivy	524-505	Spray	HAYES, DYLAN	14-Feb-08	
17767	twin peaks- erharta	ROUNDUP PRODRY	4	ozs	arctotheca	524-505	Spray	DE MEO, LICIA	7-Mar-08	
17768	west grassland brooks	ROUNDUP PRODRY	9.8	ozs	weeds	524-505	Spray	HAYES, DYLAN	11-Mar-08	
17769	Edgehil erharta	ROUNDUP PRODRY	8	ozs	weeds	524-505	Spray	ZEBELL, RANDOLPH (RANDY)	20-Mar-08	
17770	Brooks, erharta	ROUNDUP PRODRY	4.8	ozs	weeds	524-505	Spray	HAYES, DYLAN	20-Mar-08	
17882		ROUNDUP PRO HERBICIDE	2	fl ozs	stumps	524-475-ZA-524	Spray	ANNESE, THOMAS (TOM)	13-Jun-08	
17766	Mc Laren marsh area	RODEO AQUATIC HERBICIDE (Glyphosate, Dow)	2.6	fl ozs	arctotheca	524-343-AA-524	Spray	DE MEO, LICIA	7-Mar-08	

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		TOTAL ROUNDUP 2008	**33**								
18399	gazenia	ROUNDUP PRODRY	1.6	ozs.	weeds	524-505	Spray		19-May-09		Lisa Wayne
18400	hawk hill	ROUNDUP PRODRY	4.8	ozs.	weeds	524-505	Spray		26-May-09		Lisa Wayne
18578	upper grassland	ROUNDUP PRODRY	6.4	ozs.	weeds	524-505	Spray		1-Oct-09		Lisa Wayne
18579	billy goat hill	ROUNDUP PRODRY	0.8	ozs.	weeds	524-505	Spray		8-Oct-09		Lisa Wayne
18580	edgehill	ROUNDUP PRODRY	9	ozs.	weeds	524-505	Spray		9-Oct-09		Lisa Wayne
18581	Mclaren	ROUNDUP PRODRY	4.8	ozs.	weeds	524-505	Spray		29-Oct-09		Lisa Wayne
		TOTAL ROUNDUP 2009	**27.4**								
18735	Pine Lake	Aquamaster	16		Pine Lake/ cape ivy	524-343	Backpack	Mark Heath	11-Mar-10	2%	
	Lake Merced	Aquamaster	8		Ludwigia	524-343	sprayer	JC	14-Jul-10	2%	
	Lake Merced	Aquamaster	2		Impound lake - Ludwigia	524-343	Backpack sprayer	R Zebell	2-Sep-10	2%	
	Glen Park	Aquamaster + Spraytech Oil	22		Site C above Silver Tree: French Broom and Poison Oak	524-343	Backpack sprayer	Ventura Garcia, Ben Adamo	15-Oct-10	2 oz/ gal	
	Glen Park	Aquamaster + Spraytech Oil	30		Monocot City: French Broom Cotoneaster	524-343	Cut stump	Ventura Garcia, Ben Adamo	15-Oct-10	50%	
	Twin Peaks	Aquamaster + Spraytech Oil	8		Slope above Burnett: Jupiter's Beard	524-343	Backpack sprayer	Ventura Garcia, Ben Adamo, Paul Wilson, Jake Harrower	20-Oct-10	2%	
	McLaren	Roundup Pro	3.6		Arctotheca - Upper meadow, Yosemite Marsh	524-475	Backpack sprayer	L. DeMeo	9-Sep-10	2%	1000 sq ft
	Glen Canyon: Fox Meadow	Roundup Pro [Max]	6.4		Fox Meadow - Poison oak and mustard	524-579	backpack sprayer	Licia De Meo, Dylan Hayes	3-Aug-10	2%	
	Sharp Park	Roundup Pro [Max]	1.3		Pampas grass	524-579	hand sprayer	Kirra Swenerton	26-Aug-10	2%	
18668	Mt Davidson	Roundup Pro Dry	1		erhata - grasslands - edge of forest	524-505	Backpack sprayer	Christopher Campbell	3-Feb-10	0.50%	10,000 sq ft
18722	Mt Davidson	Roundup Pro Dry	3		Erhata	524 505	Backpack	illeg	18-Mar-10	1%	
18724	McLaren	Roundup Pro Dry	6.0		Upper Yosemite Marsh - arctotheca, Kikuyu burclover	524 505	Backpack sprayer	Licia DeMeo/ Christopher Campbell	24-Mar-10	2%	5000 sq ft
	Hawk Hill	Roundup Pro Dry	3		slope -erhata	524-505	Backpack	Zebell, R	22-Apr-10	1.50%	
	Glen Canyon/ Fox meadow	Roundup Pro Dry	4.5		Radish, erhata	524-505	Backpack	Swenerton, K	22-Apr-10	2%	
	Edgehill	Roundup Pro Dry	9		Edgehill - planted area/ erhata	524-505	Backpack	R Zebell, C Campbell	4-May-10	1%	
	Sharp Park	Roundup Pro Dry	1.5		Pampas grass	524-505	hand sprayer	Kirra Swenerton	26-Aug-10	2%	
18721	Mt Davidson	Roundup Pro Max	9		Erhata	524 ?	Backpack	Ryan Gerlach	16-Mar-10	1%	
18723	Glen Canyon	Roundup Pro Max	9.0		Area A - hemlock thistle	524 579	Backpack sprayer	shelterbelt/ Ryan Gerlach	23-Mar-10	1ozl gallon	
	Twin Peaks	Roundup Pro Max	4		sprayed French Broom that was missed or too small to pull along Burnett	524-579		Shelterbelt/ Gerlach	26-Apr-10	1.56%	0.25 acres
	Oak Woodlands (GGP)	Roundup Pro Max			cape ivy	524-579		(Shelterbelt) Gerlach/ Garcia	?	0.80%	0.5 acres
	McLaren	Roundup Pro Max	6.8		Fennel - south of Mansell, east of Visitacion	524-579	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10	1.5 oz/ gal	
	Bayview	Roundup Pro Max	18		Fennel- grasslands	524-579	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10	1.5 oz/ gal	
	Twin Peaks	Roundup Pro Max	1		Patch of erhata off Twin Peaks	524-579	Backpack	Ryan Gerlach	12-Aug-10	1oz/gal	
	McLaren Park	Roundup Pro Max	3		Patch of pampas grass off Visitacion	524-579	Backpack	Venny Garcia	12-Aug-10	2 oz/ gal	
	RPD-Mt Davidson	AQUAMASTER	34.432		Weeds-erharta	5243432F524		Gerlach, Ryan	3-Nov-10		
	RPD-Golden Gate Park-SEC 1	AQUAMASTER	14.3646		Weeds-ivy	5243432F524		Gerlach, Ryan	4-Nov-10		
	RPD-Mt Davidson	AQUAMASTER	2.8514		Weeds-blackberry	5243432F524			4-Nov-10		
	RPD-John McLaren Park	ROUNDUP PR	5.844		Weeds-misc	5245794A524		Taylor, Zack	16 Nov 10		
	RPD-Lake Merced Park	AQUAMASTER	1.884		Weeds-misc	5243432F524		Zebell, R	16-Nov-10		
	RPD-Twin Peaks	ROUNDUP PR	0.7435		Weeds-pampas grass	5245794A524		Garcia, Shelter Belt	16-Dec-10		

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	RPD-Glen Park Natural Areas	ROUNDUP PR	4.383		Weeds-misc	524579AA524		Garcia, Shelter Belt	27-Dec-10		
		TOTAL ROUNDUP/ AQUAMASTER 2010	**240.102**								
OTHER STUFF											
18088		SAPPHIRE (Penoxsulam fm Dow)	96	fl ozs	english daisy	62719-547	Boom Spray		9-Sep-08			Against daisies - golf courses
18089		HABITAT (Imazapyr from BASF)	5.8	fl ozs	invasive weeds	241-426	Spray		9-Sep-08		Lisa Wayne	
18334	oak woodlands	MILESTONE (aminopyralid from Dow)	10.8	fl ozs	cape ivy	62719-519	Spray		13-Mar-09	09-Mar-09	Lisa Wayne	
18582	lake merced at impound lake	HABITAT (Imazapyr from BASF)	4	fl ozs	ludwegia	241-426	Spray		1-Oct-09		Lisa Wayne	
18736	Pine Lake	MILESTONE (aminopyralid from Dow)	1	fl ozs		62719-537	backpack		11-Mar-10		Mark Heath	
	RPD-Golden Gate Park-SEC 1	MILESTONE	0.6496		Weeds-ivy	62719537AA62719		Gerlach, Ryan	4-Nov-10			

Attachment II-A

Section on NAP	Supervisor	Date	Park	Product	EPA#	How applied	Specific area treated & target pest	Rate	Total product used/ AQ	Total product used/ polaris	Total product used/ other	measure	weather conditions	Applicator (PRINT)							
1	Lisa Wayne	12/1/11	Mt Davidson	Polaris	228-534	dauber	cotoneaster .500 sq ft	50%		.3			sunny windy	R. Zebell							
2	Lisa Wayne	12/2/11	Bernal	Polaris	228-534	dauber	Albizia	50%		0.5			sunny still	R. Kesel							
3	Lisa Wayne	12/9/11	Lake Merced	Habitat	241-426	backpack sprayer	Imposed shore - ludwigia. 200 sq ft	1.50% 4 oz/ 2 gal		2			sunny mild 50 F	R. Zebell							
4	Paul Wilson	12/5/11	Twin Peaks	Aquamaster	524-343		Coriadaria jucata .100 sq ft	gal	4					Ben Adams	DEC	7	9	0	16	3	13
5	Paul Wilson	12/5/11	Twin Peaks	Polaris	228-534		Cotoneaster and French broom stumps .100 sq feet			20				Adamo, Dan Brubaker, Christine Jones	NOV	1	4	0	5	5	0
6	Paul Wilson	12/5/11	Glen Canyon Park	Polaris	228-534		Cotoneaster, French broom and acacia stumps .100 sq feet			20				Adamo, Dan Brubaker	OCT	2	4	0	6	2	4
7	Paul Wilson	12/7/11	Twin Peaks	Polaris	228-534		Cotoneaster, French broom stumps .100 sq feet			10.1				Adamo, Dan Brubaker, Christine Jones, Oliver Kanner	SEPT	3	4	0	7	4	3
8	Paul Wilson	12/7/11	Glen Canyon Park	Polaris	228-534		Cotoneaster, French broom stumps .100 sq feet			10.1				Adamo, Christine Jones, Oliver Kanner, Sram	AUG	5	11	0	16	11	5
9	Paul Wilson	12/9/11	Glen Canyon Park	Polaris	228-534		Cotoneaster, French broom stumps .100 sq feet			10				Sram, Chelsea Lynes, Ian McMahon	JULY	5	3	0	8	3	5
10	Paul Wilson	12/19/11	Mt Davidson	Aquamaster	524-343		Blackberry stumps .300 sq ft		5					Paul Wilson, Danny Cain	JUNE	6	2	1	9	6	3
11	Paul Wilson	12/19/11	Mt Davidson	Aquamaster	524-343		Blackberry stumps .300 sq ft		20						MAY	1	3	0	4	2	2
12	Paul Wilson	12/19/11	Twin Peaks	Aquamaster	524-343		Roadside brush, erhata erecta 100 sq ft		4						APR	3	0	0	3	0	3
13	Paul Wilson	12/20/11	Twin Peaks	Polaris			cotoneaster .300 sq ft			64				Sram, Wilson	MARCH				0	0	0
14	Paul Wilson	12/22/11	Mt Davidson	Aquamaster	524-343		Erhata erecta .100 sq ft		4					Sram	FEB	4	0	0	10	4	6
15	Paul Wilson	12/22/11	Mt Davidson	Aquamaster	524-343		Blackberry stumps .300 sq ft		20					Wilson, Cain	JAN	1	0	0	1	1	0
16	Paul Wilson	12/22/11	Twin Peaks	Aquamaster	524-343		Roadside brush, erhata erecta 100 sq ft		4					Sram		38	40	7	85	41	44
17	Lisa Wayne	11/2/11	McLaren	Aquamaster	524-343	backpack sprayer	blackberry valerian	1.50%	4			oz	sunny warm	Kirra Swenerton							
18	Lisa Wayne	11/10/11	Lake Merced	Polaris	228-534	daub	acacia stems	50%		4		oz	sunny warm	R. Zebell							
19	Lisa Wayne	11/3/11	Bernal	Polaris	228-534	daub	?? ilex	50%		5		oz	sunny warm	R Kesel							
20	Lisa Wayne	11/17/11	Mt Davidson	Polaris	228-534	daub	cotoneaster	50%		1		oz	overcast	R. Zebell							
21	Lisa Wayne	11/23/11	Brooks	Polaris	228-534	daub	cotoneaster	50%		2		oz	overcast	Kirra Swenerton							
22	Lisa Wayne	10/27/11	Mt Davidson	Polaris	228-534	dauber	cut stumps - cotoneaster, eucalyptus, bachelia .2000 sq ft	50%		4		oz	sunny warm	R Zebell/ J Sotelo							
23	Lisa Wayne	10/27/11	Grandview	Aquamaster	524-343	backpack sprayer	ivieplant	1.50%	30			oz	sunny warm	Yerba Buena contractor							
24	Paul Wilson	10/26/11	Bayview Hil	Polaris/ Nu Farm	228-534	Hand Sprayer	eucalyptus, broom, acacia	50% Polaris		48		oz	good	Paul Wilson, Dan Brubaker, Sram, Danny Cain							
25	Paul Wilson	10/24/11	Bayview Hil	Aquamaster	524343	Backpack	fennel	1.5 oz/ gal	2			oz	good	Paul Wilson, Dan Brubaker, Sram, Danny Cain							
26	Paul Wilson	10/26/11	Twin Peaks	Polaris/ Nu Farm	228-534	Hand Sprayer	Cotoneaster stumps	50% Polaris		15		oz	good	Paul Wilson, Dan Brubaker, Sram, Danny Cain							
27	Paul Wilson	10/26/11	Twin Peaks	Polaris/ Nu Farm	228-534	Hand Sprayer	Cotoneaster stumps	50% Polaris		15		oz	good	Paul Wilson, Dan Brubaker, Sram, Danny Cain							
28	Lisa Wayne	9/2/11	O' Shaughnessy	Aquamaster	524343	Backpack sprayer	Prosc: oak south of Del Vale, 1000 sq ft	4%	40			oz	warm calm clear	R Zebell, L De Meo, K Swenerton							
29	Lisa Wayne	9/6/11	Geneva Ridge	Polaris/ Nu Farm	Polaris/ Nu Farm	Dauber	fennel	50% Polaris		1		oz	warm sunny	R Zebell, L De Meo, K Swenerton							
30	Lisa Wayne	9/16/11	Twin Peaks	Polaris/ Nu Farm	228-534	Dauber	Mypocum	50% Polaris		4		oz	overcast	K Swenerton							
31	Lisa Wayne	9/23/11	Twin Peaks	Polaris/ Nu Farm	228-534	Dauber	Myopcrum .1000 sq ft	50% Polaris		2		oz	sunny	D Hayes							
32	Paul Wilson	9/29/11	Bayview Hil	Polaris/ Nu Farm	228-534	Hand Sprayer	Fennel .1.5 acres	50% Polaris		10			good	Sram, Christine Jones							
33	Paul Wilson	9/26/11	Mt Davidson	Aquamaster	524-343	backpack sprayer	1.5 acres- erhata grass	1 oz/ gal	4.8					Mark Heath, Sram							
34	Paul Wilson	9/27/11	Oak Woodlands	Aquamaster	524-343	backpack sprayer	1 acres- fennel	1 oz/gal	5					Mark Heath, Sram							
35	Paul Wilson	8/2/11	Bayview Hil	Polaris/ Nu Farm	228-534	?	eucalyptus .1.5 acres			57.5		oz		Wilson, Cain, Sram, Prescott							
36	Paul Wilson	8/3/11	McLaren	Aquamaster	524-343	?	fennel 1.5 acres		13					Cain, Sram, Prescott							

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	37	Paul Wilson	8/22/11	Twin Peaks	Aquamaster	524-343		Fennel, Cape Ivy, Poison Oak, English Ivy, Pea 1.5 acres		6					Wilson, Cain, Sram
	38	Paul Wilson	8/18/11	Glen Park	Habitat	241-426		Pea, scabiosa, fennel, pampas grass- 10,000 sq ft.			5.6				wilson, brubaker
	39	Paul Wilson	8/18/11	Glen Park	Polaris	228-534		cotoneaster			9.6				wilson, brubaker
	40	Lisa Wayne	8/3/11	Glen Canyon	Polaris	228-534	Daub	Triangle scrub fennel cotoneaster 500 sq ft	50%		1			sunny 65 f	Christopher Campbell
	41	Lisa Wayne	8/4/2011	Bernal	Polaris	228-534	Daub	Fennel above folsom along rd 1200 sq ft	50%		0.5			sunny 65 F	Reybel, Kezel
	42	Lisa Wayne	8/9/11	Lake Merced	Aquamaster	524-343	Spray	Ludwigia	3%	2				overcast	Hayes, Campbell
	43	Lisa Wayne	8/17/11	McLaren	Aquamaster	524-343	Spray	Blackberry, pampas	2%	4				overcast	Kirra Swenerton
	44	Lisa Wayne	8/17/11	McLaren	Polaris	228-534	Daub	fennel, blackberry	50%		8			overcast	Kirra Swenerton
	45	Lisa Wayne	8/18/11	Lake Merced	Habitat	241-426	Backpack sprayer	ludwigia 500 sq ft	3%		8			overcast	Zebell
	46	Lisa Wayne	8/23/11	Palou Phelps	Polaris	228-534	Daub	Grassland fennel, 3000 sq ft	50%		0.5			sunny	Kesal
	47	Lisa Wayne	8/23/11	Palou Phelps	Aquamaster	524-343	Backpack sprayer	Grassland valerian 3000 sq ft	2%	8				sunny	Campo
	48	Lisa Wayne	8/24/11	McLaren	Habitat	241-426	Backpack sprayer	Grassland gazania	2%		5.2			sunny	Kirra Swenerton
	49	Lisa Wayne	8/25/11	Oak woodland	Polaris	228-534	Daub	Elms	50%		2			overcast	Hayes
	50	Lisa Wayne	8/31/11	Edgehill	Polaris	228-534	Backpack sprayer	Ehrata, 6000 sq ft	1%		15			clear sunny	Zebell
	51	Paul Wilson	7/26/11	McLaren	Aquamaster			Fennel 1.5 acres	12 oz/12 gal	12					Paul Wilson, Danny Cain
	52	Paul Wilson	7/27/11	McLaren	Aquamaster			Fennel 1.5 acres	12 oz/12 gal	12					Paul Wilson, Danny Cain
	53	Paul Wilson	7/27/11	Bayview Hill	Aquamaster			Pampas Grass 1.5 acres	11 oz/ 11 gal	11					Paul Wilson, Danny Cain
	54	Paul Wilson	7/28/2011	McLaren	Aquamaster			fennel 1.5 acres	12 oz/12 gal	12					Paul Wilson, Danny Cain
	55	Paul Wilson	7/28/11	Bayview Hil	Aquamaster			Pampas Grass 1.5 acres	2.5 oz/2.5g al	2.5					Paul Wilson, Danny Cain, Alan Cantner
	56	Lisa Wayne	7/12/11	McLaren	Polaris		dauber	eucalyptus, 4000 sq ft	50%		8			overcast	K. Swenerton
	57	Lisa Wayne	7/13/11	McLaren	Polaris		dauber	eucalyptus, 1500 sq ft			5			clear	K. Swenerton
	58	Lisa Wayne	7/17/11	McLaren	Polaris		dauber	eucalyptus, 1500 sq ft			5			overcast	K. Swenerton
JUNE	59	Paul Wilson	6/2/11	Twin Peaks	Roundup Pro Max	524-579	backpack sprayer	south end of north peak	1.5	2				good	?
	60	Paul Wilson	6/14/11	Twin Peaks	Polaris	228-534	Hand Sprayer	cotoneaster stumps in northwestern bowl	68%		32.6			good	?
	61	Paul Wilson	6/16/11	Twin Peaks	Polaris	228-534	Hand Sprayer	cotoneaster stumps in northwestern bowl	68%		32.6			good	?
	62	Lisa Wayne	6/2/11	O'shaughnessy del vale Hollow	Aquamaster	524-343	backpack sprayer	O'shaughnessy del vale Hollow 1 mile s of Oshaughnessy del vale Poison oak, 2500 sq ft	2%	28				overcast cloudy	Licia DeMarc, Kirra Swenerton, Randy Zebell
	63	Lisa Wayne	6/15/11	Oak Woodland	Roundup Pro Max		Hand Sprayer	Poison oak Coon Hollow 400 sq ft	2%	2.5				sunny	Dylan Hayes
	64	Lisa Wayne	6/17/11	McLaren	Milestone VM	62719-537	backpack sprayer	gazania	3 milgallo n			0.6	(1.8 m)	sunny	Jenny Szoke
	65	Lisa Wayne	6/17/11	Mt Davidson	Aquamaster		backpack sprayer	poison oak along trails	3%	19				sunny	R Zebell, C Campbell, R Kesel
	66	Lisa Wayne	6/21/11	Corona	Aquamaster		sprayer	poison oak on trails	4%	3				sunny	Jon Campo
	67	Lisa Wayne	6/23/11	McLaren	Aquamaster		backpack sprayer	valerian	2%	18.2				sunny	Kirra Swenerton, Christopher Campbell
MAY	68	Paul Wilson	5/2/11	Twin Peaks	Polaris	228-534	Hand Sprayer	cotoneaster stumps	68%		9.5			good	?
	69	Paul Wilson	5/26/11	Mt Davidson	Roundup Pro Max	524-579	backpack sprayer	Ehrata grass	2%		6			good	?
	70	Lisa Wayne	5/10/11	Corona	Habitat	241-426	backpack sprayer	Poison oak along trails	2%		8			sunny warm	Zebell, Kesel
	71	Lisa Wayne	5/11/11	Oak Woodlands	Aquamaster	524-343	backpack sprayer	Elm suckers	1.50%	10				overcast	D Hayes, K Wooen
APR	72	Paul Wilson	4/19/22	Bernal Hil	Roundup Pro Max	524-579	backpack-foliar	More eastern side of hill - fennel	1.50%	5				good	Ben Adams and Danny Cain
	73	Paul Wilson	4/22/11	McLaren	Roundup Pro Max	524-579	backpack-foliar	Mansell fields- fennel	2% (22 oz/11 gallon)	22				good	Ben Adams and Ventura Garcia
	74	Paul Wilson	4/26/11	McLaren	Roundup Pro Max	524-579	backpack foliar	Geneva Ridge - fennel	2% (8 oz/4 gallon)	8				good	Ventura Garcia and Danny Cain

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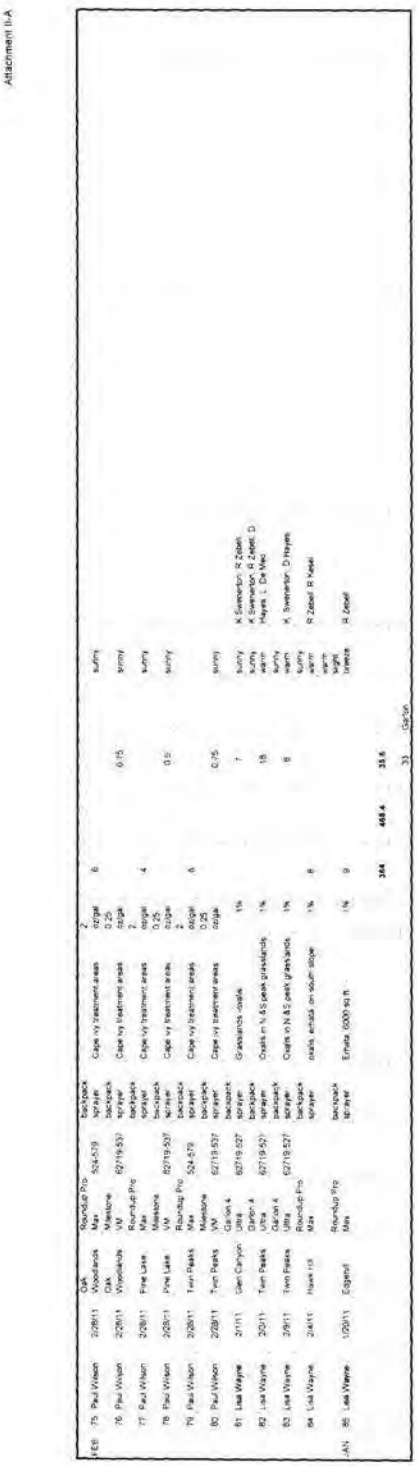

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Attachment II-B

Mary McAllister

From: "Mary McAllister" <marymcallister@comcast.net>
To: "Lisa Wayne" <Lisa.Wayne@sfgov.org>
Cc: <Chris.Geiger@sfgov.org>; <Ralph.Montana@sfgov.org>
Sent: Wednesday, February 09, 2011 9:03 AM
Attach: twin-peaks-garlon-feb-2011-notice.jpg; spraying-garlon-twin-peaks-feb-2011.jpg
Subject: Violation of City's IPM policy

Dear Lisa, Attached are photos of a pesticide application on February 3rd on Twin Peaks, near the reservoir. According to the corresponding Notice of Pesticide Application, the person was spraying Garlon 4 Ultra. It appears that the person doing the spraying is not wearing a respirator.

As you know, the IPM policy that was approved on January 25th by the Commission on the Environment has approved the restricted use of Garlon 4 and Garlon 4 Ultra as follows: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible, and **only with use of a respirator**. HIGH PRIORITY TO FIND ALTERNATIVE." (emphasis added). Therefore, the person photographed spraying Garlon 4 Ultra was not in compliance with the city's IPM policy.

I hope, for the safety of your staff and your sub-contractors, that those who are responsible for spraying this toxic chemical will be informed that they must wear a respirator in the future. As you know, the City's IPM policy classifies this chemical as "Tier I Most Hazardous." The Material Safety Data Sheet for this chemical reports that OSHA classifies this chemical as both an "Immediate" and a "Delayed Health Hazard."

Thank you for your attention to this important matter.

Mary McAllister

10/13/2011

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Attachment II-C

Dow AgroSciences

Material Safety Data Sheet

Dow AgroSciences LLC

Product Name: GARLON* 4 Herbicide

Issue Date: 03/09/2009
Print Date: 12 Mar 2009

Dow AgroSciences LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
GARLON* 4 Herbicide

COMPANY IDENTIFICATION
Dow AgroSciences LLC
A Subsidiary of The Dow Chemical Company
9330 Zionsville Road
Indianapolis, IN 46268-1189
USA

Customer Information Number: 800-992-5994

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 800-992-5994

2. Hazards Identification

Emergency Overview
Color: Yellow
Physical State: Liquid.
Odor: Gasoline-like
Hazards of product:

WARNING! May cause skin irritation. May cause allergic skin reaction. May cause eye irritation.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects
Eye Contact: May cause eye irritation. Corneal injury is unlikely. May cause pain disproportionate to the level of irritation to eye tissues.

* Indicates a Trademark.
* Indicates a Trademark of Dow AgroSciences LLC

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Skin Contact: Brief contact may cause moderate skin irritation with local redness. Prolonged contact may cause moderate skin irritation with local redness. Repeated contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.
Inhalation: Prolonged excessive exposure to mist may cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Effects of Repeated Exposure: In animals, effects have been reported on the following organs: Skin. Repeated excessive exposure may cause adverse effects.
Cancer Information: In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.
Birth Defects/Developmental Effects: For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the minor component(s): Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.
Reproductive Effects: For similar active ingredient(s). Triclopyr. For the minor component(s) In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition Information

Component	CAS #	Amount
Triclopyr 2-butoxyethyl ester	64700-56-7	61.6 %
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %
Ethylene glycol monobutyl ether	111-76-2	0.5 %
Solvent naphtha (petroleum), light aromatic	64742-95-6	0.2 %
Balance		>= 6.7 - <= 19.1 %

4. First-aid measures

Eye Contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Skin Contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.
Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

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Notes to Physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phosgene. Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance.
Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

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General Handling: Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Storage
Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Kerosene (petroleum)	Dow IHG	TWA as total hydrocarbon vapor	10 mg/m3 SKIN
	ACGIH	TWA Non-aerosol. as total hydrocarbon vapor	200 mg/m3 P: Application restricted to conditions in which there are negligible aerosol exposures.
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3 D-SEN

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.
A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.
It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

Personal Protection
Eye/Face Protection: Use safety glasses.
Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

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Engineering Controls
Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Liquid.
Color	Yellow
Odor	Gasoline-like
Flash Point - Closed Cup	64 °C (147 °F) *Closed Cup*
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	0.1 mmHg @ 37.8 °C *Literature* (kerosene)
Boiling Point (760 mmHg)	>= 150 °C (>= 302 °F) *Literature* (initial).
Vapor Density (air = 1)	1 *Literature*
Specific Gravity (H2O = 1)	1.08 *Literature* *Pyknometer*
Liquid Density	1.09 g/cm3 *Calculated*
Freezing Point	No test data available
Melting Point	Not applicable
Solubility in water (by weight)	emulsifiable
pH	6.4 *pH Electrode*
Decomposition Temperature	No test data available

10. Stability and Reactivity

Stability/Instability
Thermally stable at typical use temperatures.
Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Phosgene. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion
LD50, Rat, male 1,581 mg/kg
LD50, Rat, female 1,338 mg/kg
Skin Absorption
LD50, Rabbit, male and female > 2,000 mg/kg
Inhalation

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LC50, 4 h, Aerosol, Rat, male and female > 5.2 mg/l

Sensitization

Skin

Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.

Repeated Dose Toxicity

In animals, effects have been reported on the following organs: Skin. Repeated excessive exposure may cause adverse effects.

Chronic Toxicity and Carcinogenicity

Active ingredient did not cause cancer in laboratory animals. In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.

Carcinogenicity Classifications:

Component	List	Classification
Kerosene (petroleum)	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3
Ethylene glycol monobutyl ether	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3

Developmental Toxicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Active ingredient did not cause birth defects in laboratory animals. For the minor component(s): Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For kerosene: Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive Toxicity

For similar active ingredient(s). Triclopyr. For the minor component(s) In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For kerosene: Limited data in laboratory animals suggest that the material does not affect reproduction.

Genetic Toxicology

For the active ingredient(s): For kerosene: In vitro genetic toxicity studies were negative. For the active ingredient(s): For the component(s) tested: Animal genetic toxicity studies were negative.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: **Triclopyr-2-butoxyethyl ester**

Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Based largely or completely on information for similar material(s). Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient, n-octanol/water (log Pow): 4.09 - 4.49 Measured

Persistence and Degradability

Chemical degradation (hydrolysis) is expected in the environment. Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Stability in Water (1/2-life):

12 h; 25 °C; pH 6.7

6.6 d; pH 5

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OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
18 %	28 d	OECD 301B Test

Theoretical Oxygen Demand: 1.39 mg/mg

Data for Component: **Kerosene (petroleum)**

Movement & Partitioning

Based largely or completely on component information. Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient, n-octanol/water (log Pow): 3.3 - 6 Estimated
Bioconcentration Factor (BCF): 61 - 159; fish

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Data for Component: **Ethylene glycol monobutyl ether**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is high (Koc between 50 and 150).
Henry's Law Constant (H): 1.60E-06 atm*m3/mole Measured
Partition coefficient, n-octanol/water (log Pow): 0.83 Measured
Partition coefficient, soil organic carbon/water (Koc): 67 Estimated

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
95 %	28 d	OECD 301E Test
100 %	28 d	OECD 302B Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
5.2 %	57 %	72.2 %	

Chemical Oxygen Demand: 2.21 mg/g
Theoretical Oxygen Demand: 2.30 mg/mg

Data for Component: **Solvent naphtha (petroleum), light aromatic**

Movement & Partitioning

For the major component(s): Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). For the minor component(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): No test data available:

Persistence and Degradability

For the major component(s): Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). For some component(s): Biodegradation under aerobic static laboratory conditions is low (BOD20 or BOD28/ThOD between 2.5 and 10%).

ECOTOXICITY

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (Pimephales promelas), static, 96 h: 2.2 - 6.3 mg/l
LC50, rainbow trout (Oncorhynchus mykiss), flow-through, 96 h: 0.8 - 0.98 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea Daphnia magna, static, 48 h, survival: 1.7 - 18.8 mg/l

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LC50, water flea Daphnia magna, flow-through, 48 h, survival: 0.43 mg/l

Aquatic Plant Toxicity

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 5 d: 13.3 mg/l

Toxicity to Non-mammalian Terrestrial Species

oral LD50, bobwhite (Colinus virginianus): 1,350 mg/kg
oral LD50, Honey bee (Apis mellifera): > 100 micrograms/bee
contact LD50, Honey bee (Apis mellifera): > 100 micrograms/bee

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 7 d: 910 mg/kg

13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. Transport Information

DOT Non-Bulk
NOT REGULATED

DOT Bulk
Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S.
Technical Name: CONTAINS KEROSENE
Hazard Class: COMBUSTIBLE LIQUID **ID Number:** NA1993 **Packing Group:** PG III

IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
EMS Number: f-a,s-f
Marine pollutant.: Yes

ICAO/IATA
NOT REGULATED

Additional Information

MARINE POLLUTANT (Contains Triclopyr and Kerosene

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

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This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Toxic Substances Control Act (TSCA)
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	2	1

Revision
Identification Number: 50683 / 1016 / Issue Date 03/09/2009 / Version: 8.0
DAS Code: XRM-4714
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available

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W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Dow AgroSciences LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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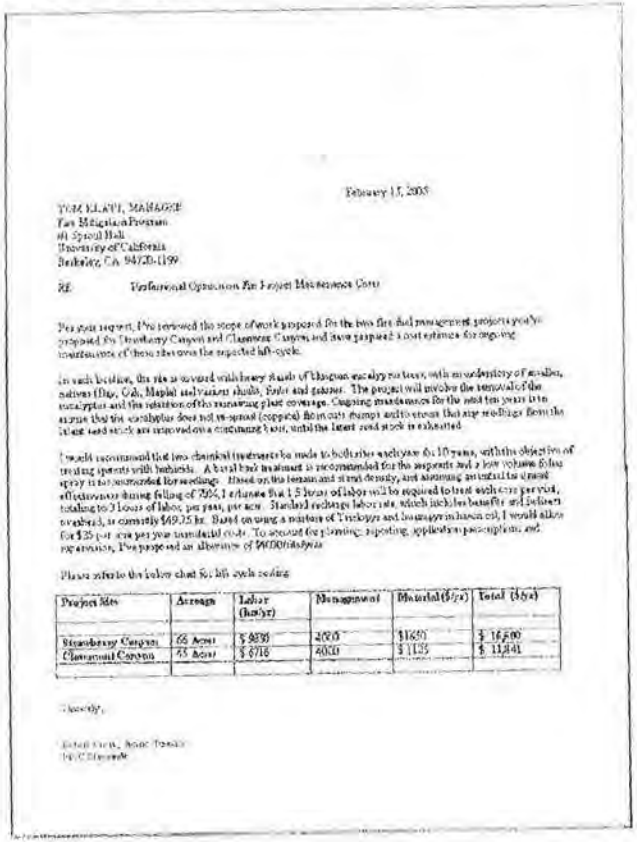
PROJECT MAINTENANCE COSTS:

The University of California, Berkeley, Associate Director of Physical Plant, Robert Costa, completed an estimate of life-cycle maintenance costs for the 2 UC projects. The letter containing Mr. Costa's opinion is embedded on the page that follows:



February 15, 2005

TOM KLATT, MANAGER
Fire Mitigation Program
#1 Sproul Hall
University of California
Berkeley, CA 94720-1199

RE: Professional Opinion Re Project Maintenance Costs

Per your request, I've reviewed the scope of work proposed for the two fire fuel management projects you've proposed for Strawberry Canyon and Claremont Canyon, and have prepared cost estimates for ongoing maintenance of these sites over the expected life-cycle.

In each location, the site is covered with heavy stands of Eucalyptus eucalyptus trees, with an understory of smaller, native (Bay, Oak, Maple) and various shrubs, Toyon and grasses. The project will involve the removal of the eucalyptus and the retention of the remaining plant coverage. Ongoing maintenance for the next ten years is to ensure that the eucalyptus does not re-sprout (coppice) from cut stumps and to ensure that any seedlings from the forest seed stock are removed on a continuing basis, until the latent seed stock is exhausted.

I would recommend that two chemical treatments be made to both sites each year for 10 years, with the objective of treating sprouts with herbicide. A basal bark treatment is recommended for the sprouts and a low volume foliar spray is not recommended for seedlings. Based on the terrain and stand density, and assuming an initial crew effectiveness during felling of 70%, I estimate that 1.5 hours of labor will be required to treat each acre per visit, totaling to 3 hours of labor, per year, per acre. Standard recharge labor rate, which includes benefits and indirect overhead, is currently $49.35 hr. Based on using a mixture of Triclopyr and Imazapyr in basal oil, I would allow for $35 per acre per year in material costs. To account for planning, reporting, application preparation, and supervision, I've proposed an allowance of 20/80 Mandays.

Please refer to the below chart for life cycle costing:

Project Site	Acreage	Labor (hrs/yr)	Management	Material ($/yr)	Total ($/yr)
Strawberry Canyon	66 Acres	$ 9870	4000	$1650	$ 16,600
Claremont Canyon	33 Acres	$ 6716	4000	$ 1125	$ 11,841

Sincerely,

Robert Costa, Assoc. Director
UC Berkeley

BCA Data Documentation3.doc

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Attachment II-D

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Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
Part III: The impact of the Natural Areas Program on wildlife

In this public comment, we will provide evidence that the Natural Areas Program has had a significant negative impact on legally protected wildlife as well as all wildlife in San Francisco's parks.

1. The Natural Areas Program has violated California Fish & Game Code, Sections 1600-1616 regarding streambed alteration and the federal Migratory Bird Treaty Act by conducting the destructive phase of their project in Glen Canyon Park during breeding and nesting season.
2. The Natural Areas Program is violating the Endangered Species Act by using pesticides known to be harmful to butterflies on Twin Peaks, where they have been reintroducing the endangered Mission Blue butterfly for several years.
3. The Natural Areas Program harms all of the animals in the parks by poisoning and eradicating the thickets in which they den and nest and the food which they eat.

1. The Natural Areas Program has violated California Fish & Game Code and the Migratory Bird Treaty Act

The DEIR states that SNRAMP is consistent with all federal and state laws governing the protection of biological resources. One of those laws is California Fish & Game Code 1600-1616 regarding the protection of fish and wildlife within "bodies of water of any natural river, stream or lake." These codes obligate those who are engaged in any "streambed alteration" to apply for a permit and "to propose reasonable project changes to protect the resource." (DEIR, page 274)

Islais Creek in Glen Canyon Park is such a water body which is protected by this law. Accordingly, the Natural Areas Program applied to California Fish & Game for a Streambed Alteration Permit in preparation for their project which began in November 2011. **The Natural Areas Program made the following commitment to mitigate harm to wildlife in Glen Canyon Park in its Streambed Alteration Permit:**

> "It is the policy of RPD's Natural Areas Program that **no new projects will begin during the breeding season (December to May)**. Follow up work in previously cleared areas may be done during the breeding season, however, because areas will have been cleared previously. Wildlife will not likely be using these areas for breeding. This protocol has been effective in reducing impacts to breeding wildlife."

12

The Natural Areas Program began to destroy the non-native vegetation in Glen Canyon Park in San Francisco in November 2011. In addition to destroying valuable habitat with chainsaws, they also sprayed herbicides. This destructive activity continued through winter and spring 2012 and cannot be dismissed as "follow-up work" on previously cleared areas. The San Francisco Forest Alliance (SFFA) protested this destructive project many times but it has continued unabated to as recently April 27, 2012, when they pruned trees and sprayed herbicides.

Earlier in April, SFFA learned from a public records request that this project violated a legal commitment to the California Department of Fish & Game. SFFA immediately brought this violation of NAP's commitment to the attention of the General Manager of the Recreation and Park Department. The head of the Natural Areas Program said that the violation was necessary because the grant funding for the project was about to expire. **To avoid losing the funding for the project, the birds and animals of Glen Canyon Park were subjected to this destructive project during their breeding and nesting season.**

1

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SFFA brought this violation to the attention of the California Department of Fish & Game. Their regulations commit them to enforce the terms of the Streambed Alteration Permit, including the mitigation of potential harm to wildlife. Violations of the terms of the permit are subject to "civil penalties" according to the regulations: "A person who violates this chapter is subject to a civil penalty of not more than twenty-five thousand dollars ($25,000) for each violation."

One month after informing California Department of Fish & Game of this violation, nothing seems to be done about it. In fact, several weeks after sending this information to Fish & Game, another episode of destruction occurred in Glen Canyon Park on April 27, 2012.

As the breeding/nesting season is also the season during which migratory birds are occupying their nests and the federal Migratory Bird Treaty Act "...also applies to the removal of nests occupied by migratory birds during the breeding season," (DEIR, page 273) we assume this law was also violated.

12 (Cont.) **In other words, the legal commitments made by the Natural Areas Program to conduct the destructive phase of their project outside of the breeding and nesting season were not observed. Furthermore, no action was taken by California Fish & Game to stop this project when it was brought to their attention. The law is apparently ignored with impunity.**

In addition to the violation of federal and state laws, the Natural Areas Program has also violated the commitments made in both the SNRAMP and the DEIR: "In compliance with the MBTA [Migratory Bird Treaty Act], the SFRPD would avoid harming or removing the nests of these species and any migratory bird species. Measure GR-4b (page 109) in the SNRAMP requires that vegetation management activities be conducted outside the breeding season (February 1 to August 31), unless these activities had already begun before the breeding season and had already removed nesting habitat or if a breeding bird survey was conducted prior to vegetation removal activities and had determined that no nesting birds were present." (DEIR, page 305)

The commitment to California Fish & Game in NAP's Streambed Alteration Permit and the commitment made in Measure GR-4B of SNRAMP are contradictory. These contradictions should be resolved by the final EIR: When is the breeding season? What evidence is there that a breeding bird survey was conducted prior to vegetation removal activities which took place continuously from November 2011 to April 27, 2012? Is the mitigation required by the Streambed Alteration Permit consistent with the caveats of Measure GR-4b?

2. The Natural Areas Program is violating the Endangered Species Act by using pesticides known to be harmful to butterflies on Twin Peaks

The Mission Blue butterfly is a federal endangered species which existed historically on Twin Peaks in San Francisco. San Francisco's Natural Areas Program has been trying to reintroduce the Mission Blue to Twin Peaks for several years, so far with limited success. This reintroduction effort is reported by the DEIR. (DEIR, page 285)

13 Herbicides are being sprayed on Twin Peaks to control non-native vegetation. **Twin Peaks was sprayed with herbicides 16 times in 2010 and 19 times in 2011.**

A recently published study reports[i] that the reproductive success of the Behr's metalmark butterfly was significantly reduced (24-36%) by herbicides used to control non-native vegetation. Two of those pesticides are used on Twin Peaks, imazapyr and triclopyr. Triclopyr was used most often on Twin Peaks in 2010 and imazapyr in 2011.

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13 (Cont.)

The study does not explain how this harm occurs. It observes that the three herbicides that were studied work in different ways. It therefore speculates that the harm to the butterfly larva may be from the inactive ingredients of the pesticides which they have in common, or that the harm comes to the larva from its host plant which is altered in some way by the herbicide application. Either theory is potentially applicable to the herbicides used on Twin Peaks and consequently harmful to the endangered Mission Blue.

The Endangered Species Act requires that the Natural Areas Program stop spraying these herbicides on Twin Peaks because they are known to be harmful to the reproductive success of butterflies. Unless further scientific study exonerates these herbicides, the law obligates us to prohibit their use where the endangered Mission Blue butterfly is known to exist, i.e., on Twin Peaks.

3. Claims that habitat for animals is improved by the eradication of non-native plants are unsupported by scientific evidence.

The DEIR states repeatedly throughout the document that habitat will be improved by the eradication of non-native plants and the presumed replacement by native plants. In fact this is offered as the basis for most claims in the DEIR that the "restoration" project will not harm the environment. For example, although the DEIR acknowledges that the environment may be harmed by the methods used to eradicate non-native plants, this harm is theoretically mitigated by the claim that the eventual development of native habitat will compensate for that harm. These claims are not supported by either the reality of restoration efforts in the past 15 years or by scientific evidence which does not substantiate a claim that native vegetation provides habitat for animals that is superior to non-native vegetation.

Although non-native vegetation has been removed repeatedly in many natural areas, the native plants that are planted in their place rarely persist for longer than a few months. These newly planted areas are quickly over run by non-native weeds. We will provide examples of such failed "restorations" in a subsequent section of this comment (Part V).

More importantly, neither SNRAMP nor the DEIR provide any scientific evidence to support the contention that native vegetation provides superior habitat to animals. In fact, all available scientific evidence contradicts this claim.

14

Because eucalyptus trees are one of the primary targets for eradication, we will focus on the specific claim that the eucalyptus forest is a "biological desert." We are frequently told that "nothing grows" under the eucalypts and that they are not providing food or habitat to insects, birds, and other animals.

Professor Dov Sax (Brown University) tested these claims while a student at UC Berkeley. **He studied the eucalyptus forest in Berkeley, California, and compared it to native oak-bay woodland in the same location. He found little difference in the species frequency and diversity in these two types of forest.**

He studied six forests of about 1 hectare each, three of eucalypts and three of native oaks and bays in Berkeley, California. The sites were not contiguous, but were selected so that they were of similar elevation, slope, slope orientation, and type of adjacent vegetation. He conducted inventories of species in spring and autumn. He counted the number of:

- Species of plants in the understory
- Species of invertebrates (insects) in samples of equal size and depth of the leaf litter
- Species of amphibians
- Species of birds
- Species of rodents

3

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He reported his findings in Global Ecology and Biogeography[ii]:

> "Species richness was nearly identical for understory plants, leaf-litter invertebrates, amphibians and birds; only rodents had significantly fewer species in eucalypt sites. Species diversity patterns...were qualitatively identical to those for species richness, except for leaf-litter invertebrates, which were significantly more diverse in eucalypt sites during the spring."

Professor Sax also surveyed the literature comparing biodiversity in native vs non-native forest in his article. He reports similar findings for comparisons between non-native forests and local native forests all over the world:

- In Spain, species of invertebrates found in the leaf-litter of eucalyptus plantations were found to be similar to those found in native forests, while species richness of understory plants was found to be greater in the native forests.
- In Ethiopia the richness of understory species was found to be as great in eucalyptus plantations as in the native forest.
- In the Mexican state of Michoacán, species richness and abundance of birds were found to be similar in eucalyptus and native forests.
- In Australia species richness of mammals and of soil microarthropods were found to be similar in native forests and in non-native forests of pine.

The only caveat to these general findings is that fewer species were found in **new** plantations of non-natives less than 5 years old. This helps to illustrate a general principle that is often ignored by native plant advocates. That is, that **nature and its inhabitants are capable of changing and adapting to changed conditions. In the case of non-native forests in the San Francisco Bay Area, they have existed here for over 100 years. The plants and animals in our forests have "learned" to live in them long ago.**

14 (Cont.)

The scientific literature informs us that wildlife does not necessarily benefit from native plant restorations and sometimes they are harmed by them. The assumption that native animals are dependent upon native plants underestimates the ability of animals to adapt to changing conditions.

Art Shapiro (UC Davis) has been studying California butterflies for over 35 years. His own observations as well as the work of other scientists have informed him that **"...the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna, including most of the familiar species of urban, suburban and agricultural environments. Some of these species are now almost completely dependent on exotics and would disappear were weed control more effective than it currently is."**[iii]

He explains that this is particularly true on the coast of California because this is where the highest concentration of introduced species of plants is naturalized and the butterfly population is less diverse because of the cool, foggy climate. There are apparently few non-native plants in the desert and alpine regions of California and so butterflies in those regions have not had the opportunity or need to adapt to new plants.

Professor Shapiro also speculates in this study that **other insects have adapted to non-native plants as well**: "Introduced hosts, having a broader geographic range than native hosts, may permit the expansion of the insect population geographically."

Birds have also adapted to non-native plants and trees. Researchers at UC Davis surveyed over 1,000 ornithologists in 4 states, including California, about their observations of native birds and non-native plants. Responses from 173 ornithologists reported 1,143 "interactions" of birds with introduced plants considered invasive. Forty-seven percent

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(47%) of those interactions were birds eating the fruit or seeds of non-native plants and trees considered invasive. Other interactions were nesting, perching, gleaning [eating insects], etc. [iv]

Interactions were frequently reported in non-native blackberry, which is found in most parks in San Francisco. It is one of the most productive food sources for birds in San Francisco. Unfortunately, it is being eradicated by the Natural Areas Program along with a long list of non-native shrubs which provide food and cover, such as cotoneaster, fennel, etc. The loss of food and cover has a drastically negative impact on the animals that live in our parks.

The non-native blackberry also provides cover for wildlife. It is an impenetrable bramble both physically and visually. Birds and small mammals hide and make nests and dens in these thickets. Coyotes are resident in San Francisco. The thick undergrowth which has been removed in some parks by the Natural Areas Program now allows unleashed dogs to pursue them in areas where they were protected before. If the safe havens of urban wildlife are destroyed, the animals may seek shelter elsewhere, a move that may be dangerous for them. When animals move into residential neighborhoods they are considered a nuisance and are often killed.

14 (Cont.)

Native plant restorations also require the use of herbicides to eradicate non-native trees and plants. Herbicides are being sprayed in the blackberries and other berry-producing non-native plants which are a major food source for wildlife. **One study performed by the US Forest Service for the EPA reported that the use of Garlon significantly reduced the reproductive success of birds.** [v] **Garlon is also highly toxic to aquatic life.**

Finally, we provide a current and local example of the scientific evidence that native plants do not provide habitat that is superior to that provided by non-native plants. The California Academy of Sciences finds that several years after planting its roof with native plants, it is now dominated by non-native species of plants in the two quadrants that are not being weeded, replanted and reseeded with natives. **Their monitoring project recently reported that there were an equal number of insect species found in the quadrants dominated by native plants and those dominated by non-native plants.** Where equal numbers of insects are found, we can expect to find equal numbers of birds and other animals for which insects are food.

Conclusion

12 (Cont.) The final EIR is not in a position to reassure the public that the implementation of SNRAMP will not harm wildlife because the Natural Areas Program has violated the laws that theoretically protect wildlife.

13 (Cont.) The final EIR must prohibit the use of pesticides known to be harmful to butterflies on Twin Peaks where the endangered Mission Blue butterfly has been reintroduced by the Natural Areas Program.

14 (Cont.) The final EIR must provide scientific evidence that native plants provide superior habitat for wildlife. If it is unable to provide such evidence, these claims must be removed from the final EIR. Without such reassurances, the final EIR must conclude that the eradication of non-native plants will have a significant negative impact on the biological resources in San Francisco's natural areas.

[iii] John D. Stark, Xue Dong Chen, Catherina S. Johnson, "Effects of herbicides on Behr's metalmark butterfly, a surrogate species for the endangered butterfly, Lange's metalmark," Elsevier, 1/11/12.

[iv] Dov Sax, "Equal diversity in disparate species assemblages: a comparison of native and exotic woodlands in California," Global Ecology and Biogeography, 11, 49-52, 2002.

[v] SD Graves and AM Shapiro, "Exotics as host plants of the California butterfly fauna," Biological Conservation, 110 (2003) 413-433

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[iv] CE Aslan and E Rejmanek, "Avian use of introduced plants: Ornithologist records illustrate interspecific associations and research needs," Ecological Applications, 20(4), 2010, 1005-1020

[v] Marin Municipal Water District, Herbicide Risk Assessment, page 4-24.

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Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
Part IV: Restrictions recreational access

The Significant Natural Resource Areas Management Plan (SNRAMP), which is evaluated by the Draft Environmental Impact Report (DEIR), announces these restrictions on recreational access in the natural areas:

- **SNRAMP "...calls for closing 54,411 feet (10.31 miles) of social trails and creating 5,897 feet (1.1 miles) of new trails, resulting in a new decrease of 48,514 feet (9.2 miles) or 23% of trails in natural areas." (DEIR, page 256)**
- **SNRAMP restricts all public use in the natural areas to the trails that will remain: "Public use in all Natural Areas, unless otherwise specified should encourage on-trail use...interpretative and park signs should be installed ...to 'Please Stay on the Trail.' If off-trail use continues...permanent fencing shall be considered..." (SNRAMP, page 5-14). This policy is not mentioned in the DEIR.**
- **The DEIR also announces plans to close 19.3 acres (20.3%) of the legal off-leash space in the natural areas which is 16.4% of all legal off-leash space available in all city parkland. (DEIR, page 257)**

Despite these plans to severely restrict all forms of recreation in the natural areas, which are 25% of all city managed parkland in San Francisco, the DEIR concludes that the impact on recreation will be "less than significant." The DEIR's analysis of impacts on recreation was inadequate for the following reasons:

1. **The DEIR did not adequately consider the impacts on recreation and visitor experience caused by the closure of 10.31 miles of trails, including many social trails.**
2. **The DEIR did not consider negative impacts on recreation and visitor experience from the Natural Areas Program's extensive use of fences to force people to stay on trails, nor did it consider impacts from the removal of benches in natural areas.**
3. **The DEIR did not consider the negative impact on recreation for park neighbors and users because NAP controls over 50% of the park in 27 out of 31 parks with natural areas (only four parks with natural areas have less than 50% of their total area controlled by NAP).**
4. **The DEIR did not adequately consider the negative impact on recreation from the intentional planting of threatened or endangered plant species and reintroduction of legally protected animal species in natural areas where they do not currently exist.**
5. **The DEIR did not adequately address the impact on recreation of the closure of off-leash Dog Play Areas, especially the potential closures of up to 80% of all legal off-leash areas on city parkland which the DEIR informs us could be the result of "monitoring" of the remaining off-leash areas.**
6. **The DEIR did not adequately address the impact on recreation, aesthetics, and visitor experience of poor maintenance in natural areas.**

1. Trail Closures

15 As acknowledged in the DEIR, a 2004 Recreation Assessment conducted for the Recreation and Park Department reported that the number one recreational facility need was more trails. Of the residents surveyed, 67% reported participating in walking or running, the highest percentage for any of the 26 activities listed in the Assessment. People want more trails, not less.

1

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15 (Cont.)

According to RPD General Manager Phil Ginsburg, the majority of trails in San Francisco city parks are located in the natural areas controlled by NAP (private conversation, June 1, 2012; he said this when asked to explain why the "trail restoration" part of the 2008 Clean and Safe Neighborhood Parks Bond was restricted to trails in natural areas). Thus, the SNRAMP's proposed closure of 23% of the total length of trails in natural areas marks a significant decrease in the length of trails available to the public systemwide, not just in the natural areas. There is simply not enough trail mileage in non-NAP parks to adequately replace the mileage lost in the natural areas. Thus the trail closures will have a more significant negative impact on the majority of San Franciscans who want more trails on which to walk or run. This aspect of the trail closures was not mentioned in the DEIR.

By closing off the areas currently accessed by the trails that will be closed, the SNRAMP will reduce the variety of experiences park users can have (fewer different areas to see). With less mileage available to walk, the closures will also discourage people from taking longer walks. Neither of these impacts was considered in the DEIR.

Many, if not most, of the trails scheduled for closure are "social trails," trails created by park users, not by park staff. There is usually a reason people create social trails; they prefer to take a more direct, faster, or more scenic path from Point A to Point B than the path RPD staff have told them they should take. Frequent visitors are the ones who create social trails by walking off an official trail time and time again. People new to a park will likely stay on official trails; they don't know where else to go. The closure of social trails will therefore have a greater impact on people who walk frequently in the parks, degrading their experience of the park by forcing them to walk in places they clearly would rather not.

When the University of California at Santa Cruz opened in the 1960s, administrators paved few paths between the colleges. They chose to wait to see what paths the students "naturally" created on their own to get from one place to another, and then paved the social trails that resulted. The social trails became the official trails. NAP has taken the opposite approach, deciding where people will be allowed to walk with little, if any, public input. And when the public has expressed a desire for something different than what NAP wants (by voting with their feet and creating a social trail), the response is to destroy the social trail. NAP is working at cross-purposes to the majority of San Franciscans who want more trails, and who try to show NAP where they want those trails to be when they create social trails.

Social trails also spring up when people want to enter or leave a park at a location where there is no "official" trail that will allow them do so. For example, over the years, people created a social trail at the northwestern corner of Grandview Park. The only "official" park access comes from trails on the eastern and southern sides of the park. To get to the official trails, people living on the north and western sides of the park are forced to walk in the street that surrounds the park, an option they clearly didn't like since they created a trail to the top of Grandview that began in the park's northwest corner. The recent closure of the social trail at Grandview by NAP has made it harder for the people who live north and west of the park to access it. The DEIR did not address the loss of accessibility to parks by the closures of some social trails.

Erosion can be a problem with social trails, but the response should be to mitigate erosion where it occurs, not to close the trail. The DEIR did not consider mitigations to these erosion problems other than closure.

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2. Fences and Benches

The DEIR does not address the impacts on recreation and visitor experience of being restricted to the trails in the natural areas. Being restricted to trails prevents many different types of recreation. Visitors can't spread a blanket on the ground and have a picnic or sunbathe while reading a book. Families can't play ball or Frisbee, fly a kite or a model airplane on a trail. Being confined to a trail essentially prohibits many other forms of recreation. Signs have been erected in the natural areas to inform the public that they are confined to the trails. The DEIR makes no mention of this policy or the restrictions it imposes on the recreational preferences of park visitors.



16 "Stay on Designated Trail" Billy Goat Hill

Fences have been erected by NAP alongside trails to enforce this restriction. With fences in place on either side of a trail, a child is physically prevented from exploring plants and bugs on the ground just off of the trail, or following a butterfly or moving to see the bird she can hear calling. Fences, no matter how attractive they are, create a "look, Don't Touch" museum-like feel to the park. That is not what most people want in their neighborhood parks.

Where trails have recently been "restored" in natural areas, NAP has erected fences on both sides of the trail, to force people to stay on the trails. These recently completed projects are a preview of the fences that the public can expect to be installed in all the natural areas as SNRAMP is implemented over its 20-year lifespan.



Grandview, May 2012

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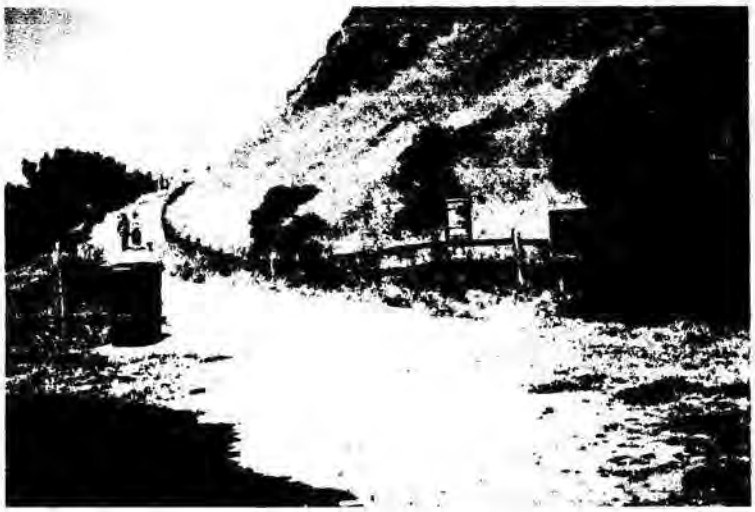
16 (Cont.)



Corona Heights, May 2012

These are not temporary fences. They will remain in place to keep people from straying off the trail for years to come. Putting a fence on both sides of a trail creates a "cattle chute" feeling that many people find unappealing. Their park experience is seriously degraded by the presence of these fences. The DEIR does not address the issue of impacts of permanent or semi-permanent fences on recreation, nor does it address the impact on visitor experience of creating "cattle chute" trails in neighborhood parks.

When all recreational users are confirmed to a trail, it creates unnecessary conflicts between different user groups. When joggers, dogs being walked on 6' leashes (as allowed by law), bicycles, birders seeking quiet, are all confirmed to the small space of a fenced trail, conflicts are inevitable. These conflicts are mitigated, if not avoided altogether, by giving people the option of stepping off the trail to accommodate other park visitors. **Of all the negative impacts of the Natural Areas Program, perhaps the most devastating has been the increased conflicts it has caused in our parks. Park visitors who have co-existed in peace for generations are now pointing fingers at one another, blaming one another for the loss of their recreational liberty.**

17 NAP has a history of removing benches from areas under its control. For example, a bench on an overlook at Mt. Davidson, one of only two benches in the park, was recently removed by NAP. There was nothing wrong with this bench. It was apparently removed because it was perceived by NAP staff to be detrimental to the native plants that grow in that area. There is now no place to sit (except on the ground) to either rest or reflect while looking at the view. This is a particular hardship for seniors and others with more limited mobility, who now have no place to sit after a strenuous uphill hike. Despite park neighbors' and users' pleas to replace the bench, NAP has so far refused to do so. The lack of benches or places for people to rest without having to sit on the ground impacts all recreational users of the parks, even those who only want to walk on trails.

18 **The final EIR must acknowledge the SNRAMP policy to confine all recreational access in the natural areas to fenced trails. This restriction has a significant impact on recreation in the parks of San Francisco and it should be recognized as such by the final EIR.**

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3. NAP's Control of Entire Parks

In over half of the parks with natural areas (17 of 31 listed in Table 5 of the DEIR), NAP controls the entire park. Entire parks have become essentially single-use parks – natural areas only. In an additional 10 parks, NAP controls over 50% of the park. In only four parks does NAP control less than half of the park.

For those parks in which NAP controls the entire park, there are no recreational uses allowed in the entire park other than walking on a trail (Bernal Hill is the one exception, with off-leash dog walking allowed in the nearly half of the park that is designated as MA-3). Parents hoping to play catch with their child must find another park in which to do so. People wanting to sit on a blanket in the sun must go somewhere else. When you add in the parks with more than half of their land controlled by NAP, 87.5% of parks with natural areas in them will have significant restrictions on access and recreation. The final EIR must consider this impact on recreation and access.

18 (Cont.)

Within all the natural areas, more than half of the land (57%) is designated as MA-1 or MA-2. These are the management zones with the most severe restrictions on recreation. In 7 parks, all of the land in the natural area is designated as MA-1 or MA-2. These parks will see even more significant impacts on access and recreation than parks with at least some of their land designated as MA-3. Recreation restrictions from different management zones, and how much of a park is made up of each zone, must be considered in the final EIR.

In some cases, the parks completely controlled by NAP do not have non-NAP parks close by. Thus people who want a non-NAP park experience (for example, to play catch with their children, friends or pets) will be forced to go to another park outside of their neighborhood. This will force many into their cars to drive to a non-NAP park. This increase in automobile usage and its attendant increases in pollution and global warming effects are not addressed in the DEIR.

4. Planting and/or Reintroducing Threatened or Endangered Species

In the SNRAMP, NAP expresses its intent to plant threatened or endangered species throughout the natural areas, including many places where they are not currently found. The mere presence of these species triggers a number of additional protections and access restrictions required by the federal Endangered Species Act and similar state and local laws The intentional planting of legally protected species where they are not currently found makes restrictions on recreational access (indeed all access) a *fait accompli.* Once the plant is in the ground or the animal is known to exist, it MUST be protected and recreational access MUST be restricted.

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We have two specific examples of the consequences of reintroducing endangered species to our parks. In the case of Sharp Park, two endangered species of animal are known to exist. To our knowledge, these animals were not reintroduced by humans. The DEIR proposes to reconfigure the golf course to accommodate those legally protected species. The scale of that project is described in detail by the DEIR. We can't imagine how much this project will cost to implement. However, despite the scale of this monumental effort, San Francisco is being sued by organizations which do not believe that the proposed accommodations are adequate and therefore violate the Endangered Species Act. These organizations demand that the golf course be closed entirely and that all recreational access be confined to "viewing zones" behind fences. Essentially, they want the entire 411 acre park turned over to the two endangered species.

The effort of the Natural Areas Program to reintroduce the endangered Mission Blue butterfly to Twin Peaks is a more clear-cut example of the potential for the implementation of SNRAMP to eliminate recreational use of San Francisco's parks, because the butterfly did not exist there prior to the efforts of the Natural Areas Program to reintroduce it. In

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other words, the reintroduction was a discretionary act. The Natural Areas Program is willfully subjecting Twin Peaks to the potential to be closed to the public. The federal recovery plan for the Mission Blue previews these restrictions:

> "Recreational impacts pose a substantial threat to mission blue butterfly habitat...One of the contributing factors to the apparent extirpation of this butterfly on Twin Peaks is heavy recreational use by off-trail hikers, and motor-bike activity all of which are prohibited."[1]

SNRAMP informs us that the Natural Areas Program intends to reintroduce the endangered Mission Blue butterfly in McLaren Park and Bayview Hill. It is, however, silent about what recreational access restrictions may be required to support the population of a legally protected species.

19 (Cont.)

In its section on Recreation (p. 252), the DEIR says that the Notice of Preparation Scoping process identified several concerns about recreation, including: "Effects of the introduction of endangered/threatened species on recreational opportunities, public access, and the administration of local public lands." Despite this acknowledgment, there is no discussion of impacts on recreation caused by intentional planting of sensitive species where they are not currently found.

The final EIR must acknowledge that the Natural Areas Program intends to reintroduce legally protected species of plants and animals to the Natural Areas. It must inform the public of what recreational access restrictions will be required to accommodate those species. When the loss of recreational access is anticipated, the final EIR must mitigate for those impacts by providing commensurate recreational opportunities in San Francisco.

5. Dog Play Area (DPA) Closures

The DEIR does not adequately consider impacts on off-leash recreation from the SNRAMP. The DEIR addresses only the impacts on remaining DPAs, and on recreation, of the immediate closure of 16.4% of the total legal off-leash space in city parks once the SNRAMP goes into effect. However, the DEIR concludes that impacts of these closures on remaining DPAs, recreation, people driving to other DPAs, etc., will be minimal.

The SNRAMP makes clear that NAP will monitor DPAs in four parks – McLaren, Buena Vista, Bernal Hill, and the Golden Gate Park Oak Woodlands – where DPAs are located either within or adjacent to natural areas. These DPAs, combined with the one scheduled for closure at Lake Merced, constitute roughly 80% of the legal off-leash space in all city parks. SNRAMP also makes clear that if NAP claims the monitoring shows impacts on theses natural areas from the dogs, the DPAs will be closed.

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In other words, initial closures of dog play areas will be 16.4% of all dog play areas in San Francisco, but SNRAMP announces the potential for 80% of all dog play areas to be closed in the future. Since no evidence is provided by the DEIR that any damage has been done by dogs in the dog play areas that are being closed immediately, no evidence is likely to be provided to close most of the dog play area that would remain after the immediate closures.

In fact, in the one dog play area which will be closed entirely and immediately, both SNRAMP and the DEIR say that use of this area by visitors with dogs is minimal: "...the DPA at Lake Merced is not heavily used..." (DEIR, page 258) One wonders what the justification is for closing this DPA if it is not heavily used and no evidence is available that damage has been done by dogs.

[1] http://ecos.fws.gov/docs/five_year_review/doc3216.pdf

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20 (Cont.)

The DEIR states that it cannot analyze the impacts of possible GGNRA closures because they have yet to be finalized. However, we know the amount of off-leash areas in the GGNRA proposed for closure in January 2011: 90% of existing off-leash space on GGNRA lands have been proposed for closure. The final EIR should analyze the cumulative impacts of the maximum amount of closure proposed by both SNRAMP and the GGNRA. We saw on "Tsunami Friday" what those impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. On Tsunami Friday, a Recreation and Park Department staff member counted over 200 dogs at once in the Pine Lake DPA at 10 am, ten times more dogs than on a normal weekday (usually about 20 dogs at any one time), and more than three times the maximum number of dogs normally seen on busy weekends (about 60 dogs). This example graphically illustrates the potential impact on remaining DPAs of significant closures of off-leash space. Forcing so many more dogs into remaining DPAs day after day will undoubtedly lead to serious degradation of those remaining DPAs thereby creating the conditions that would justify closure in the future.

Without providing any analysis, the DEIR concludes the cumulative impacts of closure of off-leash areas by the GGNRA and those proposed by SNRAMP are "significant and unavoidable." So, in this rare instance in which the DEIR acknowledges significant impact on the environment and on recreational opportunities in San Francisco, it gives itself a free pass: "It's unavoidable." We beg to differ. The final EIR has options that must be considered. The obvious and responsible thing to do is to NOT close any dog play area if there is no evidence that dogs are harming those areas.

The DEIR repeatedly justifies the exclusion of off-leash recreation because it says dogs have a significant negative impact on plants and wildlife. Yet it offers no evidence to support the claims of impacts. The DEIR repeatedly says dogs MAY be impacting protected plant species or wildlife (ppgs, 298, 305, 306, 472, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. After each of these claims, the DEIR goes on to say: Dogs MAY continue to impact plants or wildlife. If there is no proof of an impact, then that impact cannot "continue." **EIRs must be based on observed, documented impacts, not speculation about things that "may" happen at some point in the future. The final EIR must alter its analysis to address this and base any restrictions on recreation involving dogs on actual observed impacts.**

6. Poor Maintenance

The 2012 work plans for the Natural Areas Program (see Attachment IV-A, obtained by public records request) help us to understand why the natural areas are such a mess. The work plans inform us that NAP and its volunteers and contractors plan to spend a total of 358.5 days taking care of 1,075 acres of natural areas in 2012. Each acre of natural area will therefore receive one-third of one day of maintenance for the entire year. Some natural areas have not been scheduled for any maintenance and several as few as one day for the entire year.

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There are countless stories of volunteers who spent long hours planting in NAP areas, only to see absolutely no maintenance performed once the plants were in the ground. Not surprisingly, many of these plants die, creating unsightly vistas of dead or dying plants. People are much less likely to want to walk in natural areas that are poorly maintained, a negative impact on recreation that is not addressed in the DEIR.

Poor maintenance is important because NAP is exempt from the Maintenance Standards mandated by Proposition C passed by San Francisco voters in 2003. Prop C required the Recreation and Park Department, with help from the Controller's Office, park advocates and the general public, to develop maintenance standards for parks. The standards define the desired conditions of park features such as lawns, trees, and trails, and are used to assess and evaluate conditions in San Francisco parks each year. In the San Francisco Park Maintenance Standards Manual (August 2006), there is a single maintenance standard for open space – cleanliness, defined as: "From a 10 feet distance (i.e., from the

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nearest path), open space is free of litter and debris." The manual goes on to say that the standard is met if no more than 15 pieces of litter are visible in a 50' by 50' area or along a 200' line, and that the standard is not met if needles, condoms, broken glass, and/or feces are present.

Certainly people in natural areas, including those walking on trails, have a right to expect the natural areas to meet such a simple cleanliness standard. However, the Manual goes on to say: **"Open space-natural areas are not included in this standards manual, and therefore, are not inspected."** The DEIR should consider the impact on aesthetics and recreation of the woeful lack of maintenance in natural areas.

21 (Cont.)

The final EIR should also consider the mitigation of scaling NAP back to a few areas that it can adequately maintain with its existing staff and budget, compared to the current plan to spread maintenance hours so thin because they are trying to cover too many natural areas. One of many reasons why the Natural Areas Program is controversial is that it is too big. It has claimed hundreds of acres in which there were no native plants whatsoever. It has bit off more than it can chew. Much of what is now on its plate should be taken back and returned to its "natural state," i.e., without pesticides, without fences, without moonscapes created by eradicating existing vegetation.

Conclusion

The final Environmental Impact Report for the SNRAMP must:

15 (Cont.)
- **Analyze the impacts on recreation of confining all recreation to trails, as well as the closure of trails in natural areas**

18 (Cont.)
- **Analyze the impact of restricting all recreational access to trails enforced by fences on recreation and aesthetics, especially erecting fences on both sides of trails, as well as impacts from the removal of benches in natural areas**
- **Analyze impacts on recreation and access resulting from the designation of entire parks as natural areas with consequent impacts on recreation and aesthetics.**

19 (Cont.)
- **Analyze the impacts on recreation and access resulting from the intentional planting or reintroduction of legally protected species of plants and animals in natural areas where they do not currently exist**

18 (Cont.)
- **Analyze the maximum possible closures of all DPAs in natural areas (80%), not just the minimum possible (16.4%), and provide evidence of impacts claimed to be caused by dogs**

21 (Cont.)
- **Analyze impacts on aesthetics and recreation of poor maintenance of natural areas.**

If this information is provided in the final Environmental Impact Report, it will undoubtedly conclude that the impact of SNRAMP on recreation is significant and requires mitigation. The obvious mitigation is to decrease the size of the natural areas to a size that can be maintained adequately and which does not restrict recreational opportunities.

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Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
Part V: Support for the Maintenance Alternative

The Draft Environmental Impact Report (DEIR) identifies the Maintenance Alternative as the Environmentally Superior Alternative.[1] This is consistent with CEQA law which requires that the alternative that will have the least negative impact on the environment be identified as the Environmentally Superior Alternative.

Our support for the Maintenance Alternative is based on the fact that it is the least destructive of the alternatives presented by the DEIR:

- **The Maintenance Alternative will destroy the least number of trees and existing vegetation**
- **The Maintenance Alternative will require the least amount of pesticide**
- **The Maintenance Alternative will require the least restrictions on recreational access**
- **In addition to being the Environmentally Superior Alternative, the Maintenance Alternative is also the only viable and sustainable alternative because:**
  - **The Maintenance Alternative will not require that native plants which are no longer adapted to present conditions be planted where they will not grow**
  - **The Maintenance Alternative will not require that the City of San Francisco substantially increase the budget of the Natural Areas Program so that native plant gardens can be expanded**

22

1. The Maintenance Alternative will have less negative impact on the environment

The Natural Areas Program (NAP) has destroyed hundreds of trees in the "natural areas" in the past 15 years. The destruction of these trees has given NAP the opportunity to demonstrate that removing trees is beneficial to native plants. In fact, there is little evidence that the destruction of trees has resulted in successful native plant gardens.

The Pine Lake "natural area" is an example of the destruction of trees which did not result in a successful native plant garden. In 2004, about 25 trees were destroyed at the western end of Pine Lake. This destruction is documented by the Hort Science report of December 2011 ("Stern Grove-Pine Lake Park, Parkside Square tree risk assessment"). This report was written as an update on Hort Science's comprehensive assessment of all trees in Stern Grove-Pine Lake in 2003, in preparation for finally removing the hundreds of trees that had been evaluated as hazardous 8 years before. Here is what Hort Science found at the "West end of the park, near Wawona and 33rd Ave:" **"This area had a number of trees removed by the Natural Areas Program. "**

The area in which the trees were destroyed was then planted with native plants and surrounded by the limbs of the trees that were destroyed. This is what that garden looked like in May 2008, four years later:

[1] This assumes that page 2 is corrected to be consistent with pages 525-526, as the Planning Department has said in writing that it will be corrected in the final EIR.

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West end of Pine Lake, May 2008

And this is what that area looks like now:



West end of Pine Lake, July 2011

22 (Cont.)

Little remains from that effort. This is not an isolated example of the results of 15 years of attempting to restore native plants in places where they have not existed for over 100 years. In addition to the 25 healthy trees that were destroyed at the western end of Pine Lake, 132 trees judged as hazardous were destroyed around the lake in 2006 (these tree removals are documented in SNRAMP). The southern and northern shores of Pine Lake have been planted repeatedly. These areas are now dominated by foxtails and non-native nasturtiums which are thriving, despite being eradicated repeatedly.

Other parks have had similar experiences in their "natural areas." Sometimes toxic herbicides are used in the attempts to eradicate the non-native plants. Here is a picture of a field of oxalis and mustard in Glen Canyon Park that has been

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sprayed with toxic Garlon numerous times. There is no evidence that these non-native plants have been defeated by this chemical warfare.



Oxalis in Glen Canyon Park, February 2011

According to "UC [Davis] IPM Online"[2], Garlon only poisons the visible part of the plant; it doesn't kill the root of the plant (in this case, the "bulbil"). So, the plant grows back the next year and is poisoned again. Between March and October 2010, the Natural Areas Program and its contractors (Shelterbelt Builders) sprayed Glen Canyon with herbicides 10 times. If this futile effort continues, it will be sprayed again every year, for as long as the public is willing to tolerate this poisoning of its public parks. There is a creek at the bottom of this canyon that is probably being poisoned as well. According to the federally mandated Material Safety Data Sheet for Garlon, it is "highly toxic" to aquatic life. Alongside the creek is a day camp that is attended by children year around. Do their parents realize that this toxic chemical is being sprayed repeatedly in proximity of their children?

22 (Cont.)

More fortunate "natural areas" have essentially been abandoned by the Natural Areas Program. Tank Hill has not been gardened by the NAP staff for several years. It has been spared the spraying of herbicides. However, it is visited by an unsupervised volunteer who hacks at the trees that remain. In other words, so many acres of parkland have been designated as "natural areas" that the staff is unable to garden them and is unable to supervise the volunteers who are free to do whatever they want in them, including mutilate trees.

2. The conditions that supported native plants in San Francisco have changed

One of many questions that was asked during the public comment period for the Initial Study was: is it still possible to sustain native plant gardens in San Francisco, given the radical changes in underlying conditions, e.g., higher levels of Carbon Dioxide, higher temperatures resulting from climate change and urban heat effect, changes in soil such as increased nitrogen levels and as a result of non-native vegetation, etc.?

This is one of many questions that were raised at the time of the Initial Study that are neither acknowledged nor answered by the DEIR. We will therefore ask and answer this question because it is our last opportunity to do so. The evidence that the ranges of native plants and animals have changed is overwhelming. We should not be surprised that the Natural Areas Program has had little success in achieving their goals after 15 years of effort. NAP and its supporters

[2] http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7444.html

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22 (Cont.)

would like the public and the City's policy makers to believe that its lack of success is because they are not adequately funded.

Even if the City had the resources to substantially increase the staff of the Natural Areas Program—and chose to use them for that purpose--we would not see a substantially different outcome from their efforts. To demonstrate the futility of this effort, we turn to the living roof on the California Academy of Sciences.

When the California Academy of Sciences reopened in Golden Gate Park in August 2008, its "living roof" was considered its most unique feature. Thirty species of native plants were candidates for planting on the roof. They were planted in test plots with conditions similar to the planned roof and monitored closely. Only nine species of native plants were selected for planting on the roof because they were the only plants that were capable of self-sowing from one season to the next, implying that they were "sustainable." A living demonstration of "sustainability" was said to be the purpose of the living roof. [3]

So what have we learned from the living roof about the sustainability of native plants in San Francisco? Two of three of the predominant species on the roof after 2-1/2 years were native. The third—moss--is a "cosmopolitan" species that occurs everywhere. It is not considered native or non-native. It was not planted on the roof and therefore should be considered "invasive" in this context. The Academy's monitoring project has divided the roof into four quadrants. By February 2011, non-natives outnumbered natives in two of the quadrants. Although natives outnumbered non-natives in the other two quadrants which are actively gardened, non-natives were also growing in these quadrants.[4]

The consultant hired by the Academy to plan the roof garden, Rana Nursery, advised the Academy to walk the streets of San Francisco and identify the plants growing from the cracks in the sidewalks. These are the plants he advised the academy to plant because these are the plants that are adapted to current conditions in the city. The academy rejected this advice because they were committed to planting exclusively natives on the roof.

The designer also advised the academy not to irrigate the roof, because the point of the roof is that it is a demonstration of sustainability. Again, the academy refused because they knew that without irrigation most of the native plants would be brown during the dry season, roughly half the year. (In fact, it is not clear that the plants would even survive without irrigation.) They wanted the public to believe that the plants that are native to San Francisco are beautiful year around.

There is a lesson here for anyone who is willing to learn from it. The living roof is not natural because it is irrigated and intensively gardened (e.g., weeded, fertilized, replanted, reseeded, etc.[5]), yet non-natives not only found their way there on their own, but were dominating it within only 2-1/2 years. Native plants are not sustainable in San Francisco without intensive gardening effort. The living roof on the Academy is a tiny fraction of the acres that have been designated as "natural areas." The Academy is one building in Golden Gate Park. All of Golden Gate Park is about the same acreage as all of the 1,100 acres of "natural areas."

Peter Del Tredici has been telling us this for several years. He is a Senior Research Scientist at the Arnold Arboretum at Harvard University and a Lecturer in the Department of Landscape Architecture at the Harvard Graduate School of Design.

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[3] http://www.calacademy.org/academy/building/the_living_roof/

[4] *http://www.calacademy.org/pdfs/living-roof-project-results.pdf.*

[5] "High Maintenance Superstar," Linda McIntyre, Landscape Architecture, August 2009.

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In a recent publication, he advises the managers of public lands in urban areas to abandon their fantasy that native plants are sustainable in urban settings:

> **"The notion that self-sustaining, historically accurate plant associations can be restored to urban areas is an idea with little credibility in light of the facts** that 1) the density of the human populations and the infrastructure necessary to support it have led to the removal of the original vegetation, 2) the abiotic growing conditions of urban areas are completely different from what they were originally; and 3) the large number of non-native species that have naturalized in cities provide intense competition for the native species that grew there prior to urbanization."[6]

Sure, he says, we can grow native plants, but they require at least the same amount of effort as growing any other plant and are therefore just another form of gardening: "Certainly people can plant native species in the city, but few of them will thrive unless they are provided with the appropriate soil and are maintained to the same level as other intentionally cultivated plants."

He concludes that native plant advocates are making a "cultural value judgment:"

> "...people are **looking at the plant through the subjective lens of a cultural value judgment which places a higher value on the nativity of a given plant than on its ecological function**. While this privileging of nativity may be appropriate and necessary for preserving large wilderness areas or rare native species it seems at odds with the realities of urban systems, where social and ecological functionality typically take priority over the restoration of historic ecosystems."

22 (Cont.)

Conclusion

Although the Maintenance Alternative is the least destructive of the alternatives considered by the DEIR, the closure of the Natural Areas Program would be less destructive than the Maintenance Alternative

- **The Natural Areas Program has had 15 years to demonstrate that destroying trees and spraying our parks with herbicides will enable them to recreate sustainable native plant gardens. They have failed.**
- **NAP has little to show for the destruction of hundreds of healthy trees, the use of gallons of toxic herbicides, and the investment of millions of dollars of taxpayers' money.**
- **At a time of extreme economic sacrifice, it is unseemly to suggest that further destruction of trees, poisons spread and money squandered would be worthwhile.**
- **Furthermore, greater sacrifice of money, trees, public safety, and recreational access will not result in sustainable native plant gardens.**

The environmental impacts of the Proposed Project, No Project, and Maximum Restoration Alternatives are significant and the final EIR must judge them as such in these categories: Aesthetics, Wind and Shadow, Recreation, Biological Resources, Hydrology and Water Quality, Hazards and Hazardous Materials, and Air Quality.

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[6] "Spontaneous Urban Vegetation: Reflections of Change in a Globalized World," Nature and Culture. Winter 2010, 209-315.

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Public Comment of San Francisco Forest Alliance
Draft Environmental Impact Report for Natural Resource Areas Management Plan
Part VI: Flawed Public Review and Comment Process

The public review and comment process for the Draft Environmental Impact Report (DEIR) for the Significant Natural Areas Resources Management Plant (SNRAMP) was severely compromised by:

1. **A major mistake in the identification of the "Environmentally Superior Alternative" and the refusal to correct that mistake during the public process**
2. **The last minute rescheduling of the public hearing by the Planning Commission which prevented many concerned citizens from commenting at that hearing**
3. **The refusal to inform the public of the extension of the deadline to October 31, 2011**
4. **The refusal to inform the public of the reopening of the public comment period to June 11, 2012**

These errors and policy decisions will materially prejudice the public comment and therefore expose the DEIR to a legal challenge that will require that the process be repeated.

1. **The refusal to correct the mistake in the DEIR about the "Environmentally Superior Alternative"**

The Summary of the DEIR at the beginning of the document says that the "Maximum Restoration Alternative" is the "Environmentally Superior Alternative" (page 2). This is a mistake. The "Maximum Restoration Alternative" is NOT the "Environmentally Superior Alternative." The "Environmentally Superior Alternative" is the "Maintenance Alternative." The correct statement does not appear in the DEIR until the very end of the document:

23

> "**The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative**. Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance Alternative would be the environmentally superior alternative for two reasons. **While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative.** First, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. **For these reasons, the Maintenance Alternative is the environmentally superior alternative**." (DEIR, page 525-526) (emphasis added)

Attached is the email correspondence with Jessica Range, the staff member in the Planning Department responsible for the environmental review process, about this error. Ms. Range acknowledges the error, confirms that the "Environmentally Superior Alternative" is the "Maintenance Alternative," but refuses to correct the error until the public comment period is over. (See Attachment VI-A)

Few readers will read a document that is over 500 pages long. This mistake will therefore mislead the public into supporting the "Maximum Restoration Alternative" which expands the destructive and restrictive aspects of the Natural Areas Program. Furthermore, and perhaps more importantly, this expansion is NOT legal because it violates the requirements of the California Environmental Quality Act (CEQA), which requires that the "Environmentally Superior Alternative" has the least negative impact on the environment of all proposed alternatives:

1

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"§21002. APPROVAL OF PROJECTS; FEASIBLE ALTERNATIVE OR MITIGATION MEASURES
The Legislature finds and declares that it is the policy of the state that **public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects**, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." CEQA Guidelines, page 2 (emphasis added)

This mistake will profoundly prejudice the public review and comment period. The mistake was exacerbated by the refusal to correct the mistake before the public process was complete.

Although the mistake was verbally acknowledged by the staff of the Planning Department at the beginning of the public hearing on October 6th, it was characterized as a "typographical error." The dictionary definition of "typographical error" is: *"an error in printed or typewritten material resulting from a mistake in typing or from mechanical failure or the like."*[1] It is an insult to the public's intelligence to characterize the substitution of an entire phrase ("Maximum Restoration Alternative") for another ("Maintenance Alternative") as a typographical error. Trivializing this error further misleads the public by failing to acknowledge the substantive differences between these alternatives. The "Maintenance Alternative" is at the opposite extreme from the "Maximum Restoration Alternative" in the range of alternatives.

23 (Cont.)

The "Maximum Restoration Alternative" proposes an expansion of the active restoration efforts of the Natural Areas Program to 100% of all acreage designated as "natural areas." This represents a 73% increase in the acres subjected to tree removals, herbicide applications, recreational access restrictions, and the planting of endangered plants and animals that could potentially require further access restrictions.

In addition to the inaccurate and misleading identification of the environmentally superior alternative, the public notice of the DEIR was inadequate. No mention was made in the original public notice of the locations of the natural areas that would be impacted by the implementation of SNRAMP. No mention was made of the significant impacts on the environment such as the removal of thousands of trees or the loss of recreational access. The public notice did not enable the public to understand that the implementation of SNRAMP would have a significant impact on their parks or their neighborhoods.

2. The public hearing for the DEIR limited public comment

The public review and comment process was further compromised by the last minute decision to hold the public hearing by the Planning Commission earlier than originally announced. The public hearing was originally announced to begin at 1:30 pm on October 6th. Shortly before the hearing, the starting time was moved up to noon.

24

The public was further confused about the timing of their opportunity to speak to the Commission about the DEIR by the placement of the item on the agenda. The DEIR for the SNRAMP was item number 13 on an agenda with 19 items. The public had no way of knowing when the 13th item would be heard. Many naturally assumed that it would not be at the beginning of the hearing. They were wrong.

[1] Webster's Collegiate Dictionary, Random House, 1991

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The public comment period on the DEIR for the SNRAMP was completed by 2 pm. Many people came to the hearing, hoping to speak, only to find that they had missed the opportunity to do so.

A few people arrived in time to speak, but didn't arrive in time to hear the staff of the Planning Department acknowledge the mistake about the "Environmentally Superior Alternative." Therefore, they wasted their public comment by focusing on an error that the Planning Department had made a commitment to correct. No one showed them the courtesy of telling them during the hearing that the error would be corrected.

There are many neighbors of the so-called "natural areas" who have been following this issue for 15 years. They were deeply committed to speaking and they were deprived of the opportunity to do so by the change in the time of the hearing.

3. The public was not adequately informed of the extension of the deadline for comment

The President of the Planning Commission requested at the public hearing on October 6th that the deadline for written public comments be extended to October 31st. No effort was made to inform the public of this extension of the deadline. The Planning Department was asked (in writing) to inform any member of the public that had been informed of the original deadline of October 17th of this extension. That request was refused.

24 (Cont.) Such refusal to provide the public with notification of the extension of the deadline will further compromise the public review process.

4. The public was not adequately informed of the re-opening of the public comment period

The San Francisco Forest Alliance learned (from a neighborhood association) that the public comment on the DEIR was reopened on April 27, 2012 about one week after the notice was mailed. SFFA immediately requested that this public notice be distributed more widely to the neighbors of the natural areas and posted in the natural areas. This request was refused.

According to the mailing list that was used to distribute the notice of the reopening of the public comment period, the same neighborhood associations that were notified of the first public comment period were notified again. The second public comment period was not more widely distributed than the first. The organizations that had an opportunity to comment in October 2011 were essentially given a second opportunity to comment. This is preferential treatment that will further jeopardize the fairness of the public process.

The reopening of the public comment period was another opportunity for the DEIR to be corrected. The incorrect statement on page 2 of the DEIR stating that the Maximum Restoration Alternative is the Environmentally Superior Alternative was not corrected when the public comment period was reopened. That incorrect statement was simply redistributed and reposted to the Planning Department website. Once again, the refusal to correct this statement will prejudice the public comment.

Conclusion

The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

23 (Cont.)
- **Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"**
- **Distribute the corrected DEIR in the same manner as the original was distributed**

3

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24 (Cont.)

- Announce another public hearing along with the corrected DEIR
- Announce another deadline for written public comments that is at least as long as the original period
- Distribute the public notice regarding the new public comment period to the neighbors of the natural areas and post the public notice in the natural areas.

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters.

4

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Attachment VI-A

----- Original Message -----
From: <Jessica.Range@sfgov.org>
To: "Mary McAllister" <marymcallister@comcast.net>
Sent: Thursday, September 22, 2011 10:19 AM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Dear Ms. McAllister,

Please submit your comments to the Planning Department's Environmental Review Officer and we will address your comments in the Comments and Responses document.

Thank you,
Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409
www.sfplanning.org

"Mary McAllister" marymcallister@comcast.net
To Jessica.Range@sfgov.org
09/22/2011 08:18 AM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Ms. Range,

Thank you for your reply. This error will seriously compromise the public comment period because the majority of readers will be unaware of it. The error is made on page 2 of the document and is therefore prominent to readers. Few, if any readers will read the entire document to find the correct statement that does not appear until page 525 of the document, nearly the last page of the document. The error will profoundly prejudice readers to a project alternative that is not preferred by the environmental analysis.

I respectfully request that the document be corrected and recirculated with the correction of the error prominently displayed to readers. When the document has been corrected and recirculated, a new comment period should be announced of equal length to that first announced.

The SNRAMP was approved by the Recreation and Park Department in August 2006. The environmental review has therefore been in process for over five years. It is pointless to jeopardize the environmental review by rushing it after a long delay and a large investment of public funding in its preparation. After five years, another month is an inconsequential further investment in the process.

Without such a remedy, the public comment period will be fatally flawed and will expose the City to legal challenges to both the document and the process used to review and certify it, thereby adding to the expense of the environmental review at a time when public funding is scarce.

Please inform me of the decision to correct this serious error.

Thank you for your cooperation.
Mary McAllister

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----- Original Message -----
From: <Jessica.Range@sfgov.org>
To: "Mary McAllister" <marymcallister@comcast.net>
Cc: <john.bock@tetratech.com>
Sent: Wednesday, September 21, 2011 4:16 PM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Ms. McAllister,

You are correct in that there is a contradictory statement in the EIR. The discussion on page 525 contains the detailed analysis of which alternative is the environmentally superior alternative. The discussion on page 2 is incorrect and will be revised in the Comments and Responses document. I
am copying the EIR consultant on this email to keep Tetra Tech in the loop.

Thank you for pointing this out.
Regards,
Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409
www.sfplanning.org

"Mary McAllister" marymcallister@comcast.net
To "Jessica Range"
09/21/2011 01:26 PM
Jessica.Range@sfgov.org>
Subject Question about the Draft EIR for the Natural Areas Program

Hello Ms Range,
I have a question about the Draft EIR for the Natural Areas Program. There are two statements in the DEIR that appear to be contradictory. Can you reconcile these seemingly contradictory statements? If not, can you refer me to someone who can?

Page 2: *"The Maximum Restoration Alternative is the Environmentally Superior Alternative."*
Page 525: ***"The Maximum Recreation and the Maintenance Alternatives are the environmentally superior alternatives** because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative."* (emphasis added)

Thank you for your help to under[stand] the DEIR.
Mary McAllister

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Public Comment of the San Francisco Forest Alliance
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
Part VII: False assumptions about fire hazards

The Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) makes assumptions regarding fire hazards in San Francisco for which it provides no scientific or experiential evidence:

1. **That native vegetation is less flammable than non-native vegetation**
2. **That thinning trees will reduce fire hazard**

These assumptions are false and we will provide scientific and experiential evidence that they are false. Unless the final EIR can provide scientific evidence and/or actual experience to support these assumptions in the DEIR, these statements regarding fire hazards must be revised to be consistent with available evidence.

1. **Non-native vegetation, including eucalyptus is NOT inherently more flammable than native vegetation**

The DEIR makes the following claims:

> *"...maximize indigenous vegetation for fire control."* (DEIR, page 78)
>
> *"...vegetation with high fire hazard ratings such as broom and eucalyptus."* (DEIR, page 111,396)
>
> *"...replacing highly flammable eucalyptus trees with more fire resistant species."* (DEIR, page 410)

Fear of fire has fueled the heated debate about native plant restorations in the Bay Area. Native plant advocates want the public to believe that the non-native forest is highly flammable, that its destruction and replacement with native landscapes would make us safer. Nothing could be further from the truth. The fact is that the forest—whether it is native or non-native—is generally less flammable than the landscape that is native to California. In the specific case of the Sutro Forest in San Francisco, this general principal is particularly true: the existing forest is significantly less flammable than the landscape that is native to that location.

25

The "Mount Sutro Management Plan" was written by UCSF and is available on their website. It describes "native" Mount Sutro as follows: "In the 1800s, **like most of San Francisco's hills**, Mount Parnassus [now known as Mount Sutro] was covered predominantly with coastal scrub chapparal [sic], consisting of native grasses, wildflowers, and shrubs..." (page 4) (emphasis added)

A Natural History of California[1] tells us that chaparral is not only highly flammable, but is in fact dependent upon fire to sustain itself:

> "Chaparral...is...most likely to burn. The community has evolved over millions of years in association with fires, and in fact **requires fire for proper health and vigor.** Thus it is not surprising that most chaparral plants exhibit adaptations enabling them to recover after a burn...**Not only do chaparral plants feature adaptations that help them recover after a fire, but some characteristics of these plants, such as fibrous or ribbonlike shreds on the bark, seem to encourage fire.** Other species contain volatile oils. In the absence of fire, a mature chaparral stand may become senile, in which case growth and reproduction are reduced. " (emphasis added)

[1] Allan Schoenherr, UC Press, 1992, page 341

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25 (Cont.)

The local chapter (Yerba Buena) of the California Native Plant Society acknowledges the value of fire to restore and maintain native plant populations. A wildfire fire on San Bruno Mountain in native grassland and coastal scrub "consumed about 300 acres" in June 2008, according to an article on their website[2]. The article reports that

> "Fire is an adaptive management tool that, along with natural grazing and browsing, has been missing in promoting healthy grasslands that once covered much of the lower elevations of California...The threats to native grasslands are invasions of non-native grasses and forbs, and succession by native and invasive shrubs. Fortunately the fire scrubbed the canyons pretty clean of just about everything. This gives the land a shot of nutrients to recharge the soil and awaken the seedbanks that have long been lying dormant."

The fire on Angel Island in October 2008, demonstrates that native grassland is more flammable than the non-native forest. According to an "environmental scientist" from the California state park system, 80 acres of eucalyptus were removed from Angel Island 12 years ago in order to restore native grassland. Only 6 acres of eucalyptus remain.[3] The fire that burned 400 acres of the 740 acres of Angel Island in 2008 stopped at the forest edge: "At the edge of the burn belt lie strips of intact tree groves...a torched swath intercut with untouched forest." [4] It was the native grassland and brush that burned on Angel Island and the park rangers were ecstatic about the beneficial effects of the fire: "The shrubs—coyote bush, monkey flower and California sage—should green up with the first storms...The grasses will grow up quickly and will look like a golf course." Ironically, the "environmental scientist" continues to claim that the eucalyptus forest was highly flammable, though it played no part in this fire and there was no history of there ever having been a fire in the eucalyptus during the 100 years prior to their removal.

Unfortunately, the 1991 fire in the Oakland hills has enabled native plant advocates to maintain the fiction that eucalyptus is highly flammable. And in that case there is no doubt that they were involved in that devastating fire. However, there were factors in that fire that are not applicable to San Francisco. The climate in San Francisco is milder than the climate in the East Bay because of the moderating influence of the ocean. It is cooler in the summer and warmer in the winter. There are never prolonged, hard freezes in San Francisco that cause the eucalyptus to die back, creating dead, flammable leaf litter. The 1991 fire in the Oakland hills occurred in the fall, following a hard winter freeze that produced large amounts of flammable leaf litter. In fact, there were several wildfires in the Oakland hills in the 20th century. Each followed a hard winter causing vegetation to die back.

According to the FEMA Technical Report, the 1991 Oakland hills fire started in grass, spread to dry brush, and was then driven by the wind to burn everything in its path. The fire burned native plants and trees as readily as eucalyptus.[5]

When it is hot and dry in the Oakland hills, as it was at the time of the 1991 fire, it is cool and damp in San Francisco. Fogs from the ocean drift over the eucalyptus forests, condensing on the leaves of the trees, falling to the ground, moistening the leaf litter.[6] When the heat from the land meets the cool ocean air, the result is the fog that blankets San Francisco during the summer. These are not the conditions for fire ignition that exist in the Oakland hills.

UCSF applied for a FEMA grant to fund its project to destroy the eucalyptus forest and restore native chaparral, based on its claim that the eucalyptus forest is highly flammable. In its letter of October 1, 2009 (obtained by FOIA request), FEMA raised questions about UCSF's claim of fire hazard. (See Attachment VII-A) FEMA asked UCSF to explain how fire hazard would be reduced by eliminating most of the existing forest, given that **reducing moisture on the forest floor by**

[2] http://www.cnps-yerbabuena.org/experience/other_articles.html#pageTop
[3] "Rains expected to help heal Angel Island," SF Chronicle, October 14, 2008
[4] "After fire, Angel Island is a park of contrasts," SF Chronicle, October 15, 2008
[5] FEMA Technical Report on 1991 Oakland Fire, http://www.usfa.dhs.gov/downloads/pdf/publications/tr-060.pdf
[6] Gilliam, Harold, The Weather of the San Francisco Bay Area, UC Press, 2002

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eliminating the tall trees that condense the fog from the air could increase the potential for ignition. FEMA also asked UCSF to provide "scientific evidence" to support its response to this question. Rather than answer this and other questions, UCSF chose to withdraw its FEMA application.

The reputation of eucalyptus as a fire hazard is also based on the assumption that oils in its leaves are flammable. The National Park Service reports on its website that the leaves are, in fact, fire resistant: "The live foliage [of the eucalyptus] proved fire resistant, so a potentially catastrophic crown fire was avoided." [7]

The predominant species of eucalyptus in California, the blue gum eucalyptus (*E. globulus*) is native to Tasmania. Scientists at the University of Tasmania conducted laboratory experiments on the plants and trees in the Tasmanian forest to determine the relative flammability of their native species. The blue gum eucalyptus (*E. globulus)* is included in this study. The study reports that, "*E. globulus* leaves, both juvenile and adult, presented the greatest resistance [to ignition] of all the eucalypts studied. In this case, leaf thickness was important as well as the presence of a waxy cuticle." Also, in a table entitled "Rate of flame front movement," the comment for *E. globulus* leaves is "resistant to combustion."[8] In other words, **despite the oil content in the leaf, its physical properties protect the leaf from ignition.**

Even if oils were a factor in flammability, there are many native plants that are equally oily, such as the ubiquitous coyote brush and bays. According to Cornell University studies, essential/volatile oils in blue gum eucalyptus leaves range from less than 1.5 to over 3.5%. [9] The leaves of native California bay laurel trees contain 7.5% of essential/volatile oils, **more than twice the amount of oil in leaves of blue gums.**[10]

25 (Cont.)

These principles are best illustrated by a photograph of an actual fire in San Diego in 2003 in which all the homes burned to the ground, but the eucalyptus forest surrounding those homes did not ignite:



Source: New York Times

[7] http://www.firescape.us/coastliveoaks.pdf
[8] Dickinson, K.J.M. and Kirkpatrick, J.B., "The flammability and energy content of some important plant species and fuel components in the forests of southeastern Tasmania," Journal of Biogeography, 1985, 12: 121-134.
[9] http://www.ansci.cornell.edu/plants/medicinal/eucalyp.html
[10] http://www.paleotechnics.com/Articles/Bayarticle.html

3

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Likewise, non-native broom is not more flammable than its native counterpart in the chaparral plant community, coyote brush. The leaves of both shrubs are small, the fine fuel that ignites more readily than larger leaves and branches. But the leaves of native coyote brush contain oil not found in non-native broom. And the branches of broom are green to the ground, unlike the branches of coyote brush which become woody thickets with age. Broom therefore contains more moisture than coyote brush, which reduces its combustibility.

Fire is an essential feature of the landscape that is native to California.[11] Destroying a non-native forest in order to create a native landscape of grassland and scrub will not reduce fire hazard.

2. Thinning the non-native forest will NOT reduce fire hazard

The DEIR makes the following claim:

> *"...timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread."* (DEIR, page 396)

Most fires in California are hot, wind-driven fires in which everything burns. The composition of the fuel load in a wind-driven fire is irrelevant. Everything in its path will burn.[12] The 1991 fire in the Oakland hills was an example of such a fire. According to the FEMA technical report on that fire, both native and non-native vegetation, as well as about 3,800 homes burned in that fire.

25 (Cont.) Windbreaks are therefore one of the few defenses in a wind-driven fire. For that reason, in its letter of October 1, 2009 (see attachment VII-A), FEMA asked UCSF to explain how the destruction of the tall trees on Mount Sutro would reduce fire hazard. FEMA noted that **eliminating the windbreak that the tall trees provide has the potential to enable a wind-driven fire to sweep through the forest unobstructed**. FEMA also asked UCSF to provide "scientific evidence" to support its answer to this question. We repeat, UCSF chose to withdraw its application for FEMA funding of its project rather than answer this question.

In 1987, 20,000 hectares burned in a wildfire in the Shasta-Trinity National Forest. The effects of that fire on the forest were studied by Weatherspoon and Skinner of the USDA Forest Service. They reported the results of their study in Forest Science.[13] **They found the least amount of fire damage in those sections of the forest that had not been thinned or clear-cut.** In other words, the more trees there were, the less damage was done by the fire. They explained that finding:

> "The occurrence of lower Fire Damage Classes in uncut stands [of trees] probably is attributable largely to the absence of activity fuels [e.g., grasses] and to the relatively closed canopy, which reduces insolation [exposure to the sun], wind movement near the surface, and associated drying of fuels. Conversely, **opening the stand by partial cutting adds fuels and creates a microclimate conducive to increased fire intensities."** (emphasis added)

In other words the denser the forest,

- The less wind on the forest floor, thereby slowing the spread of fire
- The more shade on the forest floor.
    - The less flammable vegetation on the forest floor

[11] Sugihara, Neil, Fire in California's Ecosystems, UC Press, 2006

[12] Keeley, J, and Fotheringham, "Impact of past, present, and future fire regimes on North American Mediterranean shrublands, pages 218-262 in Veblen, et al., editors, Fire and climate change in temperate ecosystems of the Western Americas, 2003.

[13] Weatherspoon, C.P. and Skinner, C.N., "An Assessment of Factors Associated with Damage to Tree Crowns from the 1987 Wildfires in Northern California," Forest Science, Vol. 41, No 3, pages 430-453

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- The more moist the forest floor

All of these factors combine to reduce fire hazard in dense forest. Likewise, in a study of fire behavior in eucalyptus forest in Australia, based on a series of experimental controlled burns, wind speed and fire spread were significantly reduced on the forest floor.[14]

Furthermore, a recently published study corroborates that thinning the forest does not significantly reduce fire risk, nor does it increase carbon storage in the forest[15]

> "It has been suggested that thinning trees and other fuel-reduction practices aimed at reducing the probability of high-severity forest fire are consistent with efforts to keep carbon (C) sequestered in terrestrial pools, and that such practices should therefore be rewarded rather than penalized in C-accounting schemes. By evaluating how fuel treatments, wildfire, and their interactions affect forest C stocks across a wide range of spatial and temporal scales, we conclude that this is extremely unlikely. **Our review reveals high C losses associated with fuel treatment, only modest differences in the combustive losses associated with high-severity fire and the low-severity fire that fuel treatment is meant to encourage, and a low likelihood that treated forests will be exposed to fire.** Although fuel-reduction treatments may be necessary to restore historical functionality to fire-suppressed ecosystems, we found little credible evidence that such efforts have the added benefit of increasing terrestrial C stocks." (emphasis added)

25 (Cont.)

Thinning the forest will not reduce fire hazard. In fact, it will increase fire hazard.

The DEIR also says that fire hazard will be reduced by removing dead trees:

> *"Removed trees would include those that are diseased and dying, thereby reducing easily combustible fuel loads."* (DEIR, page 396)

We do not dispute that dead trees are more flammable than living trees because they contain less moisture, one of the key variables in combustibility. However, we have established in another comment (Part I) that the claim that only dead and dying trees will be removed is contradicted by the SNRAMP which the DEIR is supposedly evaluating. There is no evidence that the trees that will be removed are dead or dying. Furthermore, if the predictions of experts on Sudden Oak Death prove to be true, 90% of the native oak woodland which SNRAMP proposes to expand will be dead and highly flammable within 25 years.[16]

Conclusion

Unless scientific evidence can be provided to support statements in the DEIR regarding fire hazard, the final EIR must be corrected to reflect the scientific and experiential evidence that refutes it:

- **Native vegetation is not inherently less flammable than non-native vegetation, including eucalyptus**
- **Thinning the forest will not reduce fire hazards.**

---

[14] Gould, J.S., et. al., Project Vesta: Fire in Dry Eucalyptus Forests, Commonwealth Scientific and Industrial Research Organization and Department of Environment and Conservation, Western Australia, November 2007

[15] John L. Campbell, Mark E. Harmon, Stephen R. Mitchell, "Can fuel-reduction treatments really increase forest carbon storage I the western US by reducing future fire emissions,? Frontiers in Ecology and Environment, 2011, 10,1890/110057.

[16] Fimrite, Peter, "Sudden oak death cases jump, spread in the Bay Areas," San Francisco Chronicle, October 2, 2011

SFFA-3

Linda

Attachment VII-A

Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

HM PA
F ST DR: PDM07
Project # 29
OES #: 000-92294
A E G H
M P S
Doc Date: 10-1-09

FEMA

October 1, 2009

Mr. Frank McCarton
Governor's Authorized Representative
California Emergency Management Agency
3650 Schriever Ave.
Mather, CA 95655

Re: Response to Request for Information PDM09-PJ14 Ref N09-1568
PDMC-PJ-09-CA-2009-001, Mt Sutro Edgewood Avenue
PDMC-PJ-09-CA-2007-010, Mt Sutro South Ridge PDM09-PJ29 Ref N09-1569
Vegetation Management (Wildfire Risk Reduction) Projects
Subgrantee: University of California, San Francisco

Dear Mr. McCarton:

On July 21, 2009, the Department of Homeland Security's Federal Emergency Management Agency transmitted a Request for Information to the California Emergency Management Agency (Cal EMA) regarding the subject proposals. Your office forwarded this request to the University of California at San Francisco (UCSF), and UCSF provided a response letter, dated August 10, 2009, which was subsequently forwarded to, and received by, FEMA on September 3, 2009. FEMA has reviewed the letter prepared by UCSF and is providing a response and subsequent requests. This letter generally addresses the purpose and need for action, the effectiveness of the proposed projects, and appropriate alternatives to the proposed projects, which are required for FEMA's compliance with the National Environmental Policy Act (NEPA). Please note, however, that FEMA may later require additional information to complete its environmental and historic compliance process.

UCSF must clarify and provide supporting documentation for the statements and claims made in its August 10, 2009, response letter in order to strengthen its arguments for the need as well as the efficacy of the proposed projects. Specifically, UCSF will need to provide the following:

- An accurate, informed, and robust argument regarding the purpose and need for the projects.
- A complete profile of the wildfire hazard in the Sutro Forest.
- A clear analysis of how the built environment is vulnerable to a wildfire hazard in the Sutro Forest.
- A clear description of the anticipated effectiveness of the proposed projects in mitigating the wildfire hazard to the identified vulnerable built environment, and

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- A clear description of potential alternative actions that could also mitigate the wildfire hazard to the identified vulnerable built environment.

UCSF needs to provide information in a clear and concise manner, including appropriate citations. UCSF needs to supply applicable and appropriate quantified data to support its claims. All analyses and claims made by UCSF need to be reproducible and verifiable by FEMA (or the general public) should FEMA determine it necessary to conduct its own independent analyses. Reports described by UCSF that were not a part of the original grant applications must be provided.

1. Clarify the Wildfire Hazard

In its response to provide a clarification of the wildfire hazard, UCSF inaccurately interprets a map, provides inadequate details regarding the history of wildfires in the Sutro Forest, and provides a simplistic and ineffective comparison of the wildfire hazard in the Sutro Forest to the hazard in other areas that have burned in the San Francisco Bay area. UCSF states that "the San Francisco Department of Emergency Management has adopted a CDF Wildfire Hazard Map as part of its Hazard Mitigation Plan, which confirms that the proposed project sites are in fact very high wildfire hazard areas." This conclusion represents an inaccurate interpretation of the referenced map. Not only does the text of the Hazard Mitigation Plan that references this map state that the map illustrates only the extent and not the probability of a wildfire, the text on the actual map specifies that fuel ranks classify areas based not on hazard potential but on existing vegetation and anticipated fire behavior in that vegetation type. As explained by Dave Sapsis (CDF Fire and Resource Assessment Program (FRAP) Wildland Fire Scientist), "Fuel rank is only one of the two components used to get to future threat. The other is rotation rank which is an estimator for future burn probability." The map provided by UCSF illustrates expected wildfire behavior, but omits any estimate of fire likelihood, and because fuel ranks do not correlate directly to the full profile of a wildfire hazard, the map cannot be used to identify the hazard. A complete profile of the wildfire hazard in the Sutro Forest will require the input of information on the probability for an area to experience appropriate conditions to promote a wildfire (ignition and weather/climate). The FRAP "Draft Fire Hazard Severity Zones in LRA" (FHSZ) map for the County of San Francisco more aptly characterizes the actual wildfire hazard in the County and City of San Francisco. As described by Dave Sapsis:

> FHSZ differs from fire threat in the way fire probabilities were used, the way fuel systems were modeled for potential not current conditions, and how fuel systems influence the areas around them. Fire threat is a measure of in situ hazard, and doesn't include the influence of adjacent areas (either via flame spread or firebrands). This makes sense since fire threat was designed to characterize wildland fuel hazards, and FHSZ was designed to include those areas (as potential) and adjacent urbanized WUI [Wildland Urban Interface] areas as well.

The 2007 FHSZ map shows the Sutro Forest to have a "Moderate" wildfire hazard. In the 2007 FHSZ map, "Moderate" is the lowest of the three fire hazard severity zones. The 2007 FHSZ maps can be viewed at this website,
http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_sanfrancisco.php.

SFFA-3

If UCSF disputes the "Moderate" fire hazard severity zone given by FRAP for the Sutro Forest, UCSF may provide its own site-specific analysis of the wildfire hazard for the Sutro Forest. Specifically, UCSF will need to identify the ignition source, measure the fuel load, and analyze the capacity for the fuel to ignite across the Sutro Forest given existing fuel moisture and weather conditions. Additionally, if UCSF prefers to match the modeling integrity of the FRAP mapping effort, it must model potential fuels over a 30 to 50 year time horizon.

UCSF briefly described previous fires that occurred in the Sutro Forest. An examination of past hazard events is an important step in profiling and characterizing a potential hazard condition, and therefore UCSF must provide adequate detail about these previous events for this historic information to be relevant to current conditions. The source material of previously documented fires must be provided, and ideally, this would include details about where the fires occurred, the fire ignition sources, the time of year of each fire, and a list of structures that were damaged. Additionally, UCSF must provide an estimate of the successional stage of the Sutro Forest during each fire event and an analysis of the relevance of these previous fires to current forest conditions.

UCSF also mentioned reports of a fire that occurred approximately 20 years ago and two additional fires that occurred in the past decade. These fire events must be described in more detail to demonstrate that the nature of the fires (ignition source, cause, extent, season of fire) is relevant to the current condition of the Sutro Forest.

In its response letter, UCSF relates its wildfire hazard to previous wildfires that occurred in the San Francisco Bay area, specifically one that occurred "in Marin County along the coast" and a fire that occurred on Angel Island in 2008. For the wildfire hazard conditions at Sutro Forest to be compared to these two fires, UCSF must demonstrate the similarities between Angel Island, the referenced "Marin County" fire, and the Sutro Forest in terms of the hazard, i.e. ignition threats, weather conditions, forest type, etc.

2. Clarify the Risk to the Built Environment

FEMA understands that the built environment adjacent to the Sutro Forest is extensive and dense and includes several medical facilities, residential housing, transit infrastructure, and a large teaching college and research facility. However, UCSF must provide a more clear description and complete analysis of the vulnerability of the built environment to a wildfire in the Sutro Forest.

To improve its vulnerability analysis, UCSF must inventory the built environment, describe the methodology of its vulnerability analysis, describe data limitations, provide an exposure analysis to the hazard, summarize the impacts of the hazard, and describe likely land use and development trends that may affect the vulnerable built environment in the future. The analysis must address the vulnerable general building stock, critical and non-critical facilities, major utilities, and transportation infrastructure. This analysis must include vulnerability to a wildfire anywhere in the Sutro Forest, not just at the proposed project sites. It would be useful to describe the built environment in three geographic locations throughout the analysis: 1.) within the Sutro Forest, 2.) immediately adjacent to the forest, and 3.) in the vicinity of the forest.

SFFA-3

UCSF's response letter describes replacement cost of structures, which implies worst-case scenario physical damage. Considering some structures may be more resistant to fire than others, it is likely that some structures affected by a wildfire in the Sutro Forest would not require complete replacement. UCSF must provide a more moderate and reasonable estimate of loss to building stock that considers the fire resistance of structures.

The vulnerability analysis would be more realistic if it addressed firefighting capabilities to battle a wildfire in the Sutro Forest. Firefighting capabilities may also affect the vulnerability of the built environment (for instance, structures within Sutro Forest) to a wildfire in the Sutro Forest.

3. Clarify How the Proposed Mitigation will Reduce the Wildfire Risk

Assuming that UCSF has been able to establish a clear need for the proposed projects, the efficacy of the mitigation strategy it proposes must be clarified. UCSF must provide a clear and concise analysis and description of how the proposed projects would reduce the wildfire hazard in the Sutro Forest to the identified vulnerable built environment. This analysis must account for the fact that large parts of the Sutro Forest would be unchanged after the implementation of the proposed projects.

In the July 21, 2009, letter, FEMA requested that UCSF describe the specific hazard conditions after completion of the proposed work and the resultant hazard over the life of the proposed projects. FEMA has not been provided information from UCSF that clearly addresses this request. To repeat FEMA's initial request, UCSF must provide information of the probable change in wildfire hazard throughout Sutro Forest after the proposed projects have been implemented and the probable change in wildfire hazard throughout Sutro Forest throughout the useful life of the proposed projects. This analysis must be based on accepted scientific methodology and must be presented to FEMA in a manner that can be verified by FEMA (or the interested public). This analysis must incorporate the 5-year maintenance schedule described by UCSF in its grant applications and must also provide details with regard to the specific built environment that will benefit from the proposed projects.

In its August 10, 2009, response letter, UCSF alludes to the notion that the proposed projects would improve wildfire firefighting capabilities within the proposed project areas. To improve the credibility of this argument, UCSF must incorporate the existing firefighting capabilities to fight a wildfire in the Sutro Forest and to then provide a direct comparison of how the proposed projects will result in improvements in these capabilities. Providing copies of letters from fire departments to this effect may be useful in strengthening this particular argument.

The August 10, 2009, response letter, states that "the Edgewood Avenue Area Project will be informed by the lessons learned in the South Ridge Area Project". If this is to be the case, UCSF must clarify if it may request a change in the Scope of Work contained in its Edgewood Avenue grant application as a result of the "lessons learned" from implementing the proposed South Ridge project.

SFFA-3

FEMA has received a number of unsolicited public comments concerning the effects of tree removal on fuel moisture levels in the Sutro Forest. Commenters argue that the proposed projects would increase wildfire hazard by removing some of the material that collects fog drip and keeps the forest moist and resistant to ignition and fire, thus allowing the forest to dry out more easily and increase the relative hazard for ignition. Can UCSF specifically address this comment and describe how overall forest moisture content will change after implementation of the proposed projects? Please provide scientific evidence to support any claims.

Additionally, several of these unsolicited public comments have stated that the proposed projects could result in changed wind patterns on Mount Sutro which could also increase the wildfire hazard in the forest. New wind patterns could reduce biomass moisture as well as reduce the effective windbreak created by the current forest. These commenters argue that the effective windbreak created by the existing forest limits the potential for wildfire spread in the forest and the immediately surrounding area. As UCSF has stated, winds are a contributing factor in wildfires. Provide a citable and logical defense regarding how the proposed projects, and the resulting changes in wind patterns, would not result in an increase in the wildfire hazard in the Sutro Forest.

4. Describe Alternatives to the Proposed Work

UCSF has failed to identify alternatives to the proposed projects that meet the purpose and need of wildfire mitigation. Assuming that UCSF has been able to establish a clear need for wildfire mitigation activities, UCSF must conduct a more thorough analysis to identify alternatives to the proposed projects that could mitigate wildfire hazard in the Sutro Forest to the vulnerable built environment. These alternatives must be technically, economically, and legally practical and feasible and can include activities not eligible for FEMA grant funding. As described in FEMA's Wildfire Mitigation Policy, MRR-2-08-1, FEMA wildfire mitigation grants are available for defensible space, structural retrofit, and vegetation reduction projects. It would seem reasonable that alternatives to the proposed projects could include defensible space or retrofit projects. UCSF has not indicated that these types of alternate projects have been analyzed. Please note that FEMA funding is available for ignition-resistant construction projects only after defensible space activities are complete.

FEMA requests a response within 31 days of the date of this letter, or by November 1, 2009, including a schedule of when the requested information will be provided. Should you have any questions or need further assistance please do not hesitate to contact me at (510) 627-7027 or fema-rix-ehp-documents@dhs.gov.

Sincerely,

Alessandro Amaglio
Environmental Officer

SFPGA-1

From:	Richard Harris
Reply To:	richard@erskinetulley.com
To:	linda.avery@sfgov.org
Cc:	bill.wycko@sfgov.org; Jessica.Range@sfgov.org; 'Sarah B. Jones'; Dawn.Kamalanathan@sfgov.org; 'Philip Ginsburg'; margaret.mcarthur@sfgov.org; karen.mauney-brodek@sfgov.org; 'Bo Links'
Subject:	Historic Preservation Commission; Sept. 21 meeting; Sharp Park Golf Course is Historical Resource
Date:	09/20/2011 03:53 PM
Attachments:	00002519.PDF

San Francisco Historic Preservation Commission
Attn: Linda Avery, Commission Secretary

Dear Ms. Avery,
The San Francisco Public Golf Alliance will attend Wednesday afternoon's public meeting of the Historic Preservation Commission, and will present our initial public comment on the Natural Areas Management Plan Draft EIR, as it relates to the Sharp Park Golf Course, a designated historical resource of the City and County of San Francisco. Enclosed is a copy of the letter we will submit; the attached copy does not include the exhibits, which are extensive, and which we will submit in hard copy to the Commission. This is an initial comment, focusing on the historical resource itself; we will submit additional comments at a later time on the issue of the Management Plan's significant impacts upon the historical resource at Sharp Park Golf Course.
Best Regards.
-- Richard Harris
San Francisco Public Golf Alliance
415-290-5718

SFPGA-1

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

235 Montgomery St., #400, San Francisco, CA. 94104 * 415-392-5431, ext. 203 * info@sfpublicgolf.com

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September 20, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural Resources, etc. DEIR No. 2005.1912E

Dear Planning Department and Mr. Wycko,

01 The San Francisco Public Golf Alliance supports the determination[1] of the San Francisco Planning Department that Sharp Park Golf Course (hereinafter "Sharp Park," or "golf course"), designed by Dr. Alister MacKenzie and opened for play in 1932, is an "historical resource" under the California Environmental Quality Act.[2]

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[1] Historic Resource Evaluation Response (true copy attached hereto as Exhibit 1), signed February 15, 2011 by Senior Preservation Planner Tina Tam, at page 2, section 3. It is incorporated into Appendix C (at pages 2-5) to the Draft Environmental Impact Report on the Significant Natural Resource Areas Management Plan, dated August, 2011 (the "SNRAMP DEIR"), together with the supporting Historical Resources Evaluation Report (at Appendix C, pages 10-37) and Department of Public Resources form 523A (at Appendix C, pages 39-56): http://sfmea.sfplanning.org/2005.1912E_DEIR4.pdf. The determination is discussed in the SNRAMP DEIR, inter alia, at pages 206-209: http://sfmea.sfplanning.org/2005.1912E_DEIR.pdf

[2] The instant letter is limited to issue of the Planning Department's "historical resource" determination. The Public Golf Alliance will address other issues raised by the SNRAMP DEIR--including the issues of significant impacts to the Sharp Park Golf Course, and mitigation for those impacts--in separate letters.

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01 (Cont.)

I. SHARP PARK GOLF COURSE MEETS CEQA CRITERIA FOR "HISTORICAL RESOURCE" DESIGNATION

Sharp Park Golf Course is a well-known Pacifica historical site. Both the golf course and its clubhouse are separately identified as "historical sites" by the City of Pacifica[3] General Plan, adopted in 1980.[4],[5] The Pacifica Historical Society, official historian of the City of Pacifica, by unanimous resolution dated June 14, 2011, designated Sharp Park Golf Course as an "historical and cultural resource".[6]

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[3] Sharp Park is located in the City of Pacifica, but owned by the City and County of San Francisco; other San Francisco extraterritorial properties in San Mateo County include the San Francisco Airport, Crystal Springs reservoirs and watershed lands, and the San Francisco County Jail in San Bruno.

[4] The "historic sites" designation is found in the Historic Preservation Element and Historic Sites Map of the Pacifica General Plan, at pages 95 and 95a:
http://www.cityofpacifica.org/civica/filebank/blobdload.asp?BlobID=3443
(True copies of relevant excerpts from the General Plan, including the Historic Preservation Element and Historic Sites Map, are attached hereto as Exhibit 2.)

[5] The San Francisco Planning Department's Historic Resource Evaluation Response (see footnote 1 above, and Exhibit 1 hereto) states, at page 1, that the golf course was in 2009 designated by the City of Pacifica as an historic landmark. While it is true that the issue of landmarking the golf course was considered at the Pacifica Planning Commission's July 20 and September 8, 2009 public meetings, the Commission indefinitely tabled the matter after several commissioners said they wanted to wait until the property owner—the City and County of San Francisco—conducted its own historical study. Pacifica Planning Commission, Agenda and Minutes of September 8, 2009 public meeting, at pages 3-8. (True copy attached hereto as Exhibit 3.)

[6] Resolution of Pacifica Historical Society Recognizing Sharp Park Golf Course As An Historical Resource, June 14, 2011, together with letter of the same date from Pacifica Historical Society to Pacifica Mayor Mary Ann Nihart, San Francisco Mayor Ed Lee, and San Mateo County Board of Supervisors President Carole Groom:
http://www.sfpublicgolf.com/LiteratureRetrieve.aspx?ID=88128
(True copies are attached hereto as Exhibit 4.)

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01 (Cont.)

The golf course is also nationally recognized as one of America's "culturally significant landscapes at risk for alternation or destruction," by the Cultural Landscape Foundation of Washington, D.C.[7]

The criteria for a property to be designated as an "historical resource" under the California Environmental Quality Act, as set forth in 14 California Code of Regulations, Section 15064.5(a)(3)[8], include the following:

"(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage" and

"(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values."

1. Sharp Park is the work of Master Architect Dr. Alister MacKenzie

Sharp Park meets the criteria as "historical resource" under CCR 15064.5(a)(3)(C), because it was designed by Dr. Alister MacKenzie[9], the best-known, most influential, and arguably the greatest golf architect in history.

His other courses include Augusta National, home of the annual Masters Tournament, and the Cypress Point

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[7] Cultural Landscape Foundation, "*Landslide*," July 10, 2009, "Alister MacKenzie's Sharp Park," (copy attached hereto as Exhibit 5.A): http://tclf.org/landslides/sharp-park-golf-course-threatened-closure. The Cultural Landscape Foundation is a non-profit preservationist organization, whose "Landslide" project identifies nationally-significant landscapes at risk for destruction. See: http://tclf.org/about; http://tclf.org/landslide/about; http://tclf.org/landslide/risk-landscapes (true copies of the relevant excerpts from the Foundation's website are attached hereto as Exhibit 5.B, 5.C., and 5.D, respectively.)

[8] 14 California Code of Regulations, Section 15064.5: http://www.sfpublicgolf.com/LiteratureRetrieve.aspx?ID=93349 (A true copy of Section 15064.5 is attached hereto as Exhibit 6.)

[9] Resolution to employ Dr. Alister MacKenzie, San Francisco Board of Supervisors Resolution No. 33588, December 20, 1930 (copy attached hereto as Exhibit 7).

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01 (Cont.)

Club on the Monterey Peninsula; these two courses are currently ranked as No. 1 and No. 4 on Golf Digest Magazine's list of "America's Greatest Courses."[10] A third MacKenzie course—Royal Melbourne in Australia--is regularly mentioned with Augusta and Cypress among the 10 "greatest" golf courses in the world. Dr. MacKenzie was the first architect inducted into the World Golf Hall of Fame[11], and is recognized by golf architecture authorities as the historic architect who had the greatest influence on modern golf course design.[12]

Dr. MacKenzie proclaimed his design principles in two books: "Golf Architecture" (1920), and "The Spirit of St. Andrews" (published posthumously, 1995). In a nutshell, Dr. MacKenzie prescribed that golf should be both challenging and enjoyable by players of all abilities, and that the golf course itself should be beautiful. "... while always keeping uppermost the provision of a splendid test of golf, I have striven to achieve beauty," Dr. MacKenzie said. "This excellence of design is ... constantly exercising a subconscious influence upon [the golfer] and in course of time he grows to admire such a course as all works of beauty must be eventually felt and admired."[13]

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[10] Golf Digest Magazine, "America's 100 Greatest Golf Courses, 2009-2010" (copy attached hereto as Exhibit 8): http://www.golfdigest.com/golf-courses/golf-courses/2009-05/100_greatestgolfcourses

[11] World Golf Hall of Fame, MacKenzie biography: http://www.worldgolfhallcffame.org/hof/member.php?member=1078 (copy attached hereto as Exhibit 9); more details of Dr. MacKenzie's architectural career can be found at Links & Harris, "MacKenzie's Sharp Park Under Siege," *Golf Club Atlas*, September, 2009: http://golfclubatlas.com/in-my-opinion/sharp-park (copy attached hereto as Exhibit 10). Co-author Links is the volunteer golf historian for the City and County of San Francisco, and author of two golf historical novels: *Follow the Wind* (Simon & Schuster, 1995), and *Riverbank Tweed and Roadmap Jenkins, Tales from the Caddy Yard* (Simon & Schuster, 2001).

[12] In their definitive encyclopedia of golf architecture, *The Architects of Golf*, (Harper Collins, 1993), authors Geoffrey S. Cornish and Ronald E. Whitten say (at page 332): "Of all the course architects of the Golden Age of Golf Design, MacKenzie probably exerted the greatest influence on contemporary design." (A copy is attached hereto as Exhibit 11.)

[13] Alister MacKenzie, "*The Spirit of St. Andrews*," Sleeping Bear Press, 1995 (copies of cited pages are attached as Exhibit Ex. 12), p. 51.

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Dr. MacKenzie explained that he left the practice of medicine for golf architecture, out of a "... firm conviction of the extraordinary influence on health of pleasurable excitement, especially when combined with fresh air and exercise."[14]

2. Sharp Park is a Rare Public Seaside Links.

Sharp Park meets a second "historical resource" criterion listed in CCR 15064.5(a)(3)(C): it "embodies the distinctive characteristics of a type.. of construction". Sharp Park is a true seaside links, a rare and historically significant type of golf course.

Among the scores of beloved golf courses built by Dr. MacKenzie around the world, Sharp Park is one of his very few public courses. With the Eden Course at St. Andrews, Scotland (which he co-designed with his London partner, H.S. Colt), Sharp Park shares the distinction as Dr. MacKenzie's only public seaside links in the world.[15]

01 (Cont.)

Although a rarity in America, the seaside links type of course has particular significance to the sport of golf, because the sport originated on seaside links courses in Scotland. In recognition of the historic significance of seaside links, the British Open Championship--one of golf's four annual major championships--is played exclusively on links courses.

Dr. MacKenzie was an expert on seaside links, which he considered "... the type of land easily the most suitable for the game."[16] Before immigrating to Northern California in the mid-1920's, he was consulting architect at St. Andrews, Scotland, where he was the first to map the famous mounds, swales, pits, and bunkers of the Old Course, the birthplace of golf.

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[14] Id., at 246

[15] The "seaside links"--playing fields built in the sand by the seashore--is the oldest type of golf course. St. Andrews, North Berwick, and the other Scottish public courses where the sport originated, are seaside links. In America, this type of course is rare; and open-to-the-public seaside links are even rarer. In California, such public courses exist only on the Monterey Peninsula (Spanish Bay and Pacific Grove), and at Sharp Park.

[16] Alister MacKenzie, "*The Spirit of St. Andrews*," supra, at p. 1.

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01 (Cont.)

At Sharp Park, Dr. MacKenzie and his construction team[17] intentionally created a Scottish-style seaside links on what had originally been an artichoke farm surrounding the brackish Laguna Salada (Spanish for "salty lake") at Salada Beach[18], in what is today the Sharp Park District of Pacifica.[19],[20] Construction superintendant Chandler Egan marveled at the site's "remarkable seascape," prompting news reporters to hail Sharp Park as "a seaside municipal course of outstanding character akin to those of the English and Scottish coasts,"[21] and "a second St. Andrews and the finest municipal golf course in America."[22]

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[17] Prominent architects H. Chandler Egan, Robert Hunter, and John Fleming—all of whom worked with Dr. MacKenzie at Cypress Point and in renovating Pebble Beach for the 1929 U.S. Amateur--were MacKenzie's assistants at Sharp Park. They were also assisted by San Francisco Recreation and Park Director John McLaren, the father of Golden Gate Park, who planted the Monterey Cypress which define many of Sharp Park's fairways. (See: Alister MacKenzie, "*The Spirit of St. Andrews*," supra [Ex. 12] at p. 172.) Sharp Park's clubhouse was designed by Angus McSweeney, an architect in the Willis Polk office. (See, San Francisco Historical Society, Encyclopedia of San Francisco: http://www.sfhistoryencyclopedia.com/articles/p/polkWillis.html, copy attached hereto as Exhibit 13.)

[18] A story in the February 23, 1930 San Francisco Chronicle reports: "More than half of the holes border on Lake Salada, which John McLaren, superintendent of parks, transformed from a salt water marsh into a picturesque fresh-water pool." (True copy attached as Exhibit 14.)

[19] Dr. MacKenzie's original 1930 routing plan (http://sfpublicgolf.heysmartguy.com/LiteratureRetrieve.aspx?ID=75636) and the 1932 as-built map of the golf course (http://sfpublicgolf.heysmartguy.com/LiteratureRetrieve.aspx?ID=75637) were published in the San Francisco newspapers at the time; true copies are attached hereto as Exhibits 14 and 15.)

[20] See historic photographs of the artichoke farm before the golf course, the clubhouse in the early 1930's, and original Hole #4 (with lady golfer), true copies of which are attached hereto Exhibits 16.A, 16.B, and 16.C, respectively.)

[21] "Appropriation for Third S.F. Golf Course Receives Okeh," *San Francisco Examiner*, February 22, 1930, at p. 15. (True copy attached hereto as Exhibit 17.)

[22] "H. Chandler Egan Praises Possibilities of Sharp Park Golf Links," *San Francisco Chronicle*, February 26, 1930, at p. H-3. (True copy attached hereto as Exhibit 18.)

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01 (Cont.)

3. Sharp Park's Place in California And San Francisco History

Sharp Park also meets the "historical resource" criterion set forth in CCR Section 15064.5(1)(3)(A): it "is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage."

Sharp Park has long been known as "the poor man's Pebble Beach," and its opening in 1932 was part of a broad movement to extend the sport of golf to the American public. "I hope to live to see the day when there are the crowds of municipal courses, as in Scotland, cropping up all over the world," Dr. MacKenzie said.[23] Sharp Park's tradition of low greens fees has made it a favorite over the years of low-income golfers, racial minorities, juniors, and seniors. In 1955, Sharp Park hosted the initial championship tournament of the Western States Golf Association, one of America's oldest African-American golf associations.[24]

Sharp Park also reflects San Francisco's tradition of great public architecture. From City Hall and the Beaux Arts palaces at Civic Center to the Golden Gate Bridge, Bay Bridge, and Golden Gate Park, San Francisco proclaimed itself a world cultural and artistic center through its public architecture. The hiring of the world's preeminent golf architect to build a public seaside links golf course in the spirit of St. Andrews is in keeping with this aspect of San Francisco's personality.

4. Sharp Park Has Retained Its Integrity.

Seventy-nine years after its opening in 1932, 12 of Sharp Park's current 18 holes are MacKenzie originals - being holes numbers 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17, and 18; two other holes (numbers 12 and 16) lie in original

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[23] Alister MacKenzie, "*The Spirit of St. Andrews*," supra (fn. 13), at p. 250. (True copy attached as Exhibit 12.)

[24] Western States Golf Association website, "Legacy": http://www.westernstatesgolf.org/our-legacy/ (True copy attached as Exhibit 19.)

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01 (Cont.)

fairways, but do not have the original greens.[25] Four new holes were built east of the highway in 1941, after Dr. MacKenzie's death, by his assistant John Fleming, when the original strand holes were replaced by a seawall.

In the years since its opening in 1932, trees have grown and come down, some sand traps have grassed-in and others have built-up, mowing patterns on some greens have changed, and the old course has suffered other insults of the aging process. Notwithstanding, Sharp Park retains Dr. MacKenzie's routing, character, and artistry.[26] His trademark heaving, tumbling greens can still be seen on current holes 1, 2, 3, 9, 10, 11, 13, 14, 15, 17, and 18. The rolling fairways and mounds on current holes 1, 3, 10, 14, 16, and 17 mimic the famous fairway bumps and hollows at the Old Course at St. Andrews, where MacKenzie once served as consulting architect. At current Holes 1 and 14, there are classic examples of MacKenzie "deception bunkers," placed some distance in front of the greens in such a way as to camouflage the actual distance between bunker and the green.

Overarching all is the great beauty of the golf course as a work of art. MacKenzie's ability to create beautiful natural-appearing landscapes that simultaneously function as playing fields for the full range of golfing abilities was his true genius. This beauty is a constant

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[25] The survival of the original golf holes can be plainly seen by a comparison of: (1) MacKenzie's original 1930 routing plan and the 1932 as-built map (see fn. 19, above, and Exhibits 14 and 15 hereto); (2) Opening Day, 1932 hole descriptions by MacKenzie's assistant Jack Fleming, as reported in a March, 1932 account by San Francisco Call-Bulletin reporter Frank P. Noon (true copy attached as Exhibit 20); (4) a 1941 aerial photo of the golf course, http://sfpublicgolf.com/LiteratureRetrieve.aspx?ID=40208 (true copy attached as Exhibit 21); and (5) a 2008 aerial photo of the golf course, http://sfpublicgolf.com/LiteratureRetrieve.aspx?ID=40209 (true copy attached as Exhibit 22).

[26] Geoff Shackelford, "Sharply Divided," *Golf World*, July 20, 2009: http://www.golfdigest.com/golf-tours-news/2009-07/golf_sharp_park_shackelford_0720 (copy attached hereto as Exhibit 23.) For a detailed description, with photographs, of the MacKenzie design features seen today in the surviving original holes, see: Golf Club Atlas, "MacKenzie's Sharp Park Under Siege," supra (fn.11) (true copy attached as Exhibit 10).

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01 (Cont.)

at Sharp Park, where Dr. MacKenzie's design principles and hallmarks remain visible to this day.[27],[28]

As a result, Sharp Park is a living public museum of golf architecture.[29] In the words of San Francisco favorite son and 1964 U.S. Open golf champion Ken Venturi, this golf course is "Dr. MacKenzie's great gift to the American public golfer."[30]

Today, the course is at the same time beautiful, challenging, and playable for players of all abilities. Golf architecture historian Geoff Shackelford sums up Dr. MacKenzie's design at Sharp Park as follows: "... no municipal course design has ever come close to matching the overall package of beauty and affordable links-style golf."[31] Dr. MacKenzie's beautiful cultural landscape is enjoyed not only by golfers, but as well by passersby who view the course from the California Coastal Trail, which borders the course atop the seawall.

Dr. MacKenzie, an international master golf architect with unparalleled expertise in seaside links courses, designed Sharp Park in the style of the historic Scottish public links. In this way, he tied American golfers to the roots of the Scottish game. It is one of only three public seaside links courses in California, and

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[27] Declaration of golf architect Robert Trent Jones, Jr., May 12, 2011, at paragraphs 11-16 (true copy attached hereto as Exhibit 24).

[28] Those who want to close the golf course deny Sharp Park's history, citing golf author Daniel Wexler and San Francisco Rec & Park Department golf course gardener Joe Faulkner in support of their argument. However, both Mr. Wexler and Mr. Faulkner have publicly and in writing defended Sharp Park's historic value, and criticized Sharp Park's detractors for misrepresenting their work. See Daniel Wexler letter, July 19, 2009 (true copy attached hereto as Exhibit 25): http://www.sfpublicgolf.com/LiteratureRetrieve.aspx?ID=65476; Joe Faulkner letter, July 31, 2009 (true copy attached as Exhibit 26) http://www.sfpublicgolf.com/LiteratureRetrieve.aspx?ID=66790.

[29] Letter from golf architect Mike DeVries, November 18, 2009: http://sfpublicgolf.com/LiteratureRetrieve.aspx?ID=43267 (True copy attached as Exhibit 27.)

[30] Ken Venturi, letter, October 12, 2009: http://sfpublicgolf.com/LiteratureRetrieve.aspx?ID=40561 (A true copy is attached as Exhibit 28.)

[31] Geoff Shackelford, "Sharply Divided," supra, (fn. 26) (copy attached as Exhibit 23).

SFPGA-1

one of the few places in the world where MacKenzie's work is available for use and enjoyment by the general public.

01 (Cont.)

For all these reasons, the San Francisco Public Golf Alliance and its more than 5,000 members, support the determination of the San Francisco Planning Department that the Sharp Park Golf Course is an "historical resource" under the California Environmental Quality Act.

II. SIGNIFICANT IMPACTS ON THE HISTORICAL RESOURCE

San Francisco Public Golf Alliance has not completed its analysis of the significance of the impacts of the Laguna Salada Restoration plan on the historical resource of the golf course. We will submit a separate letter with our comments on this.

However, we can at this time make the following preliminary statements:

1. We agree with the conclusion of the Planning Department that closure of Hole 12 would cause a significant impact to the historical resource.[32] 02

2. We agree with the Planning Department's conclusion that, if Hole 12 is going to be lost, the preferred mitigation alternative would be restoration of one of MacKenzie's long-abandoned original holes west of Highway One and near the ocean.[33] 03

3. We agree with the Planning Department's conclusion that shortening or narrowing Holes 10 and 13 would constitute significant impacts to the historical resource.[34] (We believe that "10" is a typographical error, and that the Department intends to say Hole 9; we are looking into this.) We believe that there are alternatives to these shortenings/narrowings that the Planning Department and the Department of Recreation and Parks have not yet considered; we will 04

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[32] Historic Resource Evaluation Response, supra (fn. 1), at p. 3 (A true copy is attached as Exhibit 1.)

[33] Id.

[34] Id.

SFPGA-1

describe these alternatives in a subsequent letter.

05

4. We disagree with the Department's conclusion that raising Holes 10, 14, 15, and 18 "would not cause a significant impact" on the historic resource.[35] Rather, we believe that raising these fairways, or portions of them, has the potential to cause significant impacts; if done properly, we suspect that a good restoration golf architect could design raised fairways, or portions thereof, that would not necessarily constitute significant impacts. We cannot determine this in the abstract, but only upon a review of specific architectural and site plans for such work.

06

5. We disagree with the Department's conclusion that new fencing along the berm and the border of the protected wildlife area would not constitute significant impact upon the historic resource.[36] Similarly to No. 4, above, we believe that fencing has potential to cause significant impacts; but if designed and located properly, it is possible that fencing might have less-than-significant impact. It depends upon the specific architectural plans and the exact location for this fencing; the plans and construction of the fencing should be done in conjunction with the golf restoration architect.

Thank you for considering our comments.

Respectfully submitted,

Richard Harris

Richard Harris
San Francisco Public Golf Alliance

encls.

cc: San Francisco Historic Preservation Commission
Phil Ginsburg, General Manager, Recreation & Park Dept.
Mark Buell, President, Recreation & Park Commission
Dawn Kamalanathan, Recreation & Park Capital Division

[35] Id.
[36] Id.

1

SAN FRANCISCO
PLANNING DEPARTMENT

MEMO

Historic Resource Evaluation Response

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

MEA Planner:	Jessica Range
Project Address:	**Significant Natural Resource Areas Management Plan: Sharp Park Golf Course, Pacifica**
Block/Lot:	N/A
Case No.:	2005.1912E
Date of Review:	February 8, 2011
Planning Dept. Reviewer:	Shelley Caltagirone (415) 558-6625 | shelley.caltagirone@sfgov.org

PROPOSED PROJECT ☐ Demolition ☒ Alteration

PROJECT DESCRIPTION

The project is the implementation of the San Francisco Recreation and Parks Department's Significant Natural Resource Areas Management Plan. The plan establishes goals and objectives for 32 Natural Areas, including Sharp Park Golf Course located in Pacifica. The specific goals and objectives are listed fully in Chapters 2 and 3 of the Sharp Park Golf Course Historical Resources Evaluation (HRE) report. In summary, the proposed project would convert about 19 acres of the golf course to Natural Area to facilitate restoration of the Laguna Salada and wildlife habitats associated with the property. Both the lagoon and pond would be excavated extensively and the dredge spoils would be used to raise Holes 10, 14, 15, and 18, creating upland habitat on the east edge of Laguna Salada. Thirteen acres of the golf course would be converted to upland habitat along the east side of the lagoon and would require that Holes 10 and 13 are slightly shortened or narrowed. A dispersal corridor between the lagoon and the pond would be constructed with upland features and would necessitate closing Hole 12 of the golf course. A post and rail fence would also be installed along the seawall to the west of the lagoon, with additional fencing around the wetland complex to discourage human and pet intrusion.

PRE-EXISTING HISTORIC RATING / SURVEY

The golf course and the clubhouse were separately designated as historic landmarks for the City of Pacifica in 2009. The property is not listed on the state or national registries. The property is considered a "Category A" (Known Historic Resource) property for the purposes of the Planning Department's California Environmental Quality Act (CEQA) review procedures.

HISTORIC DISTRICT / NEIGHBORHOOD CONTEXT

The 411-acre golf course is located in the town of Pacifica in San Mateo County. It borders the Pacific Ocean and is bisected by Highway 1. Thirteen fairways, the clubhouse, and Laguna Salada are located to the west of the highway, and the four remaining fairways are located to the east of the highway.

Historic Resource Evaluation Response
February 8, 2011

CASE NO. 2005.1912E
SNRAMP: Sharp Park Golf Course

1. **California Register Criteria of Significance:** A building may be an historical resource if it meets any of the California Register criteria listed below. If more information is needed to make such a determination please specify what information is needed. *(This determination for California Register Eligibility is made based on existing data and research provided to the Planning Department by the above named preparer / consultant and other parties. Key pages of report and a photograph of the subject building are attached.)*

Event: or	☒ Yes	☐ No	☐ Unable to determine
Persons: or	☐ Yes	☒ No	☐ Unable to determine
Architecture: or	☒ Yes	☐ No	☐ Unable to determine
Information Potential:	☐ Further investigation recommended.		
District or Context:	☒ Yes, may contribute to a potential district or significant context. If yes, period of significance: 1929-1932		

The Planning Department concurs with Tetra Tech's determination that the subject property appears to be eligible for listing on the California Register for its significance under Criteria 1 (Events) and 3 (Architecture). The golf course's development is associated with the broader event of the golden age of golf in the US and in California. The course is also an important example of a seaside golf course designed by a master landscape architect, Alister Mackenzie. Please refer to Section 5.2 of the HRE report for a full analysis of the resource's historical significance.

---

2. **Integrity** is the ability of a property to convey its significance. To be a resource for the purposes of CEQA, a property must not only be shown to be significant under the California Register criteria, but it also must have integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The subject property has retained or lacks integrity from the period of significance noted above:

Location:	☒ Retains	☐ Lacks	**Setting:**	☒ Retains	☐ Lacks
Association:	☒ Retains	☐ Lacks	**Feeling:**	☒ Retains	☐ Lacks
Design:	☒ Retains	☐ Lacks	**Materials:**	☒ Retains	☐ Lacks
Workmanship:	☒ Retains	☐ Lacks			

The resource retains sufficient integrity in all aspects of its character to convey its historical significance. Please refer to Section 5.3 of the HRE report for a full analysis of property's integrity.

---

3. **Determination** of whether the property is an "historical resource" for purposes of CEQA.

☐ No Resource Present *(Go to 6 below.)* ☒ Historical Resource Present *(Continue to 4.)*

---

4. **If the property appears to be an historical resource,** would the proposed project materially impair the resource (i.e. alter in an adverse manner those physical characteristics which justify the property's inclusion in any registry to which it belongs)?

☐ The project would not cause a substantial adverse change in the significance of the resource such that the significance of the resource would be materially impaired. *(Continue to 5 if the project is an alteration.)*

☒ The project is a significant impact as proposed. *(Continue to 5 if the project is an alteration.)*

The Planning Department fully concurs with the impacts analysis provided by Tetra Tech in Section 5.4 of the HRE report. In summary:

Project Impacts:

- Raising Holes 10, 14, 15, and 18 *would not cause a significant impact* on the character-defining features of the golf course and the holes would remain in their original locations and the visual character of their fairways would only be minimally affected.

- The closure of Hole 12 *would cause a significant impact* to the historic resource as the work would eliminate an original hole and fairway on the west side of the course. Its removal would significantly alter the original golf course design and boundaries.

- The proposed fencing would add a modern element to the golf course but would not harm the character or setting of the resource. This addition to the landscape *would not cause a significant impact* to the historic resource.

- Modifying approximately 13 acres of the golf course to create upland habitat along the east side of the lagoon would require slightly shortening or narrowing Holes 10 and 13. This alteration would significantly alter the character of these original fairways. Therefore, the work *would cause a significant impact* to the historic resource.

Alternative Project Impacts:

- The recreation analysis of the SNRAMP EIR proposes a mitigation measure (Option 1) that would create a new hole on the east side of Highway 1 as a replacement for Hole 12. This would result in a total of 13 holes on the west side of the highway and five holes on the east side. This arrangement would not maintain the historic balance of holes on either side of the highway and would change the historic boundaries of the course. This *would cause a significant impact* to the original design of the historic resource.

- The recreation analysis of the SNRAMP EIR proposes a mitigation measure (Option 2) that would create a new hole on the west side of Highway 1 as a replacement for Hole 12. While the mitigation measure would change the layout of the holes, this alternative mitigation measure would restore some of the elements that Mackenzie had implemented in his original design by placing the new holes in areas of the course where holes were historically placed. The proposed holes would also be in keeping with the historic boundaries of the golf course. Because of the restorative aspect of the work, this mitigation *would cause a less than significant impact* to the resource.

The project would result in significant impacts to several character-defining features of the golf course, including Holes 10, 12, and 13.

5. **Character-defining features** of the building to be retained or respected in order to avoid a significant adverse effect by the project, presently or cumulatively, as modifications to the project to reduce or avoid impacts. Please recommend conditions of approval that may be desirable to mitigate the project's adverse effects.

   The character-defining features of the property are:

   - The original features and design of the clubhouse;
   - The original features and design of the permanent maintenance building; and,
   - The original features and design of the golf course, including the 12 original holes (current holes 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17, and 18), the original landscape features, and the cypress tree plantings that line the fairways.

   Documentation of the historic cultural landscape by a qualified architectural historian should be completed before the commencement of any landscape alterations, as described in Chapter 6 of the HRE report. However, documentation of the resource will not mitigate the impacts of the project to Holes 10, 12, and 13 to a less than significant level.

---

6. **Would the proposed project have an adverse effect on off-site historical resources, such as adjacent historic properties?**

   ☐ Yes ☒ No ☐ Unable to determine

   There are no identified off-site historical resources that would be affected by the project.

SENIOR PRESERVATION PLANNER REVIEW

Signature: Tina Tam Date: 2/15/2011
Tina Tam, *Senior Preservation Planner*

cc: Linda Avery, *Recording Secretary*, Historic Preservation Commission
Virnaliza Byrd / Historic Resource Impact Review File

SC: G:\DOCUMENTS\Cases\CEQA\EIR\Significant Natural Resource Areas Management Plan\Sharp Park Golf Course_HRER.doc

2

CITY OF PACIFICA
GENERAL PLAN

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GENERAL PLAN
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INTRODUCTION

The 1980 General Plan for the City of Pacifica represents a major review of planning options for the City. In developing this plan, the nine mandatory elements were considered, including: land use, circulation, scenic highways, housing, noise, conservation, open space, seismic safety and safety. In addition, community facilities, history and community design also were considered. The Policy Plan contains the recommendations of each element. The Land Use Plan represents the conclusion of the interaction among these element studies. Findings of each element are included in the Plan document so that persons using the Plan are aware of the major influences of each of these subject areas.

The General Plan program in Pacifica also included preparation of a Local Coastal Land Use and Implementation Plan (LCP). Conclusions of the Coastal Land Use Plan are included in the General Plan Report as proposed land use for the area west of Highway 1, which has been designated by State law as the Coastal Zone. These land use descriptions are more detailed and oriented specifically to Coastal Act policies. Consistent with the intent of the 1976 Coastal Act, planning in the Coastal Zone includes more detailed recommendations than are required of general plans.

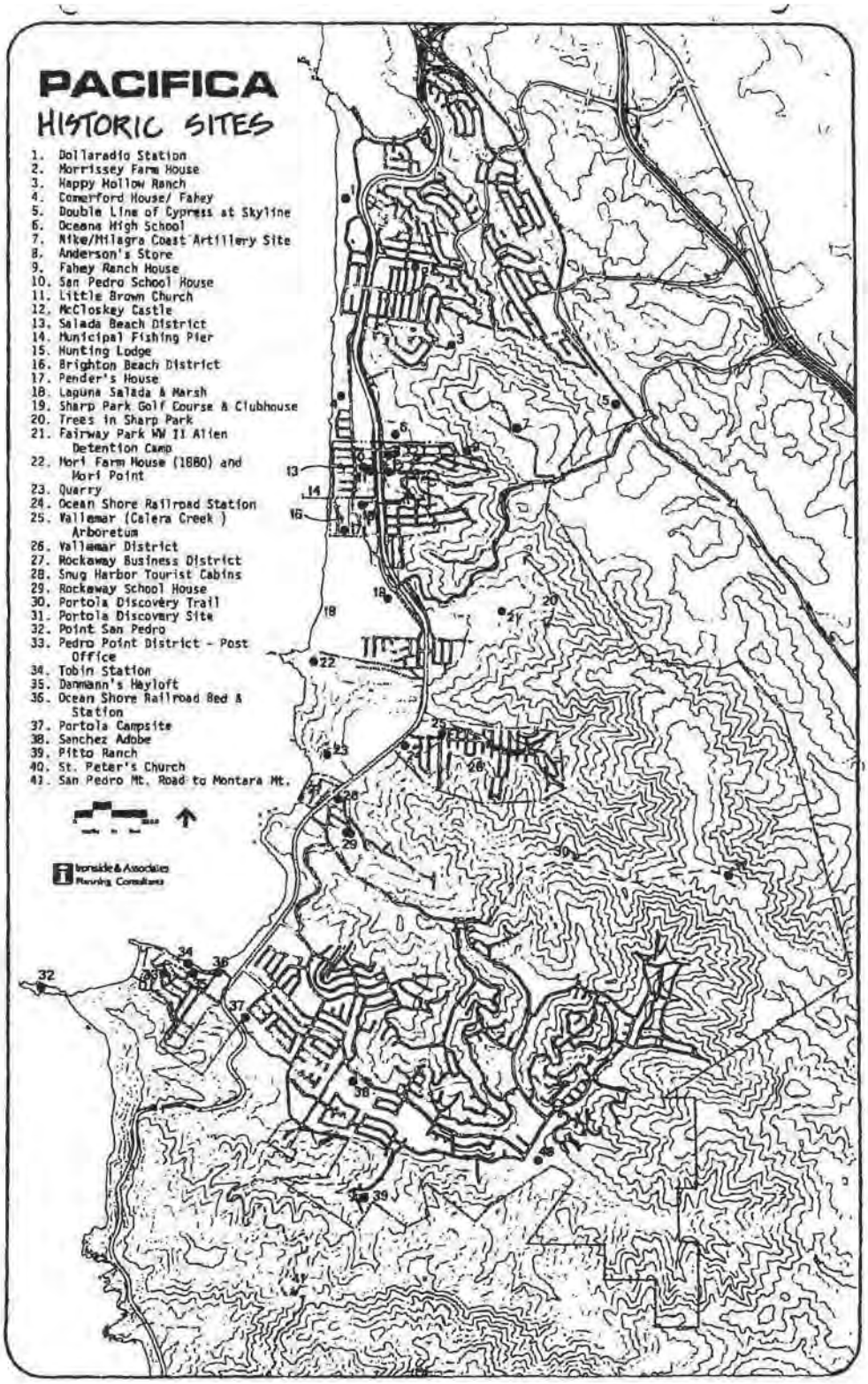
Requirements of the Coastal Act, including procedures for implementation, amendment and action, make it advisable to present the Coastal Plan in a separate report which will be certified by the State Coastal Commission as Pacifica's Coastal Plan. In terms of State Planning Law, the Coastal Plan may be considered a Special Area Plan as provided in Section 65450 of the State Government Code. The recommendations of the Coastal Land Use Plan are consistent with those of the 1980 General Plan and for this reason, the land use portion of the Coastal Land Use Plan is included for purposes of environmental impact review.

HISTORIC PRESERVATION ELEMENT

The Historic Preservation Element of Pacifica's General Plan was prepared by a group of knowledgeable citizens who volunteered, out of their concern for conserving remnants of Pacifica's past, to add depth to the human experience today and in the future. The element includes a list and map of all of the sites and structures felt to be of historic significance in Pacifica.

The element would be implemented by an Historic Ordinance which would establish a Pacifica Historic Sites Advisory Committee to review proposed changes to sites and structures designated on the Historic Sites Map and advise the Planning Commission and City Council of the appropriateness of the proposal. The Committee would also spearhead local civic activity, such as local history programs for schools and civic organizations, seeking funding for historic conservation projects, and seeking assistance for further documentation on the Historic Sites list.

The Historic Element text is also published separately so that it may be used by those who participated in its creation to seek funding for additional planning conservation activities, as well as for promoting educational and civic awareness of Pacifica's colorful past.


PACIFICA
HISTORIC SITES
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38. Sanchez Adobe
39. Pitto Ranch
40. St. Peter's Church
41. San Pedro Mt. Road to Montara Mt.
Ironside & Associates
Planning Consultants

AMENDING THE GENERAL PLAN

Pacifica's 1980 General Plan revision incorporates two planning processes: a major update of the General Plan and preparation of the City's Local Coastal Land Use and Implementation Plans. In dealing with the General Plan on a day-to-day basis, these two plans should be treated as one; however, the distinction between them must be recognized. The City Council has the ultimate authority in adopting and amending the General Plan. State law (Government Code Section 65361) permits the City to amend its General Plan no more than three times a year. In years of major revision, the adoption of the revised plan is considered one of these three permitted annual amendments.

On the other hand, the Council can recommend changes in the Coastal Plan, but the amendment must be approved by the State Coastal Commission. The approval procedure has not yet been established by the State Coastal Commission and must be embodied into official regulations.

The 1976 Coastal Act does state that minor amendments to a certified plan may be reviewed by the Executive Director and become operative in ten days. However no changes in land use shall be determined to be minor amendments (Article 30514(c)). The Act also states that amendment includes:

> .....any action by the local government which authorizes a use of a parcel of land other than that designated in the certified local coastal program as a permitted use of that parcel..... (30514(d)).

Revisions to the Coastal Land Use Plan document would require State Coastal Commission approval for amendment. These include:

-Policies indicated as being part of the Coastal Element,
-The Coastal Zone Land Use Plan Description,
-The portion of the Land Use Map west of Highway 1,
-The Coastal Zone Element, including the Access Component, Plan Conclusions, Implementation Plan and Ordinance revisions required as a part of coastal plan implementation. (This document is available under a separate cover).

ADOPTION

On April 30, 1979, the Planning Commission recommended that the City Council certify the Environmental Impact Report and adopt the proposed Pacifica General Plan. On July 14, 1980, the City Council certified the Environmental Impact Report and adopted the General Plan on July 28, 1980.

3

AGENDA

Planning Commission – City of Pacifica

DATE: September 8, 2009

LOCATION: Council Chambers, 2212 Beach Boulevard

TIME: 7:00 PM

ROLL CALL:

SALUTE TO FLAG:

ADMINISTRATIVE BUSINESS:

Approval of Order of Agenda

Approval of Minutes: August 17, 2009

Designation of Liaison to City Council Meeting of: September 14, 2009

CONSENT ITEMS:

PUBLIC HEARINGS:

1. HLD-06-09 — HISTORIC LANDMARK DESIGNATION, filed by the applicant, City of Pacifica, to designate Sharp Park Golf Course as an Historic Landmark (APN's 016-430-020 & 016-441-020) Recommended CEQA status: Exempt. *Proposed Action*: Table to a date uncertain (Continued from August 17, 2009)

2. UP-006-09 PV-500-09 — USE PERMIT and VARIANCE, filed by the agent, Chamel James, on behalf of the applicant, Verizon Wireless, and the owner, City of Pacifica, to extend an existing police station monopole and add nine wireless communications antennas, two GPS antennas and related equipment at 2075 Coast Highway, Pacifica (Assessor's Parcel Number 018-051-050). Recommended CEQA status: Exempt. *Proposed action:* Approval as conditioned (Continued from August 17, 2009)

3. CDP-316-09 — COASTAL DEVELOPMENT PERMIT, filed by the owner and applicant, Penny Keating of the Shoreside Residents Association, to legalize an existing chain link fence along Shoreside Drive, Pacifica (APN 023-730-200). The project is located in the Coastal Zone. Recommended CEQA status: Exempt. *Proposed action:* Approval as conditioned

OTHER AGENDA ITEMS:

COMMUNICATIONS:

Commission Communications:

Staff Communications:

Oral Communications:

This portion of the agenda is available to the public to address the Planning Commission on any issue within the subject matter jurisdiction of the Commission that is not on the agenda. The time allowed for any speaker will be three minutes.

ADJOURNMENT

Anyone aggrieved by the action of the Planning Commission has 10 calendar days to appeal the decision in writing to the City Council. If any of the above actions are challenged in court, issues which may be raised are limited to those raised at the public hearing or in written correspondence delivered to the City at, or prior to, the public hearing. Judicial review of any City administrative decision may be had only if a petition is filed with the court not later than the 90th day following the date upon which the decision becomes final. Judicial review of environmental determinations may be subject to a shorter time period for litigation, in certain cases 30 days following the date of final decision.

The City of Pacifica will provide special assistance for disabled citizens upon at least 24-hour advance notice to the City Manager's office (738-7301). If you need sign language assistance or written material printed in a larger font or taped, advance notice is necessary. All meeting rooms are accessible to the disabled.

NOTE: Off-street parking is allowed by permit for attendance at official public meetings. Vehicles parked without permits are subject to citation. You should obtain a permit from the rack in the lobby and place it on the dashboard of your vehicle in such a manner as is visible to law enforcement personnel.

MINUTES

CITY OF PACIFICA
PLANNING COMMISSION
COUNCIL CHAMBERS
2212 BEACH BOULEVARD

September 8, 2009

7:00 p.m.

Chair Nathanson called the meeting to order at 7:00 p.m.

ROLL CALL:

Present: Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson

Absent: None

SALUTE TO FLAG: Led by Commissioner Clifford

STAFF PRESENT: Planning Director Michael Crabtree
Assistant Planner Kathryn Farbstein
Planning Intern Lily Lim

APPROVAL OF ORDER OF AGENDA

Commissioner Clifford moved approval of the Order of Agenda; Commissioner Langille seconded the motion.

The motion carried 7-0.

Ayes: Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson

Noes: None

APPROVAL OF MINUTES: August 17, 2009

Commissioner Clifford moved approval of the minutes of August 17, 2009; Commissioner Leon seconded the motion.

Commissioner Leon stated that he had a minor typo correction on page 14, second line, changing "... ~~to confirm were everything was ...~~" to "... ~~to confirm where~~ everything was ...."

The motion carried 7-0.

Ayes: Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson

Noes: None

DESIGNATION OF LIAISON TO CITY COUNCIL MEETING OF SEPTEMBER 14, 2009:

Planning Director Crabtree stated that the City Council would be considering the Development Plan for the single family residence on Perez Drive which the Commission had recently approved.

Commissioner Clifford volunteered to attend at the Planning Commission liaison.

CONSENT ITEMS:

None.

PUBLIC HEARINGS:

1. **HLD-06-09** **HISTORIC LANDMARK DESIGNATION, filed by the applicant, City of Pacifica, to designate Sharp Park Golf Course as an Historic Landmark (APN's 016-430-020 & 016-441-020). Recommended CEQA status: Exempt.**

Planning Director Crabtree presented the staff report.

Commissioner Clifford asked how tabling affected San Francisco's report, such as encouraging, discouraging, etc.

Planning Director Crabtree felt it didn't have any impact on San Francisco's action regarding the studies. Although he acknowledged that it might do something to San Francisco internally, he reiterated that he wasn't aware of any impact.

Commissioner Leon stated that he had received many messages urging them to save the golf course, and he was asking for clarification that the issue before them was dealing with the historical preservation issue based on Pacifica's standards.

Planning Director Crabtree reiterated that the issue was whether or not to designate the golf course as an historical landmark based on Pacifica's ordinance criteria.

Commissioner Clifford thought that the golf course was already listed in the General Plan as an historic site and asked staff for confirmation of that.

Planning Director Crabtree responded affirmatively.

Commissioner Langille wasn't aware that it was listed in the General Plan and thought it was a matter of semantics. She asked what the effect of it was by being listed in the General Plan regarding protection of the golf course.

Planning Director Crabtree stated that the General Plan identified sites and the next step was to designate, via the zoning ordinance, the various sites as landmarks provided they met the criteria, and he thought the City had designated six sites as landmarks. When the landmark designation was imposed, there were various criteria that one goes through to alter or change the landmark and raises the level of CEQA analysis if designated as a landmark as opposed to being listed as a historic site.

Commissioner Langille asked what the impact was when an item was tabled, such as whether it was appeal-able or was put in a limbo.

Planning Director Crabtree thought it was closer to limbo, explaining that the impact of tabling merely put off the action and caused the City to take the initiative and re-notice it to everyone who indicated any interest and reopen the public hearing. He added that it was almost like starting over except they would have all the background of previous discussion and previous minutes.

Commissioner Clifford asked if staff stood by its original recommendation in the July 20, 2009 staff report which asserted that the golf course deserved historical landmark status.

Planning Director Crabtree clarified that their recommendation on July 20 was that the Commission adopt the resolution recommending landmark status because their analysis felt it met the criteria and that has not changed. Staff still believed that the golf course has met the criteria, but their recommendation has changed for the present and they were now recommending that it be tabled.

Commissioner Evans asked if it made any difference if they tabled the item or voted on it in regard to the EIR report.

Planning Director Crabtree stated that, if he was asking if the analysis being done by San Francisco was affected by the City's decision, he had not heard from San Francisco that their analysis was dependent on anything Pacifica did. However, he couldn't state with certainty whether what they do may or may not have an impact on San Francisco's process. He stated that one would hope that San Francisco would take into account the action of the City in which their property was located. He thought the study they were conducting was a factual one and he didn't believe that anything Pacifica does or does not do would have an impact on the facts, but how the facts were analyzed and used may be influenced by Pacifica's action.

Commissioner Evans thought the gist of their letter referred to that fact by suggesting that the City not make the determination so they can go forward with their report without it being affected.

Planning Director Crabtree thought the letter might be interpreted in different ways, and that was one possible interpretation.

Commissioner Langille stated that the golf course was listed in the General Plan as an historical resource to the City, and under the zoning requirements, if made an historical landmark, any modifications to the historical aspect of the golf course would require a permit from the Planning Commission. She referred to their opinion, as well as her opinion following her research, that San Francisco didn't have to comply with Pacifica's zoning. She asked if the City had a different opinion or were in agreement.

Planning Director Crabtree didn't think the City Attorney had issued a formal opinion on that. He added that, when she attended the previous meeting, she felt there was the possibility that San Francisco would be immune from our local land use regulations, but hadn't formalized that.

Commissioner Langille asked confirmation that, in the past, San Francisco had not come before them for permits to modify the clubhouse.

Planning Director Crabtree stated that he could not find any evidence of that.

Commissioner Leon stated that he had communications with the Planning Director and, for the record, he recalled a number of improvements done, such as the paving for motorized golf carts, and he had asked if any permits were taken and there was no evidence found to indicate that they were taken. He reiterated his belief that there have been substantial improvements made without permits from Pacifica. He asked if the Planning Director had any more information to add.

Planning Director Crabtree responded that all their research had concluded that they were not aware of any Planning permits being taken out for those specific tasks. He added that it was possible that a permit was acquired. He couldn't state with certainty that it wasn't but there was no evidence to prove that it was.

Commissioner Clifford stated that he had some information from San Francisco's Planning Commission meeting of August 17 regarding immunity which would partially answer Commissioner Langille's question. San Francisco Deputy City Attorney Stacy responded to San Francisco Commissioner Moore, referring to issues of intergovernmental immunity. She informed him that it was an issue that would be addressed for each situation, depending on the facts, use of the property, and local regulations. Commissioner Clifford felt it was clear that San Francisco wasn't certain that they had full immunity regarding the site.

Commissioner Gordon referred to Commissioners Langille's and Clifford's comments, stating that, if they designated the golf course as historic, then San Francisco would have to come before the Planning Commission before they made modifications but, if they had intergovernmental immunity from Pacifica's zoning ordinances, it didn't matter what Pacifica said with respect to historic designation because they weren't tying San Francisco's hands. He did feel that what they were doing was symbolic and whether their decision had legal teeth or was symbolic was important. He felt that, if they tabled it, when it came back it would be relevant if the City Attorney gave them some information about her view on whether San Francisco had intergovernmental immunity. He then referred to the letter from San Francisco's Deputy City Attorney which he felt said that they had immunity from Pacifica's ordinances and passing this designation would not matter one bit to them. He felt it was valuable to have our City Attorney's input on this legal issue when it returns.

Planning Director Crabtree thought Commissioner Gordon's points were excellent, adding that the City Attorney was planning to be present at this meeting but, when staff recommended tabling the item, she assumed that they would table it and she decided to wait until they actually reconsidered the item before addressing them.

Commissioner Leon referred to all the changes made at the golf course over the past 20 years, which were done without permits, and he felt it made no sense for people to take time out of their schedules to come and speak when the Planning Commission was considering legislating something that was not able to be enforced. He didn't see the point of that.

Chair Nathanson thought they were getting a little off track at this point unless they had a direct question for staff.

Commissioner Campbell asked, on following up on Commissioner Gordon's excellent recommendation, whether they could ask the City Council to task the City Attorney with this notion of determining the legalities associated with designated the course as historic.

Planning Director Crabtree felt that was not necessary. He stated that the City Attorney was prepared to give the Commission the advice they needed to move forward on this, and he didn't feel that there was a need to ask the City Council to direct her to do it. It was her job and she was present previously and gave them her opinion. She now had the letter from San Francisco and he acknowledged that the Commission would like her to respond to that letter. He assured them that,

should they table the matter, she would be present when it was presented to them again and provide them with the advice that they need.

Commissioner Campbell was merely asking for assurance that the followup would be there.

Chair Nathanson reiterated, for the benefit of the public, why they were not having a public hearing on this item at this time, explaining that they had the initial presentation with a very lengthy public hearing where everyone had spoken, closed the public hearing for Commission deliberation but it was so late that they continued it and stated that, when it came before them again they would go directly to Commission deliberations. She further explained that, if they now table the item, it would go to square one and be re-noticed, with a public hearing and after their deliberations and decision, it would go on to City Council and there would be another public hearing. She reassured the public that there would be ample opportunity for them to speak in front of the Commission and the City Council. She also reminded the public that, on any issue, they had the option of writing to the Commission or Council, were not limited to three minutes, and it would be included with their packet with ample time to deliberate on it. She again reiterated that not having a public hearing at this meeting was not because they were trying to shut them out.

Commissioner Clifford was not happy with tabling the item, and would like to finish the deliberations and send it on. He felt that this was an item that needed to go before the City Council so they can open the public hearing. He didn't see anything to be gained by tabling it, re-noticing it, and opening the public hearing again, since it was ultimately up to the City Council to make the determination.

Chair Nathanson asked clarification that the only thing they were considering was whether or not Sharp Park Golf Course met the criteria as an historical landmark. She thought all the other information would be before the City Council. She thought their only option was to table it while waiting for San Francisco's report and their agenda item was only whether or not it should be an historic landmark.

Commissioner Gordon disagreed with Commissioner Clifford. He would like as much information as possible on the subject before him before making a decision. He referred to San Francisco's letter to Pacifica, stating that they appreciated the historic and cultural value of the golf course and the effects of the resource management plan on the golf course as a potential historic resource and that fact would be included in their EIR report. He would like to wait and see what they have to say so that he can make a better decision. He mentioned that the last time it was on an evening where the agenda was full, and if they table it, he would like to see it as the only agenda item so no one has to stay until 12:30 again. He was in favor of tabling it.

Commissioner Evans was in agreement with Commissioner Gordon. He had originally stated that he didn't feel right without having input from the owner of the property. He stated that, if they were in the middle of an extensive report, the Commission owed it to both the golf course and Pacifica to wait for that report. He did understand Commissioner Clifford's position about moving on, but he felt they should wait and have everything in front of them.

Commissioner Leon also felt that they should have as much information as possible before them so that they do not send less than fully developed deliberation and information to the City Council. He felt it was their responsibility and he would like that opportunity as a Commissioner.

Commissioner Leon referred to the letter from San Francisco, which he felt clearly stated their legal responsibilities and their interest in preserving the golf course, as well as their significant natural resources area management plan and their intention of complying with CEQA regulations and Fish & Game regulations. He felt it was beneficial to wait. He mentioned the National Park Services' offer to intervene in the historic study to look at state and national historic criteria, which was a higher standard. He felt that was potentially still on the table for the future, but based on what San Francisco was doing and committed to, he agreed with tabling the item.

Commissioner Langille referred to her position regarding intergovernmental immunity but she was trying to be a responsible open-minded Commissioner. She acknowledged that they had heard from the City Attorney previously but they had not heard her response to the latest letter. She also felt that giving San Francisco time to complete their studies would give them beneficial information, stating that she was in favor of tabling it.

Commissioner Campbell stated that, whether or not intergovernmental immunity applies, he was most interested in whether the golf course met the criteria of the City's historic designation ordinance, and their decision would be informed by San Francisco's study. He thought that, if it were a private developer on private land who told them they would have more to tell them about the history of the site in a month, they would wait. He didn't see the distinction with this property. He would like to vote to table it, but he was not interested in waiting around forever. He wondered if there was a way to put a time limit or if the Planning Department's expectations were for getting something back by the end of October. He thought if they didn't produce the report by the end of October, he would conclude that it was fair to move forward.

Planning Director Crabtree explained that, when tabling an item, there was a re-noticing process and he would prefer not to create an expectation of a date. He was also hesitant because of knowing how things can be planned for a certain date and then get pushed back. He recommended that they not make it part of their motion but rather direct the Planning Director to report to them on the status. He added that, if they didn't hear anything by the end of October, they could ask him to give them a report.

Chair Nathanson stated that one reason she was in favor of tabling it was because the report on line and available to people was that staff was recommending that it be tabled. She thought they would have had more people present if they thought that was not going to be the case. She also felt there were some legal issues and, when they have a clearer perspective on San Francisco's situation, the City Attorney would be present to address them. She didn't think they had to worry about something drastic happening if they tabled the item. She felt it was in everyone's best interest to table it. It would also provide the opportunity for reopening the public hearing.

Planning Director Crabtree then elaborated on his previous response, further clarifying that the Commission always had the right to say they would like to hear the item. If they decided that it was too long to wait, or San Francisco's study didn't get completed, they always had the option to ask that it be put on the agenda.

Commissioner Clifford asked staff what the process would be for that request should it be November or December. He asked if it should be during Commissioner Communications.

Planning Director Crabtree agreed that it would be appropriate to ask, during Commissioner Communication, that the item be placed on their agenda.

Commissioner Leon asked clarification as to whether they should add the reference regarding subject to updates by the Planning Director into the motion as discussed by Commissioner Campbell.

Commissioner Campbell stated that he was satisfied with the motion as it was.

Commissioner Leon moved that the Planning Commission **TABLE** consideration of HLD-06-09 to a date uncertain; Commissioner Campbell seconded the motion.

The motion carried 7-0.

Ayes:	Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson
Noes:	None

2. **UP-006-09 / PV-500-09** **USE PERMIT and VARIANCE, filed by the agent, Charnel James, on behalf of the applicant, Verizon Wireless, and the owner, City of Pacifica, to extend an existing police station monopole and add nine wireless communication antennas, two GPS antennas and related equipment at 2075 Coast Highway, Pacifica (APN 018-051-050). Recommended CEQA status: Exempt.**

Planning Intern Lim presented the staff report.

Commissioner Campbell asked if the school board was notified of this action.

Planning Intern Lim stated that it was the adjacent property, and she was pretty sure they had been notified as everyone within 300 feet would have been notified.

Commissioner Campbell asked if the notice went to the school district's Superintendent or actually to the Board.

Planning Intern Lim stated that it went to the owner of the property.

Commissioner Campbell was merely wondering who actually gets it.

Planning Intern Lilm stated that it goes to the School District office.

Commissioner Leon asked if there were any other public or privately situated antennas that would add to any cumulative effects from this proposal.

Planning Intern Lim stated that there were existing antennas used by the police station.

Commissioner Leon thought they had approved something at the Pacific Telephone but didn't know if it was a pole or not, because he didn't have the antenna map for reference.

Planning Intern Lim stated that the RF report only had information on the cumulative effect of what was being added to the pole.

Commissioner Leon asked if the information was available with a reference map of existing poles.

Planning Director Crabtree stated that he wasn't sure what he was asking, explaining that there was another antenna at the telephone building, and thought it was the only other one in the vicinity, although the applicant may be able to respond further. He reiterated what was already stated, that the RF report did not take into account surrounding antennas, only the one on the facility.

Commissioner Leon asked if he was stating that there was one on the telephone building.

Planning Director Crabtree stated that there was one approved but he didn't know if it was actually installed. He asked Planning Intern Lim if she knew.

Planning Intern Lim acknowledged that they had approved one at 325 Reina del Mar but had no further information.

Planning Director Crabtree reiterated that they didn't know for sure if it was actually installed.

Commissioner Leon thought that the water department had one on the lower part of Cattle Hill which faces Vallemar.

Planning Director Crabtree stated that they would have to get the map to check.

Commissioner Evans referred to the RF report which stated that the new antenna would only pose 3.6% of the applicable public exposure limit allowable, and he asked if it was only for the new antenna.

Planning Intern Lim stated that was referring only to what they were now proposing.

Commissioner Langille acknowledged that she needed to stay away from public safety issues, but she questioned the cumulative effect with antennas near a school such as this one, and wondered how many antennas were in the area. She asked if there was any information on how many antennas near a school caused concern.

Planning Director Crabtree thought the applicant might be able to answer that, but he cautioned her that she could not take health issues into account when considering approval of the permits.

Commissioner Clifford asked Planning Intern Lim if she was able to get an answer about whether there would be any interference from these antennas to the public safety system that the police operate. His major concern was, during an emergency situation when everyone was on their cell phones and the antennas were maxed out, what would happen to the police communications.

Planning Intern Lim mentioned that the applicant stated that they ran on different frequencies, but she was present and could confirm that.

Commissioner Clifford assumed that she would be able to answer the question for him.

Charnel James, NSA Wireless, stated that she was representing Verizon. She stated that she had her RF engineer, Russ Benson, present and he would be available to answer any questions about the radio frequencies and how the antennas work. She felt staff did a good presentation and she was present mainly to answer any questions. She did mention the reference in the staff report to equipment, and clarified that there were multiple radio cabinets within the shelter.

Commissioner Clifford asked if her RF man would answer his previous question.

Russ Benson, radio engineer, was with Verizon with 48 years in the industry. He stated that he was responsible for everything from the Golden Gate Bridge to south of Gilroy on the west side of the bay. He stated that Verizon was more concerned about interference to their system from the police radios. He stated that RFs would normally show the probability of interference from police radios into their equipment was 100 times greater than any interference from their equipment to the Police Department.

Commissioner Clifford asked if they could get that in writing.

Mr. Benson stated that he thought they had already submitted something in writing saying that there was no chance of interference.

Commissioner Clifford stated that he didn't see it in their packets.

Planning Intern Lim stated that they had e-mailed the City stating that they were on different frequencies, and she would place it in the file.

Commissioner Clifford was merely ensuring that it was on record and public safety was clearly addressed.

Mr. Benson stated that this was for the frequencies currently being used by the Police Department but, if they changed to another range of frequencies at a later date, it would have to be restudied.

Commissioner Clifford thanked him for the information, adding that they would keep that in mind.

Planning Director Crabtree added that it was not being done in a vacuum. Verizon had been working with the Police Department from the very beginning, and the police had not expressed any concerns to the Planning Department.

Ms. James pointed out that their lease had already been in front of the City Council and the Council had approved their lease.

Commissioner Leon stated that he was trying to arrive at information regarding cumulative exposure, having approved an antenna on a commercial building adjacent to the school and adjacent to the Police Department. He asked if there was a concern regarding the equipment Verizon was planning to add.

Mr. Benson stated that they had submitted a Hammon and Edison report to the City which covered everything on the tower. He stated that once they step away from the tower by more than 10 meters, there was no chance of anything. He stated that the antenna at the AT&T facility, which was about 800 feet away, would add less than 1/10 of 1% of the public exposure limit and was so low it could not be measured with current instruments being used.

Chair Nathanson opened the Public Hearing and, seeing no one, closed the Public Hearing.

Commissioner Clifford moved that the Planning Commission find the project exempt from CEQA, and **APPROVE** Use Permit, UP-006-09 and Variance, PV-500-09, subject to conditions 1 through 7 and **ADOPT** findings contained in the September 8, 2009 staff report, and incorporate all maps and testimony into the record by reference; Commissioner Evans seconded the motion.

Chair Nathanson stated that she loved when she got before and after photos, and thanked them for a moment of happiness. She then suggested that they get an I-phone with Verizon.

The motion carried **7-0.**

Ayes:	Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson
Noes:	None

Chair Nathanson declared that anyone aggrieved by the action of the Planning Commission has ten (10) calendar days to appeal the decision in writing to the City Council.

3. CDP-316-09 **COASTAL DEVELOPMENT PERMIT, filed by the owner and applicant, Penny Keating of the Shoreside Residents Association, to legalize an existing chain link fence along Shoreside Drive, Pacifica (APN 023-730-200). The project is located in the Coastal Zone. Recommended CEQA status: Exempt.**

Assistant Planner Farbstein presented the staff report.

Commissioner Clifford asked when the fence was put up.

Assistant Planner Farbstein didn't know, adding that the applicant could probably better address that. She stated that code enforcement was involved and she could tell him when she got the application.

Commissioner Clifford stated that he was more interested in how long the fence was there.

Commissioner Campbell referred to condition 2 which stated that the applicant shall landscape along the fence with year-round plants to the satisfaction of the Planning Director and asked on which side of the fence they would plant or whether it might be both sides.

Assistant Planner Farbstein stated that she envisioned the plants on the one side away from the ocean to better maintain them, adding that she would prefer that no one go on the Oceanside.

Penny Keating, applicant, was representing Shoreside Residents Association, and explained how the residents bought their respective units in 2001. She referred to the uniqueness of the area, with its own concerns and considerations because of the public access. She felt the staff report was good and the Commission had most of the information they needed. She referred to the question about when the fence was installed, and thought it was installed in January 2009. She stated that a neighbor had suggested that the fence would be more aesthetically pleasing in black. They were told it couldn't be painted but they could add a plastic coating. She was pleased with the positive response from the neighbors in the community by their letters of support. She then read one letter from a surfer. She mentioned some of the accidents which occurred in the past and felt they were doing the best they could by installing a fence that would allow for visibility of the ocean while ensuring safety.

Commissioner Evans asked when the Police Department had talked to them about erecting the fence.

Ms. Keating stated that she hadn't spoken to the police officer but it was an unofficial comment and she had given that comment to Assistant Planner Farbstein unofficially, adding that it was shortly before they installed the fence. They had been having problems with vandalism, etc., and she didn't know if the other owner had called the police out because of that. She reiterated that it wasn't an official statement.

Commissioner Campbell felt the fence was a good idea which would be of benefit to the neighborhood. He asked if there was a way of placing vegetation on the ocean side that can be watered in order to shield it from below so that no one was looking at a fence. He didn't know if he was making a mountain out of a molehill but asked if there was a way to screen the fence.

Ms. Keating stated that they had discussed landscaping and they had a concern about the problem of getting water in terms of erosion and the mechanics of getting it out there. They were also concerned about blocking the view. There was also the fact that it was hard but they were willing to give it a try. She mentioned the fact that they naturally have green plants by March, then daisies by April. The plants last until July and then die off, and the owners felt it was a natural way of handling it but they were willing to comply with whatever was the best solution.

Commissioner Clifford initially thought the black vinyl was a good idea until his site visit. He saw that it was flaking off and he was thinking that it shouldn't be renewed because they would land up with the vinyl in the ocean.

Ms. Keating agreed with him. She only notice it recently, but wasn't sure how long it had been deteriorating. She was sorry that it was a mess when he made the site visit, but thought it was good for him to see that. She felt the fence had helped eliminate some of the litter.

Chair Nathanson asked if they had given any consideration to a more viable alternative to the vinyl.

Ms. Keating stated that they hadn't thought of doing anything to the fence unless something happened to make it unsafe. The vinyl was meant as an aesthetic addition, and there was some comment about whether it was better black or better the natural chain link coloration. She didn't think there was any thought of replacing it unless a safety issue came up.

Chair Nathanson opened the Public Hearing and, seeing no one, closed the Public Hearing.

Commissioner Langille had visited the site before it was an agenda item, and she felt the fence was an improvement, not only for the safety of pets and humans, but for keeping litter from going over the edge. She thought it would be difficult to put planting on the ocean side and they would probably have to be seasonal to avoid erosion by watering. She agreed that something like native planting placed to shield the fence was great and was a necessary recommendation. She understood why they went with a black fence but she felt letting it deteriorate and then letting it go was probably the best way to go. She stated that she had looked at the fence from the beach and thought it was hard to see. She recommended approving it.

Commissioner Leon supported the legalization of the fence, and the safety concerns were well taken. He thought the best idea was native plants that required no watering with the seasons dictating what grows. He felt the pictures were scary, with the natural condition and susceptibility to erosion, and keeping water off of it was the best way to go.

Commissioner Evans was also in favor of the fence. However, he was not in favor of adding plants that needed to be watered. He felt the natural idea was much better and anything to preserve the cliffs was a plus. He didn't think digging holes and watering them was a good idea at the cliff's edge. He was in favor of letting it go to nature, since it doesn't need watering and we will be saving water. He added that it probably wouldn't be too long before the fence was in the ocean. He reiterated that he was in favor of the fence but not of adding the plants.

Commissioner Campbell was in favor of the fence and was not in favor of non-native plants, but was in favor of initial watering just to get them started. He did appreciate Commissioner Langille for taking a look at it.

Commissioner Gordon was in favor of the legalization of the fence, but on condition #2, he would like to specify that the applicant would landscape along the fence with native drought tolerant plants that grow year round. He hadn't visited the site but, if planting native plants on the ocean side would contribute to the erosion, he would consider limiting the planting to the non-ocean side. He disagreed with Commissioner Evans regarding dropping the landscaping condition because, leaving it to its own devices, with foot traffic, they end up with invasive species coming in and crowding out the native plants.

Commissioner Clifford was in favor of legalizing the fence and felt it added to the safety of the cliff. He was in favor of planting anything that required very little digging because with any digging they would create an erosion problem and lose the fence that much quicker. He thought it might be better for plants that you can sprinkle on the ground and they do their own thing instead of digging and watering. He would like landscaping however.

Commissioner Gordon asked if Commissioner Clifford had the same reservations if the landscaping was on both sides as opposed to only the non-ocean side.

Commissioner Clifford would keep it on the non-ocean side because the fence was on the edge of the cliff already. He didn't think they should put anyone at risk by planting on that side.

Commissioner Gordon asked if the southern side was the non-ocean side.

Planning Director Crabtree stated that the non-ocean side was south.

Assistant Planner Farbstein stated that she suggested wording it the non-ocean side because it was difficult to figure out what was north and south and the wording of non-ocean side made sense.

Commissioner Langille felt that, the more they discussed it, the more it made sense not to require any landscaping that required digging. She knew the seasonal plants, such as daisies, etc., were what grows there and they do pretty well without watering. She felt they shouldn't be requiring much landscaping in that site except what grows there. She didn't know of any native plants that can grow from seed without digging and she didn't know if they needed to change the recommendation or leave as is. She thought it would take trial and error to plant anything that would establish itself without digging and watering. She thought leaving it as is, adding that even the best efforts of the applicant would be challenged by the people using the site. She was in favor of leaving the condition as is or changing it to say landscape with native drought tolerant plants requiring little or no digging.

Chair Nathanson stated that the condition presently reads that the applicant shall landscape along the fence with plants that grow year round to the satisfaction of the Planning Director. She asked the Planning Director if, having heard what was said, he would be able to implement that without specific language.

Planning Director Crabtree thought it was safer to add it. He thought they are all asking for native, drought tolerant plants which require minimal digging, and they could work something out. He felt adding that wording in the condition would be helpful.

Chair Nathanson clarified that it would not be an additional condition but part of condition 2.

Planning Director Crabtree stated that she was correct.

Commissioner Gordon stated that he has been a native plant gardener for about 20 years and had a fair amount of experience with native vegetation. He stated that they can start a native garden with 1-gallon plants that require very little digging, less than what was required to put in the fence. He felt it was very doable. He stated that there was a native nursery which sells them.

Commissioner Gordon moved that the Planning Commission **APPROVE** CDP-316-09, subject to conditions 1 through 3, based on findings contained within the September 8, 2009 staff report and incorporate all maps, documents, and testimony into the record by reference, with condition 2 modified to read the applicant shall landscape along the fence with native, drought tolerant plants that grow year round, to the satisfaction of the Planning Director; Commissioner Clifford seconded the motion.

The motion carried 7-0.

Ayes:	Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson
Noes:	None

Chair Nathanson declared that anyone aggrieved by the action of the Planning Commission has ten (10) calendar days to appeal the decision in writing to the City Council.

COMMISSION COMMUNICATIONS:

None.

STAFF COMMUNICATIONS:

None.

ORAL COMMUNICATIONS:

Ron Maykel, 896 Rockaway Beach, stated that the Commission had made a great decision to table the golf course deliberation regarding making it an historical landmark.

Chair Nathanson reminded Mr. Maykel that he could not discuss the golf course because it was already on the agenda.

Mr. Maykel then mentioned that the National Park Service has an interest in the golf course property, and he sees it as an opportunity of a thousand years, considering that it was contiguous with Mori Point and Sweeney Ridge, 400 acres of flat topography in the center of Pacifica with a diversity of ecosystems. He thought it could be like a City Park. He felt it was a beautiful piece of property that was in a cage and exclusionary for a particular single use but could be used by the handicapped, families, artists, etc. He felt it was a golden opportunity. He was bringing it before the Planning Commission because they were responsible for planning the future direction of the City. He felt the golf course has not really been a value to the City.

Planning Director Crabtree felt the speaker was treading on thin ice in addressing an aspect of a subject that was before them earlier in the meeting.

Chair Nathanson agreed with the Planning Director, stating that they couldn't talk about the golf course.

Mr. Maykel suggested that they merely talk about Pacifica seeing a substantial upgrade with some changes in land use. He mentioned the "war zone" of the wastewater treatment plant, the failed biodiesel treatment plant, failed illegal road on Pedro Headlands, mitigation ponds in the quarry for which the City was in violation of the Coastal Act because they neglected the 10-year mitigation program to stock the ponds with the San Francisco garter snakes and didn't do it. He felt they had a responsibility to look out for the well being of the City at large and the public.

ADJOURNMENT:

There being no further business for discussion, Commissioner Clifford moved to adjourn the meeting at 8:30 p.m.; Commissioner Gordon seconded the motion.

The motion carried 7-0.

Ayes:	Commissioners Evans, Langille, Clifford, Campbell, Gordon, Leon, and Chair Nathanson
Noes:	None

Respectfully submitted,

Barbara Medina
Public Meeting Stenographer

APPROVED:

_____
Planning Director Michael Crabtree

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PACIFICA HISTORICAL SOCIETY

P.O. Box 752 Pacifica, CA. 94044 650-359-5462 info@pacificahistory.org

June 14, 2011

Honorable Mary Ann Nihart
Mayor, City of Pacifica
170 Santa Maria Ave.
Pacifica, CA. 94404

Honorable Ed Lee
Mayor, City and County of San Francisco
1 Dr. Carlton B. Goodlett Pl.
an Francisco, CA. 94102

Honorable Carole Groom
San Mateo County Board of Supervisors
400 County Center
Redwood City, CA. 94063

Re: Pacifica Historical Society Recognizes Sharp Park Golf Course as An "historic resource", and calls upon elected officials to Save the 80-year-old, 18-hole golf course.

Dear Mayors Nihart and Lee, and President Groom,

The Pacifica Historical Society, official historian of the City of Pacifica, by unanimous vote of its Board of Directors on June 14, 2011, adopted a Resolution recognizing the Sharp Park Golf Course as "a significant historical and cultural resource," and called upon public officials of all levels of government "to preserve the historic 18-hole golf course for the enjoyment and appreciation of future generations." Enclosed is a copy of that Resolution.

Among other things, the Historical Society's Resolution cites the following facts in support of our determination that the Sharp Park Golf Course is an "historical resource". The golf course was opened in 1932, and designed by Dr. Alister MacKenzie, the first golf architect inducted into the World Golf Hall of Fame, and the architect of Augusta National Golf Club (home of the annual Master's

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Tournament), Cypress Point Club, and other outstanding golf courses around the world. Dr. MacKenzie was also the consulting architect at the Old Course at St. Andrews, Scotland, the ancestral home of the game of golf.

Dr. MacKenzie was assisted in the construction of Sharp Park Golf Course by Golden Gate Park Superintendent John McLaren, who planted the Monterey cypress trees on the property. MacKenzie intentionally created Sharp Park in the distinctive style of Scottish seaside links courses, the original type of golf course. Sharp Park is one of the few public golf courses in the world designed by Dr. MacKenzie. Today the golf course retains 12 of Dr. MacKenzie's original 18 holes, with two other existing holes being played in original MacKenzie-designed fairways. The golf course retains design features characteristic of Dr. MacKenzie's architecture, including its mounded greens, accessibility to all skill levels, and its picturesque beauty.

The Cultural Landscape Foundation of Washington, DC has recognized Sharp Park as an at-risk, nationally-significant cultural landscape.

The Pacifica Historical Society's Resolution is supported by extensive historical research, including historic photographs, newspaper stories, and architectural drawings published contemporaneously with the design and opening of the golf course, and contemporaneous accounts of design and construction from Dr. MacKenzie and members of his design team. We will be happy to make these materials available to you, upon request.

The mission of the Pacifica Historical Society includes preservation of the history of Pacifica and its historical sites, to act as official historian for the City of Pacifica, and to advise public officials regarding historical matters and the preservation of historical sites. Consistent with our mission, and upon consideration of a substantial historical record, our Society has determined Sharp Park Golf Course to be an historic and cultural resource of the City of Pacifica, and we hereby call upon governmental agencies at all levels to preserve the 18-hole Alister MacKenzie-designed golf course.

Respectfully submitted,

Kathleen Manning

Kathleen Manning
President
Pacifica Historical Society

encl.

cc (w/encl.): Honorable Jackie Speier, U.S. House of Representatives
David Chiu, President, San Francisco Board of Supervisors
Frank Dean, General Superintendent, GGNRA
David Holland, Deputy County Manager, San Mateo County
Phil Ginsburg, General Manager, San Francisco Recreation and Park Department
Mark Buell, President, San Francisco Recreation and Park Commission

RESOLUTION OF PACIFICA HISTORICAL SOCIETY
RECOGNIZING SHARP PARK GOLF COURSE AS AN HISTORICAL RESOURCE

WHEREAS: The Sharp Park Golf Course, located in Pacifica, CA., is owned by the City and County of San Francisco, and operated by the San Francisco Recreation and Park Department; and

WHEREAS: The golf course, opened in 1932, was designed by golf architect Dr. Alister MacKenzie; and

WHEREAS: Dr. MacKenzie is one of history's best-known, most influential, and most revered golf architects, and is the first golf architect inducted into the World Golf Hall of Fame; and

WHEREAS: Dr. MacKenzie was architect of over 400 golf courses worldwide, including the Augusta National (home of the annual Masters Tournament) and Cypress Point Club on the Monterey Peninsula (which golf courses have been identified by Golf Digest Magazine as two of the four "greatest" American golf courses), and was the consulting architect at the Old Course at St. Andrews, Scotland, the ancestral home of the game of golf; and

WHEREAS: Dr. MacKenzie was assisted at Sharp Park Golf Course by Golden Gate Park Superintendent John McLaren, whose involvement included the planting of the Monterey cypress trees; and

WHEREAS: Dr. MacKenzie intentionally created Sharp Park in the distinctive style of the Scottish seaside links courses such as St. Andrews; and

WHEREAS: Seaside links golf courses are historically and culturally significant, because the game of golf originated on the seaside links courses of Scotland, including the Old Course at St. Andrews; and

WHEREAS: Public seaside links golf courses are very rare, and Sharp Park Golf Course is one of the few seaside public links courses in the State of California; and

WHEREAS: Sharp Park Golf Course is one of the few public golf courses in the world designed by Dr. MacKenzie, and is one of only two public seaside links courses in the world (the other being at St. Andrews, Scotland) to have been designed by Dr. MacKenzie; and

WHEREAS: Sharp Park Golf Course today retains 12 of its 18 original MacKenzie-designed holes, with two other existing holes being played in original MacKenzie-designed fairways; and

WHEREAS: Sharp Park Golf Course retains design features characteristic of Dr. MacKenzie's architecture, including its mounded greens, its accessibility and playability to golfers of all skill levels, and its great, picturesque beauty; and

WHEREAS: The Cultural Landscape Foundation of Washington D.C. has recognized Sharp Park Golf Course as an at-risk, nationally-significant cultural landscape; and

WHEREAS: The Purpose of the Pacifica Historical Society is to collect information and items of historical interest to the area now called the City of Pacifica. The Society is to provide for the preservation, accessibility, and protection of information and material collected as historical and educational resources. In preserving the fine and unique from our past, the present and the ordinary should not be overlooked. The society is to work toward the preservation of historical sites, buildings, monuments and markers. The Society is to act upon request as official historian for the City of Pacifica. It will be available to advise the City Council regarding historical matters and matters relating to the preservation of historical sites, buildings, monuments and markers.

NOW, THEREFORE, BE IT RESOLVED that the Pacifica Historical Society recognizes Sharp Park Golf Course as a significant historical and cultural resource, and calls upon public officials, elected and non-elected, of all levels of government, including but not limited to the City of Pacifica, County of San Mateo, City and County of San Francisco, and the National Parks Service, to preserve the historic 18-hole golf course for the enjoyment and appreciation of future generations.

IT IS SO RESOLVED.

Kathleen Manning — June 14, 2011

Kathleen Manning, President, Pacifica Historical Society — Date

Pacifica Historical Society Board Members

Clorinda L. Campagna — Erika A. Rigling

Barbara Arietta — Helen James

Mary J. Daugherty — Katherine Kirkland

Robert D. Crow

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The Cultural Landscape Foundation
stewardship through education
Published on *The Cultural Landscape Foundation* (http://tclf.org)

Sharp Park Golf Course Threatened with Closure

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Designed by the legendary golf course architect Dr. Alister MacKenzie, Sharp Park Golf Course faces potential closure due to pressure from environmental activists and San Francisco city officials.

Just months before starting on his masterpiece Augusta National Golf Course in Georgia, Dr Alister MacKenzie designed his only seaside public links at Sharp Park, a San Francisco municipally-owned course located 10 miles south of the city in the beachside suburb of Pacifica, California. Since opening in 1932, Sharp Park has hosted an annual average 50,000 rounds,with some of the lowest green fees of any 18-hole course in the Bay Area. Today, the course also is home to the threatened red-legged frog and the endangered San Francisco garter snake; and environmental activists have lobbied city officials to close the course and dedicate the land to these two listed species. The San Francisco Board of Supervisors in April 2009 adopted an ordinance to study how—and if—the golf course can be kept open, consistent with restoring reptilian habitat. So today environmentalists are politically squaring-off against golfers, landscape preservationists, and Pacifica city officials who want to keep the course open.

History

At the turn of the 20th Century, San Francisco city fathers aspired to fashion the city as a major world capital, a "New Constantinople." For this purpose they retained Daniel Burnham who, just three years after completing his master plan for Washington, D.C, completed his San Francisco Plan in 1904. Though the Burnham plan was not fully adopted, it became the impetus for San Francisco's grand public architecture, including the Beaux Arts Civic Center, and monuments by world masters, from the Golden Gate to the Embarcadero, and Bernard Maybeck's Palace of Fine Arts.

In this spirit, John McLaren, head of the city's park system and father of Golden Gate Park, hired the world's preeminent golf architect, Dr. Alister MacKenzie, to design a municipal golf course at Sharp Park, on property donated to the city exclusively for recreational purposes. Born in England and educated as a medical doctor at Cambridge, MacKenzie served as a surgeon in the Boer War and as a camouflager in World War I before moving to the Bay Area and devoting himself full-time to golf architecture. As a golf architect, MacKenzie was a naturalist in the tradition of Capability Brown, the 18th-century English landscape gardener. "The chief object of every golf course architect worth his salt," MacKenzie famously said, "is to imitate the beauties of nature so closely as to make his work indistinguishable from nature itself."



Courtesy Jeff Phillips. Copyright *Sports Illustrated*. (right) Courtesy Gerry Groppn.

Although he had designed legendary courses outside the States, MacKenzie developed his American reputation with a burst of greatness between 1928 and 1933, the final six years of his life. During that span, he designed several of the world's most celebrated courses, including Cypress Point in Monterey and Pasatiempo in Santa Cruz, California; Crystal Downs in Michigan; Royal Melbourne in Australia; and, in collaboration with Bobby Jones, Augusta National in Georgia. (Augusta is home of the annual Masters Tournament and has been noted as America's greatest course by *Golf Digest Magazine*.) It was during this prolific time that MacKenzie designed Sharp Park, one of only a handful of his public courses.

oday at Sharp Park, golfers play 12 of MacKenzie's original holes, and parts of two others. Two original seaside holes are now buried beneath the seawall, while the routings of three other original MacKenzie holes lie fallow in the sand dunes at the course's west end. Ocean vistas are now blocked by the seawall, but the course retains its links character and the air, wind, sounds, and smells of the sea.

Sharp Park also retains the artistry of its creator—including MacKenzie's picturesque routing, his trademark optical illusions, and his false-fronted, heaving and tumbling greens. The current 14th hole for example, displays MacKenzie's use of camouflage principles. A large mound 30 yards in front of the right side of the green appears from the vantage of the drive in the fairway to be adjacent to the green, thus testing the golfer's mental skill and discipline to hit the proper shot, in spite of what appears to the eye.

Today, with green fees as low as $24 on weekends, the course continues to provide a world-class seaside recreational experience to golfers from diverse social and economic backgrounds in a city known for such diversity. In this way, the unpretentious, old-fashioned Sharp Park Golf Course closely resembles the public links of the sport's homeland, Scotland.



Courtesy Jeff Phillips

Threat

Under pressure from environmental activist groups, the San Francisco Board of Supervisors in early May 2009 directed the city's Recreation and Park Department to explore plans to close the golf course and convert some or all of its acreage to a wildlife preserve for the frog and snake. The Department is due to report back to the Supervisors by August 31, 2009.

er the years, San Franciscans have defended their cable cars, the Palace of Fine Arts, Golden Gate Park and City Hall, and have restored the ..nbarcadero, from natural, commercial and political disasters and threats. MacKenzie's public golf masterpiece at Sharp Park is worthy of the same kind of citizen effort to save this world-class work of public landscape architecture.

The San Francisco Public Golf Alliance is leading a charge to preserve Sharp Park for future generations of golfers and public landscape aficionados, and find a way to restore Sharp Park's frog and snake habitat as well. Despite the Alliance's efforts to raise awareness and funds to maintain environmental harmony at the golf course, the future of this cultural landscape is very much in jeopardy.

Bibliography

Doak, Tom. *The Life and Work of Dr. Alister MacKenzie* (Sleeping Bear Press 2001).

MacKenzie, Alister. *The Spirit of St. Andrews* (Sleeping Bear Press, orig. manuscript 1934, publ. 1995)

Wexler, Daniel. *The Missing Links* (Sleeping Bear Press 2001).

Get Involved

To get involved, please contact the San Francisco Public Golf Alliance at info@sfpublicgolf.com [5]

You can also contact city officials directly to voice your concerns:

San Francisco Recreation and Parks Commission
Jim Lazarus, President
501 Stanyan Street
San Francisco, CA 94117-1898
Recpark.commission@sfgov.org [6]

San Francisco Board of Supervisors
Hon. Sean Elsbernd
#1 Dr. Carleton B. Goodlett Plaza
San Francisco, CA 94102-4689
Sean.elsbernd@sfgov.org [7]

(Please copy all correspondence with San Francisco officials to info@sfpublicgolf.com [5]*.)*

About the Author:
..'e Lancelle is the currently-serving, second-term Mayor of the City of Pacifica, home of the Sharp Park Golf Course. She has been a Pacifica ..nunity leader on public schools and environmental issues, and helped establish the Pacifica Land Trust. Bo Links is a golf historian and author ..ow the Wind (1995, Simon & Schuster) and Riverbank Tweed & Roadmap Jenkins: Tales from the Caddie Yard (2001, Simon & Schuster). As an amateur golf architect, he is two-time winner of the Alister MacKenzie Society's Lido Design Prize for golf architecture. He is a San Francisco attorney, who serves as a volunteer Golf Historian for the City & County of San Francisco. Jeffrey Phillips, when he is not golfing on the Bay Area's public golf courses or volunteering for the San Francisco Public Golf Alliance, is a San Francisco management consultant.
Post your own comment [8]

About TCLF



The Cultural Landscape Foundation (TCLF) is the only not-for-profit (501c3) foundation in America dedicated to increasing the public's awareness and understanding of the importance and irreplaceable legacy of its cultural landscapes.

Through education, technical assistance, and outreach, we broaden awareness of and support for historic landscapes nationwide in hopes of saving this diverse and priceless heritage for future generations. While TCLF seeks donations to support its efforts, it is not a membership organization.

Founded in 1998 by Charles Birnbaum, FASLA, TCLF achieves its mission by

- Collaborating with individuals and local, regional, and national groups to understand and protect our landscape heritage and to reach the broadest possible audience. For example, TCLF is one of the American Society of Landscape Architects' "partners in education";
- Training professionals, students, teachers, and the general public to recognize, document and safeguard America's cultural landscapes;
- Serving as the nation's largest and most valuable non-profit source of information about our nation's historic landscapes and those pioneering individuals who have contributed (through design, planning and advocacy) to this legacy;
- Raising awareness of and support for individual landscapes-at-risk; and
- Recognizing and celebrating the efforts of owners, supporters and stewards of significant American places.

TCLF's overall success can be measured by the millions of people who have learned about cultural landscapes through its website, publications and events—as well as through the growing national awareness of the importance of America's cultural landscapes and the increasing efforts to document and protect this heritage.

TCLF's core efforts include:



Cultural Landscapes as Classrooms
teaching people to "read" the landscapes that surround them, to understand how changes affect these special places, and to become better stewards of our significant cultural landscape heritage.



Stewardship Stories
recognizing individuals who share our vision of "stewardship through education" by working to raise awareness of cultural landscapes in their community.



Landslide
drawing immediate and lasting attention to threatened cultural landscapes, sparking debate and encouraging informed, community-based stewardship decisions



Pioneers of American Landscape Design
chronicling the lives and careers of those who have designed our gardens, parks, streets, campuses, cemeteries, suburbs, and the innumerable other environments in which we live



What's Out There
raising the public's awareness of the rich diversity and interconnectedness of our shared designed landscape heritage by providing context about these sites through an easy-to-navigate, searchable database

Landslide



Pottenger San Francisco

The goal of *Landslide* is to draw immediate and lasting attention to threatened landscapes and unique features.

Landslide sparks debate—revealing the value of everyday places—encouraging informed community-based stewardship decisions. Landslide both highlights and monitors at-risk landscapes and annual thematic listings to save this heritage for future generations. Through web features, traveling exhibits, and print publications, *Landslide* reveals the value of these often forgotten landscapes.

Landslide is designed to educate and thereby rally support at the local, state, and national levels by calling attention to endangered landscapes in communities nationwide. *Landslide* both highlights and monitors at-risk landscapes and annual thematic listings. By creating an interactive, online resource, *Landslide* directs the public to local advocates working to safeguard each site. While many Landslide properties have been saved, others remain at-risk or were lost all together.

Landslide features are written by outside authors and provide a history of each threatened site; the social, cultural, and artistic significance; a biography of the landscape architect or designer, if applicable; and details of the current threat. The articles are reviewed and vetted by TCLF staff prior to publication on our website in hopes of encouraging an enformed dialogue.

This Initiative includes:



At-Risk
richly illustrated, online features that include a history of the site, the nature of the threat, and critical information for learning more and getting involved.



Annual Spotlight
online features, signboard exhibits, and exhibitions of original photography highlight thematic designees, nominated by the public and selected to highlight current issues in design and historic preservation.

At-Risk Landscapes



May 9, 2011

Consensus Reached: Design Workshop to Reopen Heritage Park Plaza

Fort Worth, Texas

The City of Fort Worth closed Heritage Park Plaza in 2007. Concerned citizens have since been working with City officials to address the issues.



April 22, 2011

Washington Square Village Eligible for Listing in the National Register of Historic Places

New York, New York

In April 2011, the New York State Historic Preservation Office (SHPO) determined that the Washington Square Village complex is sufficiently significant to qualify for possible listing in the State and National Register of Historic Places.



April 19, 2011

Brookview Naighborhood Threatened by Potential Development

Fort Wayne, Indiana

Arthur Shurcliff's Brookview was one of the first planned communities in Fort Wayne. It is now threatened by four proposed municipal projects.



April 5, 2011

Sharp Park Golf Course Subject of Lawsuit

Pacifica, California

The 80-year-old Alister MacKenzie-designed Sharp Park Golf Course, owned by the City of San Francisco, but located in its southern beach-side suburb of Pacifica, CA, is the subject of a lawsuit.



March 16, 2011

Northern State Hospital Listed in the National Register of Historic Places

Sedro-Woolley, Washington

Northern State Hospital, a treatment facility for the mentally ill built in 1909, was listed in the National Register of Historic Places on December 20, 2010.



March 14, 2011

Buttonwood Park's Legacy Threatened

vs Master Plan

New Bedford, Massachusetts

The 97 acre, Olmsted-designed neighborhood park, listed on the National Register of Historic Places is threatened by a proposed zoo Master Plan that would double its footprint within the historic park



March 11, 2011

Revolutionary War Era Fishkill Supply Depot Threatened

Fishkill, New York

Fishkill Supply Depot thrived as a sophisticated military city center during the height of the war. Currently, two properties at the heart of the complex are at risk of development



March 11, 2011

Victor Steinbrueck Park Design Threatened by Renovations

Seattle, Washington

Designed to harmonize the traditional market setting of Seattle's Pike Place with surrounding buildings, Victor Steinbrueck Park is now threatened by proposed renovations



November 8, 2010

Fresno Park Threatened by Master Plan

Fresno, California

Roeding Park is an outstanding example of naturalistic landscape design style and a historically significant arboretum. A new master plan for the zoo within it now threatens the landscape



August 11, 2010

San Francisco Continues Funding Sharp Park Golf Course

Pacifica, California

The San Francisco Board of Supervisors adopted a $6.5 Billion final 2010-2011 budget that leaves intact funding for Sharp Park Golf Course

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14 CA ADC § 15064.5

14 CCR § 15064.5

Cal. Admin. Code tit. 14, § 15064.5

Barclays Official California Code of Regulations Currentness
Title 14. Natural Resources
Division 6. Resources Agency
Chapter 3. Guidelines for Implementation of the California Environmental Quality Act
Article 5. Preliminary Review of Projects and Conduct of Initial Study

➡§ 15064.5. Determining the Significance of Impacts to Archaeological and Historical Resources.

(a) For purposes of this section, the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public

Resources Code sections 5020.1(j) or 5024.1.

(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

(4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

(5) When a project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents.

(c) CEQA applies to effects on archaeological sites.

(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to de- termine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial

Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission." Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21083.2, 21084 and 21084.1, Public Resources Code; and Citizens for Responsible Development in West Hollywood v. City of

West Hollywood (1995) 39 Cal.App.4th 490.

HISTORY

1. New section filed 10-26-98; operative 10-26-98 pursuant to PublicResources Code section 21087 (Register 98, No. 44).

2. Change without regulatory effect amending subsections (c)(1), (c)(3), (d) and (e)(1)(B)2.-3. and amendingNote filed 10-6-2005 pursuant to section 100,title 1, California Code of Regulations (Register 2005, No. 40).

14 CCR § 15064.5, 14 CA ADC § 15064.5
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"ADOPTED-Board of Supervisors, San Francisco, Nov. 3, 1930.

"Ayes: Supervisors Andriano, Canepa, Colman, Gallagher, Havenner, Hayden, McGovern, McSheehy, Peyser, Power, Rossi, Shannon, Spaulding, Stanton, Suhr, Toner.

"Absent: Supervisors Miles, Roncovieri.

J.S. DUNNIGAN, Clerk.

Approved, San Francisco, Nov. 14, 1930.

JAMES ROLPH, JR., Mayor"

Ordered spread upon the minutes of this meeting.

lagment of Alister Mackenzie

The Secretary then read the following resolution of the Board of Supervisors:

"RESOLUTION NO. 33566 (New Series):

"RESOLVED, That, pursuant to and in compliance with Section 8, Article XVI of the Charter, the Board of Park Commissioners be and is hereby authorized to employ Dr. Alister Mackenzie, Golf Architect, for services in connection with the construction of the Municipal Golf Course at Sharp Park, San Mateo County.

"ADOPTED-Board of Supervisors, San Francisco, Dec. 8, 1930.

"Ayes: Supervisors Andriano, Canepa, Havenner, McGovern, Miles, Peyser, Roncovieri, Rossi, Shannon, Spaulding, Stanton, Suhr, Toner.

"Absent: Supervisors Colman, Gallagher, Hayden, McSheehy, Power.

J.S. DUNNIGAN, Clerk.

Approved, San Francisco, Dec. 20, 1930.

JAMES ROLPH, JR., Mayor"

Ordered spread upon the minutes of this meeting.

eacon Lights- nt Highway:

A letter was next presented from Chief of Police William J. Quinn, requesting the installation of beacon lights similar to those on safety islands, on each end of the upper Esplanade, namely at Lincoln Way and Sloat Boulevard.

Referred to Superintendent John McLaren, with full power to act.

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Golf Digest GolfWorld

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America's 100 Greatest Golf Courses/2009-10

The game's oldest ranking, established in 1966



NATIONAL GOLF LINKS / No. 15 among America's 100 Greatest.
Stephen Szurlej

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PHOTOS BY STEPHEN SZURLEJ

May 2009

* 2007 RANK IN PARENTHESES
TIES BROKEN IN FAVOR OF COURSES WITH MORE EVALUATIONS

1.	(3) AUGUSTA NATIONAL G.C. Augusta, Ga. / Alister Mackenzie & Bobby Jones (1933)	7,435	72	73.39
2.	(1) PINE VALLEY G.C. Pine Valley, N.J. / George Crump & H.S. Colt (1918)	7,047	70	73.03
3.	(2) SHINNECOCK HILLS G.C. Southampton, N.Y. / William Flynn (1931)	6,781	70	70.25
4.	(4) CYPRESS POINT CLUB Pebble Beach / Alister Mackenzie & Robert Hunter (1926)	6,509	72	69.84
5.	(5) OAKMONT C.C. Oakmont, Pa. / Henry Fownes (1903)	7,255	71	69.17
6.	(6) PEBBLE BEACH G. LINKS Pebble Beach / Jack Neville & Douglas Grant (1919)	6,737	72	68.82
7.	(7) MERION G.C. (East) Ardmore, Pa. / Hugh Wilson (1912)	6,686	70	68.58
8.	(8) WINGED FOOT G.C. (West) Mamaroneck, N.Y. / A.W. Tillinghast (1923)	7,258	72	68.23
9.	(16) FISHERS ISLAND CLUB Fishers Island, N.Y. / Seth Raynor & Charles Banks (1926)	6,566	72	67.28
10.	(9) SEMINOLE G.C. Juno Beach, Fla. / Donald Ross (1929)	6,836	72	66.91

11.	(25) OAK HILL C.C. (East) Rochester, N.Y. / Donald Ross (1925)	7,145	71	66.74
12.	(28) CHICAGO G.C. Wheaton, Ill. / C.B. Macdonald (1894) / Seth Raynor (1923)	6,846	70	66.44
13.	(12) SAND HILLS G.C. Mullen, Neb. / Bill Coore & Ben Crenshaw (1994)	7,089	71	66.39
14.	(14) PACIFIC DUNES Bandon, Ore. / Tom Doak (2001)	6,633	71	66.36
15.	(13) NATIONAL G. LINKS OF AMERICA Southampton, N.Y. / C.B. Macdonald (1911)	6,935	72	66.35
16.	(10) CRYSTAL DOWNS C.C. Frankfort, Mich. / Alister Mackenzie & Perry Maxwell (1931)	6,518	70	66.15
17.	(15) WADE HAMPTON G.C. Cashiers, N.C. / Tom Fazio (1987)	7,218	72	66.05
18.	(20) THE COUNTRY CLUB (Clyde/Squirrel) Brookline, Mass. / Willie Campbell (1895) / Alex Campbell (1902)	6,577	71	66.03
19.	(18) MUIRFIELD VILLAGE G.C. Dublin, Ohio / Jack Nicklaus & Desmond Muirhead (1974)	7,331	72	65.86
20.	(11) MEDINAH C.C. (No. 3) Medinah, Ill. / Tom Bendelow (1928)	7,561	72	65.76
21.	(30) PRAIRIE DUNES C.C. Hutchinson, Kan. / Perry Maxwell (1937) / Press Maxwell (1957)	6,706	70	65.68
22.	(24) WHISTLING STRAITS (Straits) Haven, Wis. / Pete Dye (1998)	7,362	72	65.53
23.	(17) OAKLAND HILLS C.C. (South) Bloomfield Hills, Mich. / Donald Ross (1918) / Robert Trent Jones (1950)	7,445	72	65.47
24.	(22) VICTORIA NATIONAL G.C. Newburgh, Ind. / Tom Fazio (1998)	7,239	72	64.95
25.	(38) THE OCEAN COURSE Kiawah Island, S.C. / Pete Dye (1991)	7,356	72	64.83
26.	(23) THE OLYMPIC CLUB (Lake) San Francisco / Sam Whiting (1924)	7,112	71	64.81
27.	(New) THE CLUB AT BLACK ROCK Coeur d'Alene, Idaho / Jim Engh (2003)	7,130	72	64.75
28.	(36) CASTLE PINES G.C. Castle Rock, Colo. / Jack Nicklaus (1981)	7,606	72	64.65
29.	(26) BETHPAGE STATE PARK (Black) Farmingdale, N.Y. / Joseph H. Burbeck & A.W. Tillinghast (1936)	7,386	71	64.65
30.	(44) BALTUSROL G.C. (Lower) Springfield, N.J. / A.W. Tillinghast (1922)	7,400	72	64.62
31.	(61) RIVIERA C.C. Pacific Palisades, Calif. / George C. Thomas Jr. & W.P. Bell (1926)	7,298	71	64.51
32.	(19) PINEHURST RESORT & C.C. (No. 2) Pinehurst, N.C. / Donald Ross (1935)	7,335	72	64.43
33.	(31) BANDON DUNES Bandon, Ore. / David McLay Kidd (1999)	7,212	72	64.35
34.	(32) SOUTHERN HILLS C.C. Tulsa, Okla. / Perry Maxwell (1936)	7,150	71	64.15
35.	(40) THE GOLF CLUB New Albany, Ohio / Pete Dye (1967)	7,268	72	64.02
36.	(37) SAN FRANCISCO G.C. San Francisco / A.W. Tillinghast (1918)	6,828	71	63.96
37.	(21) BUTLER NATIONAL G.C. Oak Brook, Ill. / George Fazio & Tom Fazio (1974)	7,523	71	63.95
38.	(35) THE HONORS COURSE Ooltewah, Tenn. / Pete Dye (1983)	7,481	72	63.85
39.	(New) SEBONACK G.C. Southampton, N.Y. / Jack Nicklaus & Tom Doak (2006)	7,481	72	63.84
40.	(41) INVERNESS CLUB Toledo, Ohio / Donald Ross	7,255	71	63.79
41.	(27) SHADOW CREEK North Las Vegas, Nev. / Tom Fazio (1990)	7,560	72	63.77
42.	(New) CANYATA G.C. Marshall, Ill. / Bob Lohmann & Mike Benkusky (2004)	7,258	72	63.73
43.	(42) OLYMPIA FIELDS C.C. (North) Olympia Fields, Ill. / Willie Park Jr. (1922)	7,205	70	63.52
44.	(47) THE QUARRY AT LA QUINTA La Quinta, Calif. / Tom Fazio (1994)	7,083	72	63.42
45.	(79) TPC SAWGRASS (Players Stadium) Ponte Vedra Beach, Fla. / Pete Dye (1980)	7,215	72	63.35
46.	(51) RICH HARVEST LINKS Sugar Grove, Ill. / Jerry Rich & Greg Martin (1999)	7,758	72	63.33

47.	(34) LOS ANGELES C.C. (North) Los Angeles / George C. Thomas Jr. (1921)	6,909	71	63.26
48.	(29) KIMLOCH G.C. Manakin-Sabot, Va. / Lester George & Vinny Giles (2001)	7,203	72	63.25
49.	(46) ARCADIA BLUFFS G.C. Arcadia, Mich. / Rick Smith & Warren Henderson (2000)	7,300	72	63.17
50.	(50) SHOAL CREEK Shoal Creek, Ala. / Jack Nicklaus (1977)	7,234	72	63.17

2007 RANK IN PARENTHESES

TIES BROKEN IN FAVOR OF COURSES WITH MORE EVALUATIONS

51.	(52) SPYGLASS HILL G. CSE. Pebble Beach / Robert Trent Jones (1966)	6,953	72	63.15
52.	(48) MILWAUKEE C.C. River Hills, Wis. / H.S. Colt & C.H. Alison (1929)	7,094	72	63.14
53.	(56) GARDEN CITY G.C. Garden City, N.Y. / Devereux Emmet (1899)	6,911	73	63.08
54.	(53) CHERRY HILLS C.C. Englewood, Colo. / William Flynn (1923)	7,586	72	62.94
55.	(45) FOREST HIGHLANDS G.C. (Canyon) Flagstaff, Ariz. / Jay Morrish & Tom Weiskopf (1988)	7,007	71	62.79
56.	(70) DOUBLE EAGLE CLUB Galena, Ohio / Jay Morrish & Tom Weiskopf (1992)	7,140	72	62.72
57.	(99) PETE DYE G.C. Bridgeport, W.Va. / Pete Dye (1994)	7,248	72	62.72
58.	(54) KITTANSETT CLUB Marion, Mass. / William Flynn & Frederic Hood (1922)	6,811	70	62.63
59.	59. (59) DALLAS NATIONAL G.C. Dallas / Tom Fazio (2002)	7,326	72	62.54
60.	(61) PEACHTREE G.C. Atlanta / Robert Trent Jones & Bobby Jones (1947)	7,414	72	62.49
61.	(58) SCIOTO C.C. Columbus, Ohio / Donald Ross (1916)	7,106	71	62.49
62.	(64) EUGENE C.C. Eugene, Ore. / Robert Trent Jones (1967)	7,033	72	62.35
63.	(49) FLINT HILLS NATIONAL G.C. Andover, Kan. / Tom Fazio (1997)	6,946	71	62.34
64.	(62) INTERLACHEN C.C. Edina, Minn. / Willie Watson (1911)	6,900	73	62.31
65.	(43) WINGED FOOT G.C. (East) Mamaroneck, N.Y. / A.W. Tillinghast (1923)	6,792	72	62.29
66.	(66) CONGRESSIONAL C.C. (Blue) Bethesda, Md. / Robert Trent Jones (1962)	7,250	72	62.25
67.	(39) THE PRINCE COURSE Princeville, Kauai, Hawaii / Robert Trent Jones Jr. (1990)	7,309	72	62.08
68.	(New) STONE CANYON CLUB Oro Valley, Ariz. / Jay Morrish (2000)	7,317	72	62.06
69.	(64) EAST LAKE G.C. Atlanta / Donald Ross (1915) / Rees Jones (1995)	7,374	72	62.06
70.	(74) GALLOWAY NATIONAL G.C. Galloway, N.J. / Tom Fazio (1995)	6,901	71	62.06
71.	(85) PLAINFIELD C.C. Plainfield, N.J. / Donald Ross (1921)	7,107	72	62.03
72.	(77) MONTEREY PENINSULA C.C. (Shore) Pebble Beach / Bob Baldock (1961) / Mike Stranz (2004)	6,914	72	62.01
73.	(78) LONG COVE CLUB Hilton Head Island / Pete Dye (1981)	7,026	71	61.99
74.	(86) SHOREACRES Lake Bluff, Ill. / Seth Raynor (1921)	6,521	71	61.99
75.	(93) HARBOUR TOWN G. LINKS Hilton Head Island / Pete Dye & Jack Nicklaus (1969)	6,973	71	61.98
76.	(New) ARONIMINK G.C. Newtown Square, Pa. / Donald Ross (1928)	7,152	70	61.97
77.	(82) LAUREL VALLEY G.C. Ligonier, Pa. / Dick Wilson (1959)	7,327	72	61.97
78.	(95) THE PRESERVE G.C. Carmel, Calif. / Tom Fazio / J. Michael Poellot & Sandy Tatum (2000)	7,067	72	61.96
79.	(86) MAYACAMA G.C. Santa Rosa, Calif. / Jack Nicklaus (2001)	6,785	72	61.94
80.	(New) BANDON TRAILS	6,796	71	61.94

—	Bandon, Ore. / Bill Coore & Ben Crenshaw (2005)			
81.	(33) QUAKER RIDGE G.C. Scarsdale, N.Y. / A.W. Tillinghast (1918)	6.880	70	61.82
82.	(81) THE ESTANCIA CLUB Scottsdale / Tom Fazio (1995)	7.314	72	61.76
83.	(New) EAGLE POINT G.C. Wilmington, N.C. / Tom Fazio (2000)	7.258	72	61.74
84.	(76) SAHALEE C.C. (South/North) Sammamish, Wash. / Ted Robinson (1969)	7.003	72	61.73
85.	(58) KIAWAH ISLAND CLUB (Cassique) Kiawah Island, S.C. / Tom Watson (2000)	7.050	72	61.57
86.	(72) MAIDSTONE CLUB East Hampton, N.Y. / Willie Park Jr. & Jack Park (1924)	6.403	72	61.57
87.	(91) SAGE VALLEY G.C. Graniteville, S.C. / Tom Fazio (2001)	7.331	72	61.53
88.	(57) SOMERSET HILLS C.C. Bernardsville, N.J. / A.W. Tillinghast (1918)	6.659	71	61.47
89.	(67) BLACK DIAMOND (Quarry) Lecanto, Fla. / Tom Fazio (1988)	7.159	72	61.46
90.	(83) TULLYMORE G.C. Stanwood, Mich. / Jim Engh (2001)	7.250	72	61.38
91.	(89) HAZELTINE NATIONAL G.C. Chaska, Minn. / Robert Trent Jones (1962)	7.360	72	61.29
92.	(71) CALUSA PINES G.C. Naples, Fla. / Michael Hurdzan & Dana Fry (2001)	7.215	72	61.27
93.	(92) SYCAMORE HILLS G.C. Fort Wayne, Ind. / Jack Nicklaus (1989)	7.340	72	61.20
94.	(90) HUDSON NATIONAL G.C. Croton-on-Hudson, N.Y. / Tom Fazio (1996)	6.955	70	61.18
95.	(68) VALHALLA G.C. Louisville / Jack Nicklaus (1986)	7.540	72	61.15
96.	(73) SANCTUARY Sedalia, Colo. / Jim Engh (1997)	7.044	72	61.00
97.	(75) OCEAN FOREST G.C. Sea Island, Ga. / Rees Jones (1995)	7.321	72	60.87
98.	(65) GRANDFATHER G. & C.C. Linville, N.C. / Ellis Maples (1968)	7.101	72	60.85
99.	(69) BLACKWOLF RUN (River) Kohler, Wis. / Pete Dye (1990)	7.405	72	60.82
100.	(New) CROOKED STICK G.C. Carmel, Ind. / Pete Dye (1964)	7.516	72	60.81

Keywords: AMERICA'S 100 GREATEST GOLF COURSES, GOLF COUSE RANKINGS, 2009-10, AUGUSTA NATIONAL, NATIONAL GOLF LINKS, PINE VALLEY,

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HALL OF FAME FACT

Alister MacKenzie developed the groundbreaking camouflage techniques employed by the British military during WWI

SCORE CARD

Other Accomplishments:

Codified 13 features of an ideal golf course
Credited with more than 400 designs or redesigns
Designs include Augusta National, Cypress Point, Crystal Downs, Lahinch, Royal Melbourne, Pasatiempo and Yarra Yarra

World Golf Hall of Fame Profile: Alister MacKenzie

Augusta National, Cypress Point, Royal Melbourne, Pasatiempo, and Crystal Downs all have two things in common - the golf courses were designed by Alister MacKenzie and have become veritable cathedrals of the game.

Former United States Golf Association President Sandy Tatum calls Cypress Point "the Sistine Chapel of Golf" and few would argue with him. Since opening in 1928, Cypress Point's 16th hole has been the most photogenic in the world. Initially, MacKenzie considered making 16 a do-or-die par 4, but he was convinced otherwise by U.S. Women's Amateur champion Marion Hollins.

"The amazing thrill of driving successfully over the ocean at the sixteenth hole at Cypress Point," he said, "more than compensates for the loss of a dozen balls."

Every April, the golf world descends on perhaps MacKenzie's best known course for The Masters. The greatest player of his generation, Bobby Jones, handpicked MacKenzie to design Augusta National. When Jones was upset in the first round of the 1929 U.S. Amateur at Pebble Beach, he played Cypress Point and marveled at the layout. When they met, the pair realized their shared affection for the Old Course at St. Andrews, where Jones won 1920 British Amateur and the 1927 British Open. In 1923, MacKenzie was hired by the Royal and Ancient Golf Club to survey the Old Course. MacKenzie's map hangs in the Royal and Ancient clubhouse to this day.

A wonderful partnership was formed. "MacKenzie and I managed to work as a completely sympathetic team," Jones wrote in Golf is My Game. "Of

course, there was never any question that he was the architect and I his advisor and consultant." With Jones hitting test shots at his side, MacKenzie created the perfect puzzle for the masters of the game. The hand of man is unobtrusive, the beauty of the course is ever-present, and despite the changes in the landscape wrought by the passing of time and efforts to stay current with technology, there is not jarring artificiality, only a serene naturalness. Sadly, MacKenzie never got to see the final product of his masterpiece. He died before the club opened in 1934.

Like the artist Vincent Van Gogh, MacKenzie's work has been better appreciated following his death. Royal Melbourne has been called the best course south of the equator. Routinely 10 of his courses are rated in the top 100 in the world by the major golf magazines.

MacKenzie's book, Golf Architecture, published in 1920, was the first to present and explain the fundamentals of golf course design. MacKenzie combined modest golf holes with more heroic challenges, always allowing room for the lesser player to enjoy the game.

MacKenzie's forte was his greens. He refrained from flattening natural undulations and contrived to create artificial undulations that were "indistinguishable from nature." MacKenzie practiced before the era of bulldozers, which left him little capacity to force golf holes where they didn't belong. His approach to providing fair and strategic golf without disrupting the site is a model for golf course design that lasts to this day.

Originally a surgeon in England, MacKenzie served in the Boer War and World War I. MacKenzie abandoned medicine and joined H.S. Colt, the first architect to devote a career solely to designing golf courses, and began working in the British Isles. His greatest work was to come after he immigrated to the U.S. in the early 1920s. By the end of his career MacKenzie had laid out some 400 golf courses.

MacKenzie died of heart failure on January 6, 1934 in Santa Cruz, Calif. His ashes were spread over the Pasatiempo golf course. He left behind a wonderful legacy of golf architecture. During his final years, he wrote a book The Spirit of St. Andrews, and it included a foreword by Bobby Jones. It was never published during his lifetime, but a copy was found by his step-grandson and was published in 1995. It gave those who admire his work one last treasure from a man whose golf courses will be treasured for generations to come.

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MacKenzie's Sharp Park Under Siege
A classic Depression-Era public seaside links, designed by a master, is in jeopardy

by Bo Links and Richard Harris

Sharp Park, located on Salada Beach in the San Francisco coastside suburb of Pacifica, shares the distinction with the Eden Course at St. Andrews, as the world's only Alister MacKenzie-designed, municipal seaside golf links. But this rare and beautiful golf gem, which opened in 1932, is today under relentless political attack by a tag-team of golf-skeptics and environmental absolutists, who are demanding that the City of San Francisco plow the golf course under and replace it with a wetlands restoration project.

To save this important golf legacy, the national and international golf communities will have to rise to the occasion.



MacKenzie transformed these dunes into...

A Great Walk, Endangered

At the same time San Francisco is preparing to host the 2009 President's Cup in October at another great public course (Harding Park), the city's Board of Supervisors have directed the Recreation and Park Department to study the alternative possibilities of (1) closing Sharp Park, (2) reducing it to 9 holes, or (3) preserving and modifying the 18-hole course to create new habitat for threatened frog and snake species which now share the property with the golfers.

To avert the international limelight of President's Cup media coverage, officials at Rec and Park are waiting " until after the President's Cup press bus rolls out of town " before they make the study public.

In the meantime, Bay Area golf enthusiasts, historic preservationists, including the Washington, D.C.-based cultural Landscape Foundation [1], and others who treasure Sharp Park, including Pacifica Mayor Julie Lancelle, are fighting to rescue Dr. MacKenzie's muni masterpiece. As of this writing, the battle for Sharp Park has been joined. The outcome " with implications for golfers and golf courses everywhere " hangs in the balance.

How in the world did we get to this point? And what can be done about it?



one of America's great cultural landscapers.

The Gold Rush, A Gift, and The Making of Sharp Park

Sharp Park Golf Course occupies approximately 120 acres of a 400 acre park " most of it forested wilderness " bequeathed to the City of San Francisco in 1917 by the executors of the estate of Honora Sharp, the widow of George Sharp a prominent San Francisco attorney who sailed around Cape Horn and arrived in San Francisco in 1849. He made a fortune during and after the Gold Rush but dropped dead in a local courtroom while pleading a case in 1882. The gift from Mrs. Sharp's estate is subject to the condition that the property will revert to the Sharp family heirs unless it is used exclusively for a public playground or park.

Ic photographs show that before the golf course, the land was predominantly a barren and deserted stretch of sand dunes surrounding the Laguna Ja (Spanish for salty lake), a brackish lagoon located in an area designated on the 1892 US Geological Service topographic map as Salt Valley ...

In 1930, when San Francisco's two existing public courses at Lincoln Park and Harding Park were oversubscribed with enthusiastic golfers, the man who created Golden Gate Park had a brainstorm. Why not build a third course on the land that had been donated by Mrs. Sharp? So John McLaren, the legendary steward of San Francisco open space and parkland, floated the idea of a seaside public golf course at Sharp Park. McLaren's handpicked architect, Dr. Alister MacKenzie, was retained by unanimous vote of the San Francisco Board of Supervisors to build the City's third municipal course in the dunes at Salada Beach.



You will never see a more eclectic group of golfers anywhere.

MacKenzie was by then a Bay Area resident, with an office in Oakland, and a recent string of Northern California architectural successes, including Cypress Point (1928), Pasatiempo (1929), Claremont (Oakland, 1929, remodel) Lake Merced (Daly City, remodel 1928-29) California Golf Club (South San

Francisco, remodel 1928), and Meadow Club (Fairfax, 1926)

Dr. MacKenzie designed Sharp Park in 1930-31, leaving construction supervision to his partners Chandler Egan (two-time U.S. Amateur champion, 1904 Olympic golf silver medalist, and designer of a string of outstanding courses in Oregon and Washington) and Robert Hunter, both of whom worked with MacKenzie when he remodeled Pebble Beach for the 1929 U.S. Amateur Championship. They were joined by Jack Fleming, who had been the construction foreman at Cypress Point.

The Good Doctor's Golf Prescription: beauty, fun, accessibility and pleasurable excitement

Born in 1870 in Yorkshire, England, Alister MacKenzie received a medical education at Cambridge, and served as a British Army surgeon in the Second Boer War in South Africa in the 1890s. He later quit the practice of medicine and went into partnership in turn-of-the-20th-century London with H.S. Colt, the first-ever business dedicated solely to golf architecture.

One of the reasons why I, a medical man, decided to give up medicine and take to golf architecture was my firm conviction of the extraordinary influence on health of pleasurable excitement, especially when combined with fresh air and exercise, MacKenzie explained. How frequently have I with great difficulty persuaded patients who were never on my doorstep to take up golf, and how rarely, if ever, have I seen them in my consulting room since. [2]

As consulting architect at St. Andrews in the early 1920s, MacKenzie was the first to chart the swales, hollows and pits which characterize the fairways of the Old Course. Golf in its early days was always played on commons or links land which bordered the sea, MacKenzie explained. The natural characteristics of this type of land made it easily the most suitable for the game. [3]

Golfers the world over have come to know Dr. MacKenzie as one of history's greatest golf architects, whose courses circle the globe from New Zealand (Titirangi) to Australia (Royal Melbourne and New South Wales) to Argentina (The Jockey Club) to England (Alwoodly and Moortown), Ireland (Cork and Lahinch) and, of course, Scotland (Blairgowrie, and his work at St. Andrews, including assisting H.S. Colt in designing the Eden Course).

MacKenzie in America

In the United States, Dr. MacKenzie worked primarily in the Midwest (where he built university courses at the University of Michigan and Ohio State, and the great layout at Crystal Downs in Northern Michigan) and California. Indeed, his final resting place is Santa Cruz, overlooking Monterey Bay, 90 miles south of San Francisco, where his ashes were scattered at Pasatiempo, the wonderful up-and-down course he built for Marion Hollins. Bobby Jones played Pasatiempo on opening day in 1929 and it was that experience, as well as the fact that MacKenzie (working again for Mrs. Hollins) had also recently designed the amazing new course at nearby Cypress Point, that caused the game's greatest amateur (and some say greatest player) to retain MacKenzie to construct Jones's dream course, Augusta National, on an abandoned nursery in rural Georgia.

In 1920, MacKenzie published "Golf Architecture," the first-ever book on the subject of golf course design, in which he enumerated key principles of golf architecture, including:

- The course should have beautiful surroundings.
- [T]he course should be arranged so that the weaker player with the loss of a stroke, or portion of a stroke, shall always have an alternate route open to him."
- "[T]here should be a complete absence of the annoyance and irritation caused by the necessity of searching for lost balls" and
- "[T]he long handicap player or even the absolute beginner should be able to enjoy his round in spite of the fact that he is piling up a big score." [4]

Dr. MacKenzie was a devotee of natural beauty, and an artist in the tradition of Lancelot Capability Brown, the 17th Century father of English naturalistic landscape design. The chief object of every golf architect or greenkeeper worth his salt, MacKenzie said, "is to imitate the beauties of nature so closely as to make his work indistinguishable from Nature herself." [5]

"My reputation," he continued, "has been based on the fact that I have endeavored to conserve the existing natural features and, where these were lacking, to create formations in the spirit of nature herself. In other words, while always keeping uppermost the provision of a splendid test of golf, I have striven to achieve beauty. This excellence of design is more felt than fully realized by the players, but nevertheless it is constantly exercising a subconscious influence upon him and in course of time he comes to admire such a course as all works of beauty must be eventually felt and admired." [6]

An ardent advocate of municipal golf, MacKenzie hoped to live to see the day when there are the crowds of municipal courses, as in Scotland, cropping up all over the world. There can be no possible reason against, and there is every reason in favor of, municipal courses. [7]

Unfortunately for public golfers, MacKenzie worked mostly for private developers, so very few of his courses are publicly accessible. Most golfers only hear about MacKenzie's greatness when the world's best play the Masters every April at Augusta National. Similarly, most American golfers never get closer to a genuine seaside links than their couches and TV sets every summer during the British Open.

The Miracle at Salada Beach

But for the past 77 years, lucky San Francisco muni players and visitors have had Sharp Park," the Pacific Coast's answer to North Berwick," a place where a remarkably diverse golfing clientele of all races, languages, social classes, and genders pull their carts, hit their shots, and enjoy a beer and a sandwich in a charming 19th hole pub, for a modest weekday greens fee under $30. The Spanish hacienda-style clubhouse was a Works Progress Administration construction project, designed by an associate of Willis Polk, who in turn was head of the San Francisco office of Chicago-based master planner Daniel Burnham. In other words, when constructing Sharp Park," in the dark days of the Great Depression," San Francisco went first-class all the way.



The clubhouse at Sharp Park is a WPA classic.

As for the course design, Dr. MacKenzie made the most of the opportunity handed him by John McLaren. Deploying state-of-the-art machinery and innovative engineering techniques, he dredged the Laguna Salada, converting it from a brackish marsh into a fresh water lake, then set about surrounding the lagoon with golf holes. Sharp Park incorporates MacKenzie's prescription that a golf course should be a piece of surpassing natural beauty, and that

the game should foremost be a fun and healthful pastime, equally playable and enjoyable by persons of all abilities.

At Sharp Park, MacKenzie combined features in one place that he had scattered over other layouts. His original design included holes featuring multiple tees (Nos. 2, 5, and 14); double fairways (Nos. 5 & 10), cross bunkering (No. 16), fairways in the sand dunes (Nos. 3 & 7) and several holes bordering the inland lake (Nos. 4, 5, 8, 9, 10 and 11). There were tees on spits in the water, and island landing areas. Two of the holes were clearly inspired by MacKenzie's Lido Hole which catapulted him to fame in 1914 when he won a design contest sponsored by *Country Life* magazine.



Looking at Sharp Park is like viewing a John Constable painting of an English landscape.

The plans were drawn in 1930-31, and while MacKenzie was attending to business in Europe, his colleague Chandler Egan supervised construction. Egan marveled at the site's remarkable seascape, prompting local reporters to refer to the course as a second St. Andrews. Everyone associated with the project fully intended it to become the finest municipal golf course in America. [1]

1. local press reports analogized the effort to build Sharp Park as nothing less than an attempt to bring a touch of Scottish coastland on the Pacific. One report said the joint effort of McLaren and MacKenzie would create a seaside municipal course of outstanding character akin to those of the [illegible]ish and Scottish coasts. [2]

When the course opened for play on April 16, 1932 it played 6,173 yards to a par of 71. The local press echoed Egan's theme, noting that the course presented a thorough test of golf and a perfect seaside layout. One report commented that [c]uriesque dunes and a lagoon or so dot the landscape to add their charm and hazards to the golfer's day. [3]

Modern architectural scholars have come to regard MacKenzie's design at Sharp Park as one of America's greatest public courses. Daniel Wexler, America's leading exponent of lost courses, has lauded Sharp Park as a marvelous golf course featuring seaside holes, two double fairways, a large lake and a cypress-dotted setting fairly reminiscent of Monterey. It was, in short, a municipal masterpiece. [4] In a call for restoration, Wexler observed, after surveying hundreds of public and private courses from coast to coast, that the original Sharp Park would have to stand well out in front as America's finest municipal golf links. [5]

Tom Doak, perhaps the country's most noted authority on golf course renovation, has cited Sharp Park as a milestone, evidencing an evolution in Dr. MacKenzie's style even at the height of his fame as the country's most sought-after golf architect. [6]

One of today's most prolific golf architecture critics, Geoff Shackelford, echoes these themes, saying, Certainly no municipal course design has ever come close to matching the overall package of beauty and affordable links-style golf. [7]

MacKenzie himself, in his comprehensive (and long lost) manuscript, *The Spirit of St. Andrews*, praised Sharp Park and San Francisco's public golf facilities in general:

> "The municipal courses in San Francisco are far superior to most municipal courses. The newest, which we constructed at Sharp Park, was made on land reclaimed from the sea. The course now has a great resemblance to real links land." [8]



This sea wall protects the course from the ocean, which is only a wedge shot away. Two of MacKenzie's original holes were right on the beach, but erosion and flooding forced the City to move inland with the construction of four new holes in 1941.

Urban legend long held that portions of the original course were washed away in the 1930s by powerful winter storms. But in truth, the course weathered the storms until 1941, when the original strand holes (Nos. 3 and 7) were replaced by an unreinforced sea wall, and four excellent new holes were built by MacKenzie's associate Jack Fleming, who by then had become San Francisco's supervisor of golf. The new holes were built (following MacKenzie's death in 1934) in a canyon east of the rest of the golf course, located on the other side of what was then state Highway 1. (An aerial photograph taken in March 1941 shows the original course still intact; the picture was taken just prior to the building of Fleming's four new holes.)

Sharp Park Today

In 2009, twelve of Sharp Park's current 18 holes are MacKenzie originals, and an additional two holes lie in original fairways, but without original greens. While the course has seen trees mature, traps grassed-in, a stream or two culverted, and withstood other relatively minor insults of the golf course aging process, the unmistakable fact is that 14 of 18 holes track MacKenzie's original routing. A comparison of the present-day course with the original routing maps proves the point, as do the hole-by-hole descriptions penned by Jack Fleming for one of the San Francisco newspapers for the course opening in 1932.

Those familiar with MacKenzie's style will immediately recognize the Good Doctor's trademark heaving, tumbling greens at current holes 1, 2, 3, 9, 10, 11, 13, 14, 15, 17, and 18. Fairway undulations and mounds on current holes 1, 3, 9, 10, 14, and 16 mimic the famous fairway bumps and hollows at the Old Course at St. Andrews. And the deception bunker 50 yards in front at the right side of the current 14th green is a classic bit of MacKenzie's renowned use of camouflage principles.

A walking tour of the current course not only reveals the original green contours and the locations of original bunkers, but a detour through the ice-plant strewn sand dunes in the shadow of the sea wall also reveals three of the lost holes abandoned in 1941 when the new holes were built east of Highway 1.



The lost holes are there, waiting to be reclaimed!

Overarching the design details at Sharp Park is MacKenzie's beautiful landscape architecture. The Monterey Cypress that define several fairways frame picturesque views of the mountains and headlands surrounding the low-lying golf course. It is as if the Good Doctor had set the fortunate golfer down in the middle of an early 19th Century English romantic landscape painting by John Constable.



This picture shows portions of the original 4th and 8th holes.

Although time and underfunded maintenance have taken the edge off many of the original features, Sharp Park is still unmistakably a great golf course" a MacKenzie classic, and an American masterpiece. But it is more than that. Sharp Park incorporates Dr. MacKenzie's faith in the capacity of public golf to help enormously in increasing the health, the virility and the prosperity of nations. It is a public golf companion piece to the Golden Gate Bridge, a monumental engineering and artistic feat, created in the depths of the Great Depression by a great artist, to inspire and uplift the public spirit.



This shot is in the vicinity of the original (and lost) fourth green. Are we standing in a MacKenzie bunker?

In the throes of the Great Recession of the early 21st Century, the Good Doctor's Golf Prescription remains timely.

Who Would Want to Destroy Such a Place?

ourse is real estate. Those who hold it eventually have to contend with those who covet it. That time has arrived for Sharp Park.

The charge to destroy the golf course is lead by powerful forces, including the San Francisco Neighborhood Parks Council, a public parks advocacy organization, funded partly by taxpayer dollars, whose founder and spokeswomen Isabel Wade has publicly denigrated golf as "predominantly a male sport and frankly a white sport" and not a family-oriented sport that you do with other folks. Joining in the attack is the Tucson-based Center for Biological Diversity, a controversial organization specializing in Endangered Species Act litigation, which in September, 2008 issued a notice-of-intent-to-sue-letter to the City of San Francisco, alleging depredations to the endangered San Francisco Garter Snake and California Red-legged Frog at the golf course. The running drama of the CBD's threats and its related campaign to turn the golf course into a dedicated frog and snake preserve, the San Francisco Board of

Supervisors May, 2009 Ordinance directing study of development alternatives at Sharp Park, and the golf community's reaction, is described in detail in recent news reports.[21]

To be sure, the snake and frog are federally-listed, and are reputed to live in and about the ponds on the golf course, and on land adjacent to the course. And for their part, the golfers and golf course supporters think that golfers, snakes, frogs, and All God's Creatures can live and let live at Sharp Park, and that the creatures native habitat and the historic golf course can both be dramatically improved, for the benefit of all.

But there is considerable irony here. The snake and frog are freshwater species, and historic photos show that before the golf course, the area was mostly barren dunes surrounding the brackish Laguna Salada. According to scientific studies, Laguna Salada prior to the golf course was unlikely to have been home to either species, due to the high salt content of the water.[22] And the first scientific records of the San Francisco Garter Snake at the property are studies made in the mid-1940s,[23] long after golf course irrigation and the construction of the first sea wall in 1941 had changed Sharp Park's hydrology from brackish to freshwater.



A west coast version of The Old Course.

So now the environmental absolutists campaign to drive the golfers off and close the very golf course that attracted the frog and snake in the first place strikes golfers as beyond common sense, and beyond responsible science. It is Out of Bounds.

Reflections – And a Call to Action

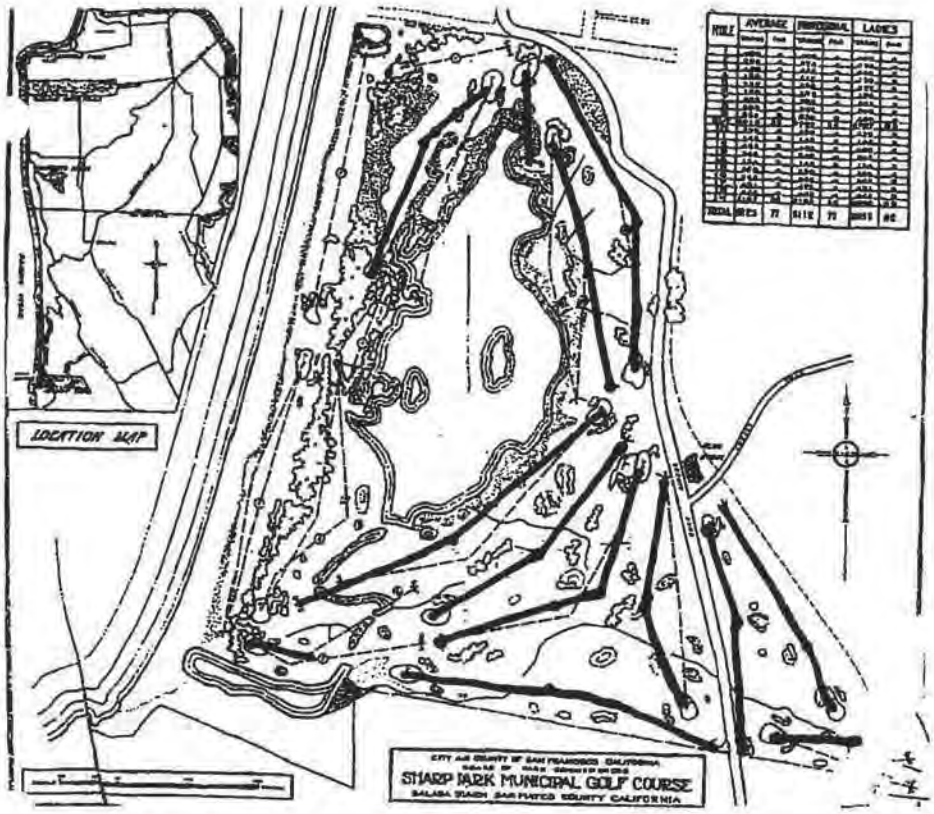
Whether the golfers will be able to keep the course or whether it will be converted to a frog and snake preserve are real political questions in San Francisco and in Pacifica.

Unless the golfing world stands up to demand preservation of Dr. MacKenzie's historic seaside public links, and unless money is raised within the golfing community to help preserve golf at Sharp Park while at the same time enhancing natural habitat for the endangered species in and about the property, this great work of golf's greatest architect will be lost forever.

If a golf course with Sharp Park's historic legacy and devoted multicultural clientele can be destroyed by a combination of anti-golf prejudice and over-aggressive use of the Endangered Species Act, no golf course is safe. For these reasons, the San Francisco Public Golf Alliance solicits the support of golfers everywhere to save this municipal masterpiece.

For more information, contact either Bo Links (bo@[illegible].com) or Richard Harris (richard@[illegible].com) or go to our website (www.sfpublicgolf.com). Once there, sign up for updates, make your voice heard, and contribute your support to the cause.

HOLE DESCRIPTIONS



As shown on this map of the original MacKenzie layout, 12 of the original holes are still in play. A portion of another hole is in use, and remnants of several "lost holes" remain in the dunes west of the lagoon.

Written by Jack Fleming

As published in the *San Francisco Call Bulletin*, 1932

Hole 1 (current 11th hole) – 409 yards – Par 4

A fairly long two shot hole slightly dog legged. No particular difficulties to a straight hitter.



This was the original opening hole, and a test at that: over 400 yards back in 1932

Hole 2 (current 12th hole, shortened to a 3-par) – 262 yards – Par 4



This hole original was a short par 4 with double tees and a routing that crossed a corner of the lagoon. Today, it is a stout three par, backed against the sea wall with ocean breezes always in play

A short two shotter. Drive must clear an arm of lake at about 100 yards, but a wide fairway available at 175 yards out. Green tail back against trees and trapped in right front

Hole 3 (lost) – 420 yards – Par 4

One of the ocean holes constructed on the beach in a slight depression bounded by sand and sand grass embankment on left, trees on right. Entrance to green slightly advantageous from left on account of traps

Hole 4 (lost) – 120 yards. Par 3

A one shotter. Green very large, but well trapped in front and right, trees left and rear

Hole 5 (current 17th hole) – 327 yards – Par 4



This hole was one of two that MacKenzie modeled after his famous "Lido Hole" the design entry he submitted in 1914 to Country Life magazine that launched his career.

A lakeside hole and one of the most interesting holes on the course, similar to Dr. MacKenzie's ideal golf hole [a reference to the Lido Design]. Three tees, four routes. Easy route probably will cost at least one extra stroke to get on while the other combinations of tees and routes give rewards proportionate to their respective risks



This hole was one of two that MacKenzie modeled after his famous "Lido Hole" the design entry he submitted in 1914 to Country Life magazine that launched his career

Hole 6 (lost) – 158 yards – Par 3

A difficult par. Green well trapped

Hole 7 (lost, paralleled current 15th hole) – 385 yards – Par 4

Similar to No. 2, but in opposite direction. A trap endangers the short player on his second, but properly played as a two shot hole a par is possible

Hole 8 (lost) – 396 yards – Par 4

dog, quite difficult for two shots. Drive is blind and over trees if played close to get in opening for a good second. Plenty of fairway, however, for who play short and do not care to risk lines on right for possible par. The wide play practically requires three strokes to get on

Hole 9 (current 13th hole) – 538 yards – Par 5



odern day 13th as viewed from behind the old 9th tee

side hole with wide, sandy beach on water side. Back tee should be used by all, as water carry is very short and close to tee. Requires three good shots to get on if dogleg is played, but possibly a very long sure approach will get in under par

Hole 10 (current 14th hole - left fairway now part of marsh) – 382 yards – Par 4



This is the other hole MacKenzie modeled after his Lido Hole. The original design, like that of the original 5th hole, featured two fairways. The one on the left, closest to the lagoon, was a peninsula much like the Lido design. It offered the shorter route to the green, a temptation for the adventurous player. Today, the lagoon feature has been lost, but the hole still presents a challenge as it follows a gentle curve around the hazard. A mound and camouflage bunker protect the green.

One of the best holes, two tees, four possible routes, sand and water carries optional. The ideal shot is an accurately placed ball on an island with a water carry on both first and second shots. If well placed on first, the green opens wide for a pitch and run second. All other approaches to the green are guarded.

Hole 11 (currently 15th hole) – 142 yards – Par 3

A fairway-less short hole. Water and sand carry. Irap green. Green, however, is long and should receive an average straight ball easily.

Hole 12 (current 18th hole) – 486 yards – Par 5

Fairway flat, double dogleg. Not difficult except to get two good straight drives in succession.

Hole 13 (current 3rd hole) – 345 yards – Par 4

Passing the clubhouse from No. 12 green to No. 13 tee. The thirteenth, fourteenth and fifteenth are all holes of a different type than the lakeside and ocean holes. No 13 is an upland type of hole of average difficulty. The green is well trapped.

Hole 14 (shortened; current 8th hole) – 134 yards – Par 3



This sporty par 4 was originally the 14th hole. The green is well protected and one can readily see how MacKenzie's original green must have heaved and flowed with the bumps and hollows that are there today.

This short hole has two tees. The tee with the carry across the creek opens into green easily, while on crossing creek to the other tee a more difficult shot over a trap at the green is encountered. Directly into prevailing winds.

Hole 15 (current 2nd hole) – 339 yards – Par 4



Originally the 15th hole, this is another mid-range four par to a green that was a MacKenzie classic: rolling and undulating to provide no end of excitement for players of all abilities. There are indications on the ground today to indicate that the original green most likely wrapped around the bunker, which itself was shaped somewhat like a cloud another Mackenzie hallmark.

Similar to No. 12. At present along the edge of the county road, which it is planned to re-locate. No. 15 green is near clubhouse.

Hole 16 (current 1st hole) – 383 yards – Par 4

A hole with two optional routes and a creek to cross.

Hole 17 (current 9th hole) – 471 yards – Par 5

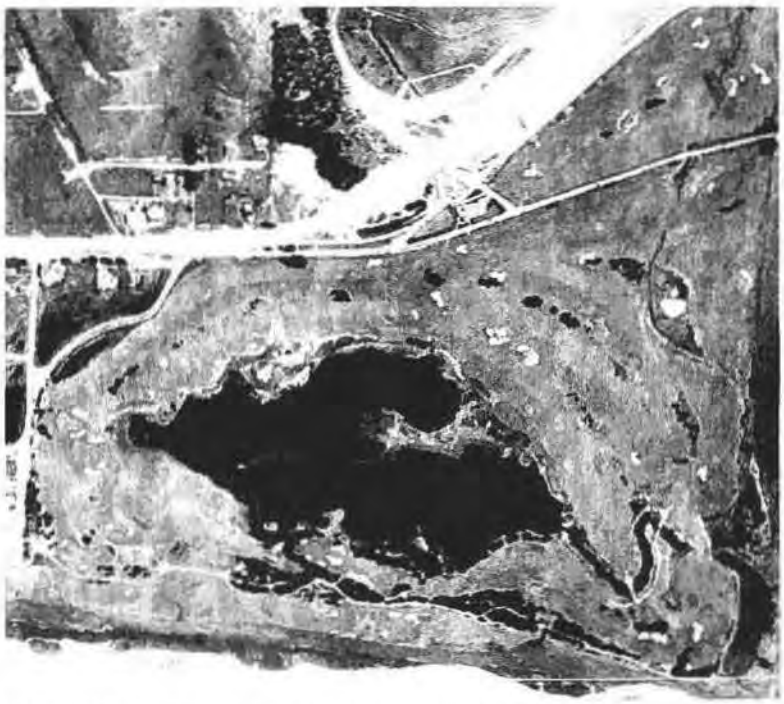


Par 5 was the original 17th hole. The green is framed beautifully by cypress trees planted by John McLaren, the man who created Golden Gate Park. MacKenzie credited with planning around the golf course to enhance the beauty of the natural landscape.

A long hole down the south property line. The green is on a 15 foot fill.

Hole 18 (current 10th hole) – 443 yards – Par 4

The finishing hole is long and hazardous if not successfully played on both long shots, but the green is wide, open and nicely rolling in order to lend interest to the many thrilling final decisions which will no doubt be made on it. A clump of trees guards the green on the left.



The 1941 aerial photo shows that the urban legend of the course washing away shortly after it opened, is a myth. The picture shows the original course almost fully intact prior to the creation of four new holes inland, on the other side of a state highway.

The End

[1] Landslide, The Cultural Landscape Foundation. *â€œAlister MacKenzie's Sharp Park*, July, 2009. (Note: links to this and all sources cited can be found in the News and Resources section of the San Francisco Public Golf Alliance website: http://www.sfgolfcourse.com/news.html)

[2] Williams & Associates, *Laguna Salada Resource Enhancement Plan*, (June, 1992) , at pp 2-3, and Fig. 2.

[3] Alister MacKenzie, *The Spirit of St. Andrews*, (Sleeping Bear Press 1995) at p. 246

[4] Id. at p. 1

[5] Id. at p. 41-42

[6] Id. at p. 50.

[7] Id. at p. 51

[8] Id. at p. 250

[9] â€œH. Chandler Egan Praises Possibilities of Sharp Park Golf Links (sub-head: New Municipal Course Ideal Claims Expert, *San Francisco Chronicle* February 26, 1930, page H-3

[10] Appropriation For Third S.F. Golf Course Receives Okeh, *San Francisco Examiner*, February 22, 1930, page 15

[11] â€œNew San Francisco Course Opens, *San Francisco Examiner*, April 16, 1932, page 17

[12] Wexler, *The Missing Links* (Sleeping Bear Press 2001) at p. 113

[13] Id. at p. 116

[14] Doak, *The Life and Work of Dr. Alister MacKenzie* (Sleeping Bear Press 2001) at p. 154

[15] Shackelford, Sharply Divided, *Golf World*, July 20, 2009, at p. 31

[16] MacKenzie, *The Spirit of St. Andrews* (supra, fn 3) at p. 171-172

[17] Tee Topics (sub-head: Here's What You Find at Sharps [sic] Park – Fleming Describes City's Newest Layout), *San Francisco Call-Bulletin*, March-April 1932. The hole-by-hole descriptions are included at the end of this article

[18] *The Spirit of St. Andrews* (supra, fn. 3) at pp. 171-172.

[19] Id. at p. 250

[20] KQED Radio, Aug. 31, 2007, *â€œThe Future of Public Golf in San Francisco.â€*

[21] KGO TV (ABC), *The Fate of Sharp Park*, â€¦ August 12, 2009, Geoff Shackelford, Sharply Divided, (supra, fn. 15), Cliff Sampson, Sharp Elbows, Environmentalists and Golfers Square Off Over Sharp Park, *Sports Illustrated*, May 11, 2009 at pp. G-3-G-5.

[22] Williams & Associates, *Laguna Salada Reource Enhancement Plan*, (supra, fn. 2), at pp. 2-3

[23] Swaim Biological, *Sharp Park Wildlife Surveys*, etc. Dec. 4, 2008, at p. 13-14

THE END

Search

11

The Architects of GOLF



A Survey of Golf Course Design from Its Beginnings to the Present, with an Encyclopedic Listing of Golf Architects and Their Courses. A Completely Revised and Expanded Edition of *The Golf Course*.

Geoffrey S. Cornish
and Ronald E. Whitten

next teeing ground people sometimes forget and commence playing some other game.

8. Hills on a golf course are a detriment. Mountain climbing is a sport in itself and has no place on a golf course. Trees in the course are also a serious defect, and even when in close proximity prove a detriment.
9. Glaring artificiality of any kind detracts from the fascination of the game.

Late in life, however, Macdonald despaired of both the game of golf and golf architecture. In one of his last pieces of correspondence, to golf architect Perry Maxwell, he wrote, "Young man, you have the idea of a real golf course, and I am sorry I can't encourage your enthusiasm by going to see what is undoubtedly a most wonderful and ideal location, but I can't. I tell you I am through. I wouldn't walk around the block to see it for I don't want to get interested in another golf project however fine. But I do wish you the best of luck."

Courses by Charles Blair Macdonald:

Connecticut: Yale University GC (1926), with Seth Raynor, Charles Banks and Ralph Barton.
Illinois: Chicago GC (1895); Downers Grove GC [FKA Chicago GC] (9 1893).
Maryland: Gibson Island GC (9 1922, NLE), with Seth Raynor.
Missouri: St. Louis CC (1914), with Seth Raynor.
New York: Blind Brook C (routing 1915), with Seth Raynor; [The] Creek C 1925), with Seth Raynor; Deepdale GC (1925, NLE), with Seth Raynor; H. P. Whitney Estate G Cse (NLE), with Seth Raynor; Lido GC (1917, NLE), with Seth Raynor; [The] Links GC 1919, NLE), with Seth Raynor; Moore Estate G Cse (NLE), with Seth Raynor; The] National Golf Links of America 1911); Otto Kahn Estate G Cse 1925, NLE), with Seth Raynor; Piping Rock C (1913), with Seth Raynor; Sleepy Hollow GC (1914), with Seth Raynor.
West Virginia: Greenbrier GC (Old White Cse 1915), with Seth Raynor.
Bermuda: Mid Ocean C (1924), with Seth Raynor, Charles Banks and Ralph Barton.



Alister Mackenzie, 1932 COLLECTION RON WHITTEN

ALISTER MACKENZIE, M.D. (1870–1934)

BORN: Normanton, Yorkshire, England. DIED: Santa Cruz, California, at age 63.

Dr. Alister Mackenzie, the son of Highland parents, graduated from Cambridge University with degrees in medicine, natural science and chemistry. In the Boer War he served as a surgeon with the Somerset Light Infantry, where he closely observed and analyzed the ability of Boer soldiers to hide effectively on treeless veldts. After the war he returned to Britain to practice medicine in the city of Leeds.

Just when the good doctor entered the field of golf architecture is unclear. He apparently dabbled in design somewhat in the early 1900s. What is known is that in 1907 golf architect H. S. Colt, on a visit to Leeds, stayed overnight at Mackenzie's home. Impressed with Mackenzie's models of greens and bunkers, Colt invited his collaboration on the design of Alwoodley Golf Club. Over the next few years Mackenzie gradually gave up his medical practice to devote full time to golf course architecture. In 1914 he won first prize in C. B. Macdonald's *Country Life* magazine competition for the best two-shot hole for the proposed Lido GC on Long Island, New York. This competition, judged by golf writer Bernard Darwin, Horace Hutchinson and Herbert Fowler, brought Mackenzie considerable publicity on both sides of the Atlantic.

With the outbreak of war in Europe, Mackenzie returned to medicine as an army surgeon but soon transferred to the Royal Engineers to develop camouflage techniques based on the knowledge he had gained in South Africa. The art and science of camouflage as developed by Mackenzie was credited with saving thousands of lives. Years later Mackenzie observed that successful course design, like camouflage, depended on utilizing natural features to their fullest extent and creating artificial features that closely imitated nature.

Shortly after the Armistice in 1918, Mackenzie formed a partnership with H. S. Colt and C. H. Alison, but it was short-lived. Reportedly the egos were too great on both sides, and Mackenzie and Colt, though partners on paper, competed on several commissions. A full rift occurred in 1921, but it wasn't until 1928 that Colt got around to formally dissolving Mackenzie's name from the firm. Consequently, a good deal of American courses designed by Colt's partner Hugh Alison also bear Mackenzie's name as architect of record, though there is little evidence that Mackenzie worked on any American designs with either of his partners.

When Mackenzie did finally settle in the United States, he formed brief partnerships with a number of persons, including Robert Hunter, H. Chandler Egan and Perry Maxwell. But despite the temperamental nature of his business acumen, there was no denying the talent of Alister Mackenzie. Cypress Point in California finally established his reputation as a golf course architect and led to his collaboration with the immortal Bobby Jones on the design of Augusta National.

During the 1920s Mackenzie made an extended trip through South America, Australia and New Zealand. He did a number of "paper jobs" that were completed by hastily arranged associates, most notably Australian Alex Russell.

Mackenzie authored *Golf Architecture*, a collection of design lectures he had delivered that was published in 1920. In it, he codified thirteen essential features of an ideal golf course that became standards for course architecture after World War II. They were:

1. The course, where possible, should be arranged in two loops of nine holes.
2. There should be a large proportion of good two-shot holes, two or three drive-and-pitch holes, and at least four one-shot holes.
3. There should be little walking between greens and tees, and the course should be arranged so that in the first instance there is always a slight walk forward from the green to the next tee; then the holes are sufficiently elastic to be lengthened in the future if necessary.

4. The greens and fairways should be sufficiently undulating, but there should be no hill climbing.
5. Every hole should have a different character.
6. There should be a minimum of blindness for the approach shots.
7. The course should have beautiful surroundings, and all the artificial features should have so natural an appearance that a stranger is unable to distinguish them from nature itself.
8. There should be a sufficient number of heroic carries from the tee, but the course should be arranged so that the weaker player with the loss of a stroke or portion of a stroke shall always have an alternate route open to him.
9. There should be infinite variety in the strokes required to play the various holes—interesting brassy shots, iron shots, pitch and run-up shots.
10. There should be a complete absence of the annoyance and irritation caused by the necessity of searching for lost balls.
11. The course should be so interesting that even the plus man is constantly stimulated to improve his game in attempting shots he has hitherto been unable to play.
12. The course should be so arranged so that the long handicap player, or even the absolute beginner, should be able to enjoy his round in spite of the fact that he is piling up a big score.
13. The course should be equally good during winter and summer, the texture of greens and fairways should be perfect, and the approaches should have the same consistency as the greens.

Of all the course architects of the Golden Age of Golf Design, Mackenzie probably exerted the greatest influence on contemporary design.

Courses by Alister Mackenzie:

California: Charlie Chaplin Estate GC (9 Par 3, NLE); Cypress Point C (1928), with Robert Hunter; Green Hills CC (1930), with Robert Hunter and H. Chandler Egan; Haggin Oaks Muni (South Cse 1932); Harold Lloyd Estate GC (9 Par 3, NLE); [The] Meadow C (1927), with Robert Hunter; Northwood GC (9 1928), with Robert Hunter; Pasatiempo GC (1929); Pittsburgh GC (9), with Robert Hunter; Sharp Park GC (1931); Stockton G&CC; Valley C of Montecito (1928), with Robert Hunter.
Georgia: Augusta National GC (1933), with Robert Tyre Jones, Jr.
Michigan: Crystal Downs CC (1933), with Perry Maxwell; University of Michigan GC (1931), with Perry Maxwell.
Ohio: Ohio State University GC (Gray Cse, routing 1939; Scarlet Cse, routing 1939).
Manitoba: St. Charles CC (North Nine 1930).
Argentina: Jockey C (Blue Cse 1935; Red Cse 1935).
Australia: Australian GC (27 1926); Lake Karrinyup CC (1927), with Alex Russell; New South Wales GC (1928), with Des Soutar; Royal Melbourne GC (West Cse 1931), with Alex Russell; Victoria GC (1927); Yarra Yarra GC (1929), with Alex Russell.
England: Alwoodley GC (1907), with H. S. Colt; Bingley St. Ives GC (1931); Blackpool–Stanley Park GC (1925); Brancepeth Castle GC (1924), with H. S. Colt and C. H. Alison; Cavendish GC (1925); Darlington GC (1909); Felixstowe Ferry GC (1919); Fulford GC (1909); Grange-over-Sands GC (1919); Hadley Wood GC (1922); Low Laithes GC (1925); Marsden GC (9 1921); Moor Allerton GC (1923, NLE); Moortown GC (1909); Oakdale GC (1914); Reddish Vale GC (1912); Scarborough Southcliff GC (1911); Scarcroft GC (1937); Sitwell Park GC (1913); Teignmouth GC (1924); Walsall GC (1909); Wheatley GC (1913); Worcester G&CC (1927).
Ireland: Island GC.
Isle of Man: Douglas Muni (1927).
New Zealand: Heretaunga GC.
Scotland: Hazelhead Muni (Cse No. 1 1927); Pitreavie GC (1923); St. Andrews (Eden Cse 1913), with H. S. Colt.
Uruguay: GC de Uruguay; Punta del Este GC.

Courses remodeled or expanded by Alister Mackenzie:

California: California GC of San Francisco (R.); Claremont CC (R.); Lake Merced G&CC (R. 1929, NLE); Monterey Peninsula CC (Dunes Cse, R. 1928), with Robert Hunter; Redlands CC (R.).
New York: Bayside Links (R. 1932, NLE Lake Placid C (Upper Cse, R. 1931).
South Carolina: Palmetto CC (R. 1931)
Argentina: Mar de Plata GC (R. 1930).
Australia: Flinders GC (R. A.2 1926); Kingston Heath GC (R. 1928); Royal Adelaide GC (R. 1926); Royal Queensland GC (R. 1927); Royal Sydney GC (R.).
England: Bolton GC (R.); Buxton and High Peak GC (R.); City of Newcastle GC (R.); Harrogate GC (R.); Headingley GC (R.); Ilkley GC (R.); Manchester GC (R.); Royal St George's GC (R.), Saddleworth GC (R.9 A.9); Seaton Carew GC (R. 1925); Shipley (R.); West Herts GC (R. 1922); Weston-Super-Mare GC (R.); Willingdon GC (R. 1925); Worcestershire GC (R. 1924).
Ireland: Cork GC (R.9 A.9 1927); Douglas GC (R.9 1927); Galway GC (R Lahinch GC (Old Cse, R. A.11 1927 Muskerry GC (R.).
Isle of Man: Castletown GC (R.)
New Zealand: Titirangi GC (R. 1926
Scotland: Blairgowrie GC (Rosemount Cse, R.9 A.9 1927); Duff House R[illegible] GC (R. 1926), with *Charles A. Mackenzie*; Newtonmore GC (R.); Royal Troon GC (R. 1907); St. Andrews [illegible] Cse, R.).

GREGOR MACLEOD MACMILLAN

BORN: Montana.

Following graduation in the early [illegible] from the University of Washington [illegible] degree in civil engineering, Greg[illegible] Millan worked as a surveyor for the Bal[illegible]com Canal Lumber Company of Se[illegible]. When Balcom headed a group of business men organizing the Olympic Golf [illegible] Country Club, MacMillan was assigned to oversee the golf course construction. His knowledge impressed Frank James, Western states representative of the course's contractor, William H. Tucker & Son, and after Olympic opened [illegible] hired MacMillan to help design and supervise Tucker projects along the West [illegible].

James soon resigned to pursue his own golf design career, and MacMillan took his place in the Tucker organization. [illegible] next eight years, he designed and [illegible] courses with Tucker in nine Great [illegible]

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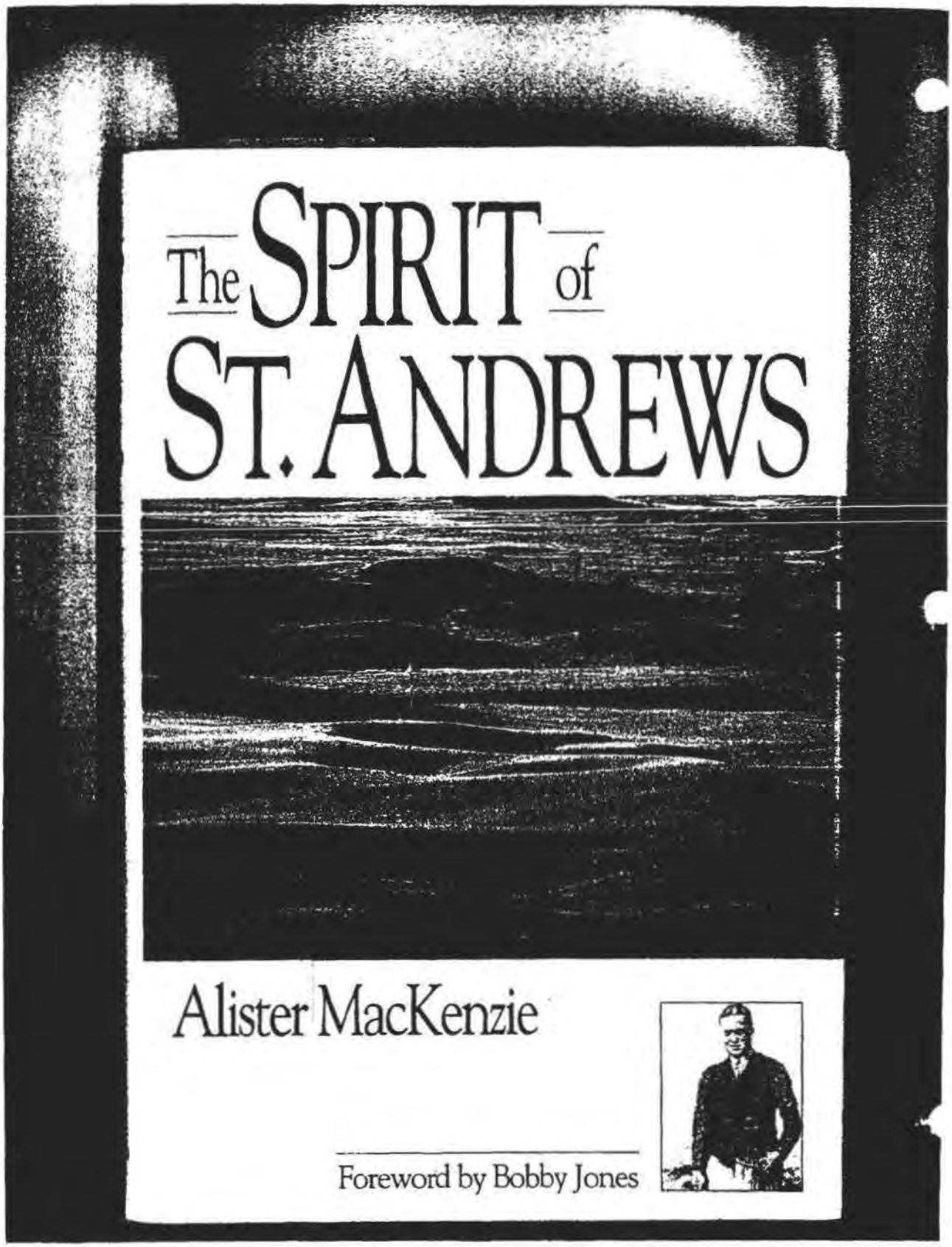
The SPIRIT of
ST. ANDREWS
Alister MacKenzie
Foreword by Bobby Jones

The Spirit of St. Andrews

by
Alister MacKenzie

Foreword by
Robert Tyre Jones, Jr.



Sleeping Bear Press
Chelsea, Michigan

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Introduction

"I have always wanted to live where one could practice shots in one's pyjamas before breakfast, and at Santa Cruz the climate is so delightful that one can play golf every day of the year."
—Dr. A. MacKenzie

It is nearing Christmas 1932 and the place is the cottage that Dr. MacKenzie has built for his wife Hilda on the 6th fairway at Pasatiempo Golf Course. Joining them for the holidays are her son Tony, with his wife and their two sons Philip and Raymund, who have just recently arrived from England. Little more than one year later, on January 6, 1934, the Doctor dies and his ashes are distributed over the golf course.

Alexander MacKenzie was born in England on August 30, 1870 in the town of Normanton, County of York. He was a well-educated man, receiving several degrees from Cambridge and from Leeds, where he practiced medicine before going to South Africa to serve as a civil surgeon in the Boer War. Here he could not help but admire the capacity of the Boers to conceal themselves so effectively. It was these observations that first interested him in "the imitation of nature," and which led to his appointment to establish the British School of Camouflage during World War I.

Although he had played golf in his youth, he did not take up the game seriously until after he received his degrees, when he "developed the disease badly." Yet he did not become a good golfer until into his 60's. He was known as Dr. Alister MacKenzie during his golf course design



DR. A. MACKENZIE

«1»
The Evolution of Golf

Golf, in its early days, was always played on commons or links land which bordered the sea. The natural characteristics of this type of land made it easily the most suitable for the game. It is an interesting fact that sandy gravelly soil which is of little value for agricultural purposes is by far the best type of land for a golf course. Links land, consisting as it does of rolling sand dune country partially covered with gorse, heather, bent and short "rabbity" turf, is specially suitable.

In days of old, a golf course was usually kept by one greenkeeper who not infrequently acted as professional as well. Rabbits acted as the "grounds staff," keeping the turf short, crisp and free from weeds. The duties of the greenkeeper merely consisted in cutting holes and sweeping rabbit droppings from the greens. Now, alas, most of these old seaside courses have been ruined by well-intentioned but injudicious efforts of their green committees to improve on nature. The rabbits have been killed off. Alkaline fertilizers, fit only for agriculture, have been used, with the result that the sparse dwarf velvety turf has disappeared and is now replaced by plantains, daisies, clover, and luscious agricultural grasses, which need an enormous amount of mowing, weeding and upkeep.



MacKenzie and Hunter on one of their best—and one of the world's best par 3's ever built—the 16th hole at Cypress Point.

«2»
General Principles

Twenty years ago I published in the English paper *Golfing* a series of articles on what I considered the ideal golf course. Later on these were reprinted in my little book, *Golf Architecture.*

As the essence of golf is variety, it would not be wise to be too didactic as to what does constitute the ideal golf course, but my suggestions for it would be very much on the lines of what I wrote twenty years ago, and as I can hardly improve on that, I set it down here as it was originally written.

1. The course, where possible, should be arranged in two loops of nine holes.
2. There should be a large proportion of good two-shot holes, and at least four one-shot holes.
3. There should be little walking between the greens and tees, and the course should be arranged so that in the first instance there is always a slight walk forwards from the green to the next tee; then the holes are sufficiently elastic to be lengthened in the future if necessary.
4. The greens and fairways should be sufficiently undulating, but there should be no hill climbing.

5. Every hole should be different in character.
6. There should be a minimum of blindness for the approach shots.
7. The course should have beautiful surroundings, and all the artificial features should have so natural an appearance that a stranger is unable to distinguish them from nature itself.
8. There should be a sufficient number of heroic carries from the tee, but the course should be arranged so that the weaker player with the loss of a stroke, or portion of a stroke, shall always have an alternate route open to him.
9. There should be infinite variety in the strokes required to play the various holes—that is, interesting brassie shots, iron shots, pitch and run up shots.
10. There should be a complete absence of the annoyance and irritation caused by the necessity of searching for lost balls.
11. The course should be so interesting that even the scratch man is constantly stimulated to improve his game in attempting shots he has hitherto been unable to play.
12. The course should be so arranged that the long handicap player or even the absolute beginner should be able to enjoy his round in spite of the fact that he is piling up a big score. In other words the beginner should not be continually harassed by losing strokes from playing out of sand bunkers. The layout should be so arranged that he loses strokes because he is making wide detours to avoid hazards.
13. The course should be equally good during winter and summer, the texture of the greens and fairways should be perfect and the approaches should have the same consistency as the greens.

A Decided Advantage

In regard to the first three principles there can be little difference of opinion. It is a considerable advantage that a course should be arranged in two loops of nine holes, as on

them, but I do not think for an instant that he believes what he is writing about, for at the same time he talks about the beauties of the natural courses. The chief object of every golf architect or greenkeeper worth his salt is to imitate the beauties of nature so closely as to make his work indistinguishable from Nature herself.

I have not the slightest hesitation in saying that beauty means a great deal on a golf course; even the man who emphatically states that he does not care a hang for beauty is subconsciously influenced by his surroundings. A beautiful hole appeals not only to the short but also to the long handicap player, and there are few first rate holes which are not at the same time, either in the grandeur of their undulations and hazards, or the character of their surroundings, things of beauty in themselves.

> It is not suggested that we should all play around the links after the manner of the curate playing with the deaf old Scotsman. The curate was audibly expressing his admiration of the scenery, the greens and everything in general until they finally arrived at a green surrounded by a rookery. The curate remarked "Is it not delightful to hear the rooks?" "What's that?" said the deaf old Scottie. "Is it not delightful to hear the rooks?" reiterated the curate. The Scotsman shook his head in disgust "I canna hear-r a wor-r-d you're saying for those dommed craws," he replied.

The finest courses in existence are natural ones. Such courses as St. Andrews, and the championship courses generally, are admitted to provide a fine test of golf. It is by virtue of their natural formation that they do so. The beauty of golf courses in the past has suffered from the creations of ugly and unimaginative design. Square, flat greens and geometrical bunkers have not only been an eyesore upon

the whole landscape, but have detracted from the infinite variety of play which is the heritage of the game.

My reputation in the past has been based on the fact that I have endeavored to conserve the existing natural features and, where these were lacking, to create formations in the spirit of nature herself. In other words, while always keeping uppermost the provision of a splendid test of golf, I have striven to achieve beauty.

It may at first appear unreasonable that the question of aesthetics should enter into golf course design. However, on deeper analysis it becomes clear that the great courses, and in detail all the famous holes and greens, are fascinating to the golfer by reason of their shape, their situation and the character of their modeling. When these elements obey the fundamental laws of balance, of harmony and fine proportion, they give rise to what we call beauty. This excellence of design is more felt than fully realized by the players, but nevertheless it is constantly exercising a subconscious influence upon him and in course of time he grows to admire such a course as all works of beauty must be eventually felt and admired.

Cypress Point

The most beautiful of all courses we have made is Cypress Point, and at the same time it is also the most difficult of all our courses. When we constructed Cypress Point we expected we should be snowed under by hostile criticism.

My experience of really first class holes is that, like the famous "Road Hole" at St. Andrews, they at first sight excite the most violent spirit of antagonism. It is only after the holes have been played many times that the feeling of resentment disappears and the former critics become the strongest supporters.

More than half the holes at Cypress Point were of such a nature that I knew by experience that they would at first

They are lacking in strategy, as most of them have been designed by architects belonging to the penal school. It is unfortunate that in the Chicago district the best golfing ground, consisting of magnificent sand dune country, is on the south shore bordering the industrial district.

In Detroit also there is some excellent golfing ground—not sand dune country, but nevertheless consisting of bold, pleasing undulations.

In California

In California there are several outstanding courses. O. B. Keeler goes so far as to say they are so much better than those in the rest of the country that he has no basis of comparison.

California golf courses are of comparatively recent origin. I have been told that before the war there were none in Los Angeles with grass greens, whereas today there are over fifty.

I attribute the excellence of Californian courses to the influence of golf architects like Max Behr and Robert Hunter. I think also that although it has been the fashion to deride Herbert Fowler's efforts, he set a standard which other architects attempted to emulate. It is a great joy to construct golf courses in California, as the Californian sun and hoseless irrigation systems bring up the grasses so quickly that the courses have a springy carpet of turf three months after sowing and give one the impression that they are several years old.

The best of these golf courses are on the Monterey Peninsula. Four courses are already existing and two more are contemplated. We have already discussed Cypress Point. I do not expect anyone will ever have the opportunity of constructing another course like Cypress Point, as I do not suppose anywhere in the world is there such a glorious combination of rocky coast, sand dunes, pine woods and cypress trees.

The Monterey cypress is unique. It has an elbowed



"The ideal two-shot hole that launched my golf architecture career. C.B. Macdonald and Bernard Darwin awarded this design first place in *Country Life* magazine, July 25, 1914."

gnarled appearance and is twisted into such fantastic shapes as to be almost frightening. It is even beautiful when dead and the elbowed limbs give the impression of huge white gaunt skeletons of giant men. If one first visits Cypress Point in foggy weather, these weird white skeletons looming out of the mist are so terrifying that they are apt to create a depressing effect which is only dispelled when the sun breaks through the mist and brings to view a wonderful variety of coloring unsurpassed on any golf course. Strange to say, it appears to be impossible to grow the Monterey cypress elsewhere. I have been informed that when an attempt has been made to grow them from seed it has simply resulted in the common garden variety of tree.

« *Pebble Beach* »

When, in 1929, the Amateur Championship was played at Pebble Beach, the course was almost universally admitted to be the best one on which the Championship had been played. It is very beautiful, running along the edge of the coast its whole extent.

The best holes are probably the third, eighth, and eighteenth, the last named being as fine a finish as on any golf course, and it would be better still if the entrance to the green were slightly larger. Considering the magnificence of the terrain, however, the short holes are somewhat disappointing.

The Monterey Peninsula course is considered by many to be as good as Pebble Beach. When it was constructed and ready for seeding, however, it was recognized that it could be vastly improved, and we were called in to alter it. My partner, Robert Hunter, was allowed only thirty days to reconstruct all the greens, and was not permitted to reroute the holes because some of the adjoining lots had been sold, and, consequently, it tied our hands considerably. The ground available for the course was in some respects even better than Cypress Point, and no doubt an equally good

course might have been constructed if we had been ... to make it de nove.

The fourth golf course on the Monterey Peninsula ... Del Monte Course. It has always been a complete myste... me, and is so contrary to my experience in other cou... that it should enjoy such great popularity, which can... entirely due to its proximity to the Del Monte Hotel. ... being a greater amount of play on it than all the other ... es put together. The course is well wooded and is ... beautiful surroundings, but the majority of the hole... uninspiring and uninteresting, and it has not even the ... of good greens and fairways.

In London and many other British towns there ... many courses of a similar nature to Del Monte, but ... newer and better courses were made, such as Sunning... Wentworth, and Addington, the majority of the mem... the flat park courses deserted them, emigrating else... and it was not until these park courses were reconst... that they regained any degree of popularity.

In Scotland, the first question asked on returning ... clubhouse is, "Did you have a good match?" In Ameri... only too frequently, "Did you have a good score?"

Scoring is easy at Del Monte, so this may account ... popularity. Since writing this, there has been a ma... decrease of play at Del Monte and Pebble Beach, and ... increasing amount on the Monterey Peninsula and C... Point. Notwithstanding the Depression, last winter C... Point had nearly twice as much play as the previous ye...

« *Lakeside, Hollywood* »

In Southern California there are many good golf ... es. By far the best of these is Max Behr's course at Lake... the course on which Bobby Jones played in some of his m... pictures. Lakeside had none of the natural advantages ... Monterey courses, the Olympic at San Francisco c...

many of the other courses in the Los Angeles district, but it has been so admirably designed and constructed that it compares favourably with any inland course. It was originally a flattish orchard. Now the whole ground has been made undulating and the undulations have such a natural appearance that they have a close resemblance to real links land.

The interest of the course is entirely due to the undulations and not due to bunkers, which at many of the holes are nonexistent. In a word, Lakeside is one of the world's greatest golf courses.

Norman Macbeth's course, Wilshire, has some interesting holes. The 18th is magnificent. It has not a single bunker, but owes its excellence to a large deep arroyo running diagonally almost the full length of the hole.

On the San Francisco Peninsula there is a wealth of good golfing territory. The sand dune country owned by the Olympic Club, which although not so spectacular as that on the Monterey Peninsula, is the finest golfing territory I have seen in America.

Unfortunately, the courses were designed and constructed at a time when not so much was known about golf course construction as is known today, so that owing to the lack of provision for drainage, floods washed some of the most spectacular holes down the slopes towards the sea.

« *Sharp Park* »

The municipal courses in San Francisco are far superior to most municipal courses. The newest, which we constructed at Sharp Park, was made on land reclaimed from the sea, similar to the Lido course; the greens and fairways were built with sand sucked up from below the water. One fairway alone required 200,000 cubic yards of sand to build it up above 10 feet of water. This was probably the biggest engineering feat of its kind that has ever been attempted.

The course now has a great resemblance to real links land. Some of the holes are most spectacular. Two of them are of similar type to the plan of the ideal two-shot holes depicted on page 166. One of them has the island on the right and the other on the left. In designing and constructing the course we had the greatest assistance from Mr. John Maclaren, the designer of the Golden Gate Park. John Maclaren is an artist, and his help not only in the artistic planting of trees but in creating other delightful features was most valuable.

« *Pasatiempo* »

Miss Marion Hollins was the founder of Pasatiempo, the course at Santa Cruz. My wife and I consider the course so beautiful that we have built a cottage on the edge of the sixth fairway.

I have always wanted to live where one could practise shots in one's pyjamas before breakfast, and at Santa Cruz the climate is so delightful that one can play golf every day of the year, where it is never too hot and never too cold, and if it should rain it usually does so at night.

Many good golfers consider the second nine holes at Pasatiempo the finest in existence. The short holes are especially good, and I think the sixteenth hole is the best two-shot hole I know. I certainly do not know of any hole which gives so great an advantage for length and accuracy.

On the Northern Pacific Coast the best known courses are at Oak Bay and Colwood, Victoria. Oak Bay has an attractive setting by the sea, but if I remember rightly, has three one-shot holes in succession and other defects which prevent it being an ideal course. These defects are largely owing to outcrops of rock which limited the positions available for greens, and when the course was first constructed there were none of the new machinery available for dealing with rock as there is today.

land. He did not appear to realize that there are hundreds of times as much land devoted to wheat as to golf, and that, moreover, wheat can be grown away from the big cities, whereas golf courses for the masses are of value only when they are in close proximity to large towns.

A good golf course is a great asset to a nation.

Those who harangue against land being diverted from agriculture and used for golf have little sense of proportion. Comparing the small amount of land utilized for golf and other playing fields with the large amount devoted to agriculture, we get infinitely more value out of the former than the latter. We all eat too much.

During the Great War, in Britain, the majority were all the better for being rationed and getting a smaller amount of food, but none of us get enough fresh air, pleasurable excitement and exercise.

Health and happiness are everything in this world. Money grubbing, so-called business, except insofar as it helps to attain this, is of minor importance.

One of the reasons why I, a medical man, decided to give up medicine and take to golf architecture was my firm conviction of the extraordinary influence on health of pleasurable excitement, especially when combined with fresh air and exercise. How frequently have I, with great difficulty, persuaded patients who were never off my doorstep to take up golf, and how rarely, if ever, have I seen them in my consulting room again.

I recently came across a lady I had not seen for over twenty years. She said, "I shall always be grateful to you, Dr. MacKenzie, for what you did for me." I replied that I was not aware of doing anything for her. She said, "Oh yes! You did. You persuaded my husband to play golf. Before then he said he had no time for golf, he sat all day and every day in his office, went to church on Sunday, then ate too much and was not fit to live with for the rest of the week. Since he played golf he is not only physically fit but mentally alert.

He who knows and knows not that he knows, will fail.
Pity him.
He who knows and knows that he knows is a wise man.
Follow him.

If more people connected with the promotion and upkeep of golf courses knew that they knew not, the game would probably not cost a quarter as much as at present, and as is the case of motor cars in America, would no longer be considered a luxury but a necessity for the promotion of the health, the happiness and the prosperity of the community.

Today one can almost gauge the intelligence and prosperity of a community by the extent golf and golf courses are booming. In America there is a tremendous boom in golf; in Russia there is none.

With the exception of ignorant politicians who, with a few notable exceptions, appear to desire to tax golf courses and playing fields out of existence, most people know that golf and other games promote the health and happiness of the community, but there are few who realize the extent to which it promotes the prosperity of the world.

Some years ago I was designing a golf course on the East coast of England which was financed by an old man and one who did not play golf. I was curious to know why he, a non-golfer, should finance the club, so one day I asked him.

He said, "During the war twelve of my clerks started to play golf. They became so much more mentally alert and so much more useful to me that I concluded golf was a great asset in promoting the prosperity of the community, and I decided to promote it to the fullest extent in my power."

I hope to live to see the day when there are the crowds of municipal courses, as in Scotland, cropping up all over the world. It would help enormously in increasing the health, the virility and the prosperity of nations, and would do much to counteract discontent and Bolshevism. There can be no possible reason against, and there is every reason in favour of, municipal courses.

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Polk, Willis Jefferson

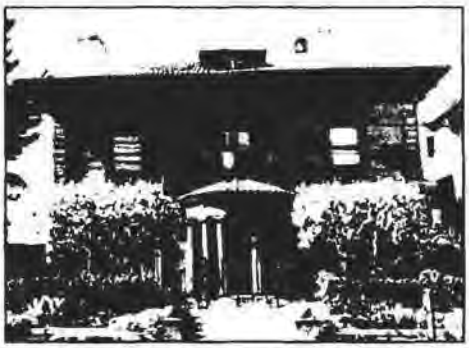
Entry Author: David Parry

Architect



Willis Jefferson Polk was born in Jacksonville, Illinois on October 3, 1867, the eldest of five children. His father, Willis Webb Polk (1836-1906), was also an architect. At the age of 14 Polk became an architect's apprentice and in 1882 he won a competition for the design of a six-room schoolhouse in Hope, Arkansas, where his family then lived. In 1885 the partnership of W. W. Polk & Sons, including Daniel Polk, Willis' brother, was established in Kansas City. Between 1887 and 1889 Willis traveled extensively and acquired experience working for many architects including Ernest Coxhead and A. Page Brown. Brown encouraged Willis to follow him out to San Francisco. Polk's family also then moved here and the new firm of Polk & Polk was opened in 1892 with young Willis providing the creativity, his brother Daniel doing the drafting, and his father supervising construction projects.

Polk's earliest residential design work in the City was on Russian Hill and is well documented in Richard Longstreth's *On the Edge of the World and Bill Kostura's Russian Hill - the Summit 1853-1906*. He remodeled the Horatio Livermore home at 1045 Vallejo in 1891, and in 1892 he designed two multi-level houses at 1013-19 Vallejo for his family and a client, waiving his fee for the eastern portion of the lot. The structure he designed for himself was recently listed for sale for $4,000,000. Some of his other early residential commissions were in Presidio Heights at 116 Cherry (in 1891) and 3203 Pacific (an extensive remodel in 1892). A little while later, in Pacific Heights he designed 2015 Pacific (in 1894), 2622 Jackson (also in 1894, for George W. Gibbs, San Francisco Landmark #203), and 2550 Webster (in 1896, for William B. Bourn, San Francisco Landmark #38).



The Gibbs Mansion at 2622 Jackson, pictured here, is in the Italian Renaissance style and was declared at the time by the Examiner to be 'the first classical residence in San Francisco'. The round entrance portico is reminiscent of a Tuscan villa. The exterior is gray Oregon sandstone and the home features a Gladding McBean glazed tile roof. Sadly, George Gibbs died only two months after moving into it, but his widow Augusta continued to occupy it until her death in 1918. It later became the Japanese Consulate until the outbreak of World War II. It then served as headquarters for the local chapter of the Red Cross until the late 1940's when it was purchased by the San Francisco Music and Arts Institute. It was sold in 1993 to designer Agnes Bourne, who supervised the renovation of it and made it available to University High School as their 1994 Decorator Showcase house. In May 1995 it was bought by the present owner, a pre-eminent writer/movie director. Hidden behind the house to the northwest, closer to Pacific than to Jackson, is a little-known two-story structure originally built as a caretaker's residence for the main house. Now subdivided from the original parcel and separately owned, it was also designed by Polk & Polk, and is included in the Landmark case report as an unusual support structure for such a house in the area.

Polk's father retired from the firm in 1896 and Daniel Polk had already departed to play banjo in vaudeville, which left Willis Polk struggling to survive in business. He was forced to declare bankruptcy in 1897, which hurt his reputation and his ego. He worked out of the Vallejo family house until late in 1899 when he joined architect George W. Percy after Percy's partner F. F. Hamilton died.

In 1900 Polk married Christine Barreda, moving into her family's home in Pacific Heights at what is now 2141 Buchanan. In 1901 they relocated to Chicago so Polk could work for famed architect Daniel Burnham. Burnham had laid out the 1893 World's Columbian Exposition in Chicago, which sparked the American Renaissance of arts and architecture, and had already designed two important San Francisco buildings - 690 Market (in 1889) and 220 Montgomery (in 1891). While in Chicago, in 1903, Polk designed 465 California for

QUICK FACTS

Born: Jacksonville, Illinois October 3, 1867
Designed Hallidie Building in 1917
Died: September 10, 1924

RELATED INFORMATION

> Ernest Coxhead
> A. Page Brown

OUTSIDE RESOURCES

+ A chronological listing of 60 selected extant works created between 1890 and 1932 in the San Francisco Bay Area by Willis Polk
+ Bourn's country estate Filoli on Cañada Road in Woodside
±

the firm. After a three-month trip to Europe, Polk returned to San Francisco in the fall of 1903, beginning a partnership with George A. Wright which lasted until 1906, being dissolved just prior to the April earthquake.

Burnham had become a leader of the nationwide City Beautiful movement and was asked in 1904 to produce a San Francisco Plan. His associate, Edward H. Bennett, led the project, with Polk assisting, and the plan was completed in 1905. The 1906 earthquake and fire killed its chances of being implemented, but Polk convinced Burnham to reopen a San Francisco office which Polk then ran for four years before they parted ways again in July 1910.

Among the many D. H. Burnham & Co. commissions after the earthquake was a remodel of the gutted shell of the Flood mansion at 1000 California into the Pacific Union Club. It was arranged by William B. Bourn, President of the Spring Valley Water Company and owner of Grass Valley's Empire Mine. Bourn was a patron of Polk's for whom Polk designed many projects, including the aforementioned 2550 Webster and also Bourn's country estate Filoli on Cañada Road in Woodside. Much later Filoli was made famous as the Carrington house in the television series Dynasty.

In 1914 the Livermore family commissioned Polk to further improve the 1000 block of Vallejo. Polk designed the unusual double access ramp from Jones Street and also the houses on Russian Hill Place (1, 3, 5 and 7) that provide the flanking wall on Jones, but look like simple cottages when you are standing on Russian Hill Place. Among other notable post-earthquake residences in Pacific Heights designed by Polk are 2820 Pacific (1912), 2960 Broadway (1912), 2880 Broadway (1913), 1969 California (1915), 2233 Lyon (1916), 2840 Broadway (1917), and 2255 Lyon (1920).

In addition to his residential work, Polk played a leading role in the planning of the 1915 Panama-Pacific International Exposition as the initial supervising architect, generously giving the design of the Palace of Fine Arts, which had been assigned to his office, to Bernard Maybeck after being impressed by Maybeck's initial sketches. The Palace of Fine Arts, rebuilt in 1962, is the only significant structure that survived in place after the Exposition ended.

Polk was an untiring advocate for civic improvements. A volatile personality, he could sometimes be difficult to get along with, but his talent was never in dispute. During the construction of the Hobart Building at 582 Market (1914, San Francisco Landmark #162) he mounted a protest while perched on a steel girder ten stories up after a City building inspector tried to have the work stopped. Polk had decided that lath and plaster fireproofing of the structural steel in the building was better than the concrete soffit called for by the building code of the day. Polk won his case, but not before taking on and antagonizing the City Hall hierarchy all the way up to Mayor Rolph.

Polk's Hallidie Building at 130 Sutter (1917, San Francisco Landmark #37) is recognized world-wide as one of the first glass curtain-wall structures. This retail and office building was the last one built on the block and is not only innovative, but does a wonderful job of tying a group of individual Downtown structures into a cohesive whole. It was built for the Regents of the University of California and named after Andrew Hallidie, inventor of the cable car. Fittingly, one of the office floors is home today to the local chapter of the American Institute of Architects.

After Polk died, on September 10, 1924, his stepson Austin P. Moore (Christine Barreda's son by her first husband Charles A. Moore) came in to run the business affairs of Willis Polk & Co. With the talented architects trained by Polk, including James Mitchell and Angus McSweeney, the company completed many projects including 2800 & 2808 Broadway, 2100 Washington, the 1090 Chestnut co-operative apartments (all in 1927), and the St. Francis Yacht Club (in 1928). After Mitchell left in 1929, the company name and the Polk legacy were continued well into the 1930's by McSweeney.

For his later career, the scrapbook kept by Polk, which can be viewed at the California Historical Society, contains many fascinating insights into his work and personality.

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SAN FRANCISCO CHRONICLE DAILY SPORTING GREEN

...ks Raise Arguments on "Play as It L...

Chandler Egan Will Inspect Sharp Park Golf Course As City Park Board Plans Early Construction Start

Noted Player and Architect to Supervise Links Building

H. Chandler Egan, former national amateur champion and noted golf architect, will this week inspect Sharp Park where construction of San Francisco's third municipal golf course is to begin Monday, March 2. This was the announcement yesterday of Herbert Fleishhacker, president of the park commission.

Plans for the course were drawn last year by Dr. Alister Mackenzie, British golf architect with whom Egan is associated. Mackenzie is now in Europe and Egan will carry on the work in his absence.

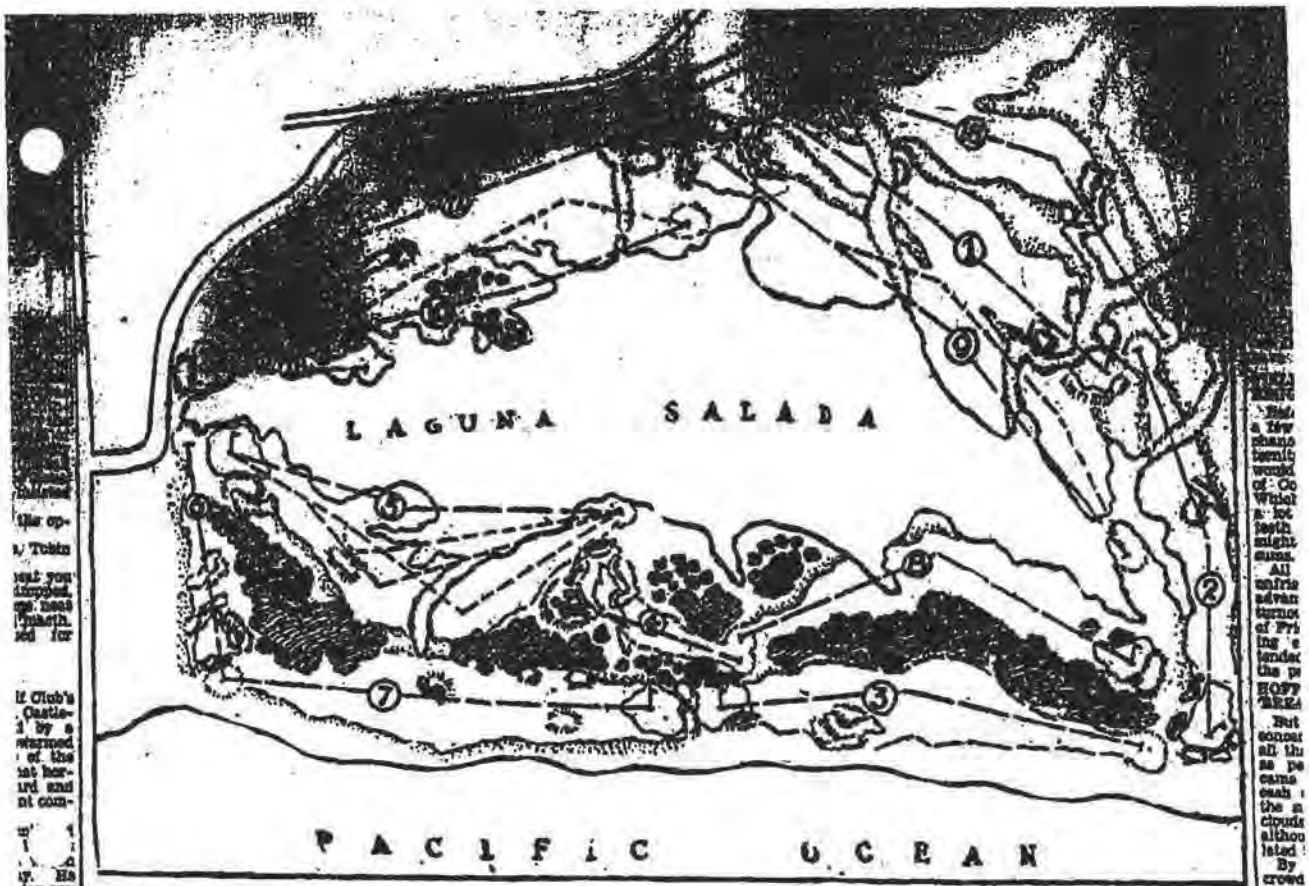
Those who saw the superb test of golf that Egan created for the national amateur championship at Pebble Beach last September are

Here Is Card For Sharp Park

CHAMPIONSHIP length of 6500 yards will make difficult par 71 on the city's new Sharp Park golf course.

Hole	Yds.	Par	Hole	Yds.	Par
1	420	4	10	380	4
2	250	4	11	160	3
3	470	5	12	430	4
4	140	3	13	440	4
5	380	4	14	210	3
6	170	3	15	370	4
7	375	4	16	410	4
8	455	5	17	430	4
9	380	5	18	420	4
Out	3340	37	In	3250	34
			Out	3340	37
Total				6580	71





SAN FRANCISCO'S third municipal golf course, Sharp Park, is depicted in this diagram, showing the plan devised by Architects Alister Mackenzie and H. Chandler Egan. Construction is to begin Monday, March 3, according to plans of the Park Commission and Architect Egan. The course is located at Salada Beach. It is reached by the Skyline boulevard, half an hour's drive from the City Hall. More than half of the holes border on Lake Salada, which John McLaren, superintendent of parks, transformed from a salt water marsh into a picturesque fresh-water pool.

confident that Sharp Park will be among America's finest municipal courses.

Egan has had a wide range of golf course construction experience. From a home-made links at his home at Medford, Or., to the national test at Pebble Beach he has shown uncanny ability to suit the layout to the terrain and the purpose of each course.

As a public links, Sharp Park will not be as difficult as Pebble Beach for the average golfer. It will conform to the Egan theory, however, of giving sporty hazards to stars who seek birdies.

With Lake Salada furnishing a fine natural water hazard, it will be more testing than either Lincoln or Harding park present many layouts.

The finance committee of the Board of Supervisors last Friday appropriated $25,000 for initial construction at Sharp Park, on the Skyline boulevard, located just over the San Mateo county line, and six-seven miles from the City Hall. The rest of the $150,000 needed to complete the course and clubhouse was promised for appropriation next June. The course will be ready in March of next year, it is expected.

Plans of the architects call for a course with a par of 71 and 6360 yards long, which is full championship length. Par on the first nine is 37, yardage 3340. Par on the return nine is 34, with yardage 3350.

Fight by Rounds

ROUND ONE

The pair met in the center of the ring and sparred at long range. Corbett shot a light left to the body and followed up with a light left to the jaw. They clinched. Fields missed a right to the head. The champion worked cautiously but uncorked two hard rights to the jaw which caused Corbett to back away.

Corbett was short with a left to the body and fell into a clinch. Jackie blocked a left to the body and Corbett clinched. Corbett staggered Fields with a left to the chin and repeated with a series of lefts and rights. Fields retreated into a clinch but came out of it to find Corbett's jaw with a mean right.

Corbett had a slight advantage in the opening round.

ROUND TWO

Corbett started things by sending lefts and rights to the head. Both boys resorted to rough stuff in a clinch. Fields missed a right and Corbett nailed him with a left to the face.

Fields scored lightly with a right to the jaw and they clinched again. Jackie tapped Corbett with two light rights and cuffed Corbett with a left in a clinch. Corbett sunk his left into the pit of the champion's stomach and followed up with another left to the jaw back with another sharp right to the head. Corbett landed a left to the body but took three rights to the ribs at close range.

Corbett connected with a lusty left to the jaw and landed again with the same punch as he fell into a clinch. The Fresnan repeated with two more lefts to head and body and came back with another series of lefts, which reached the champ's ribs. Fields came in fast, but could not avoid Corbett's left hand. The southpaw wrestled Fields around the ring at the bell. Corbett's round.

ROUND SIX

Fields opened with a light right to the head, but remained at a cautious distance from his foe. Corbett rocked Fields' head with a left but Jackie came back with two right taps to the face and Corbett clinched.

The Fresno southpaw lashed out with a sweeping left which found the champion's face. Fields put two rights to Corbett's head, and Corbett retaliated with a left to the cheek. The champion took another hard left as he came into a clinch. Corbett tied Fields up at close quarters. Fields assumed the aggressive, but could not escape another Corbett left. Corbett's left thudded against the champion's face twice

Benny Bass Battles Draw With Anderson

MILWAUKEE, Wis., Feb. 22 (AP)—Benny Bass, Philadelphia, junior lightweight champion, and Eddie "Cowboy" Anderson, Chicago, fought a 10-round draw, featured by nine knockdowns here tonight. Bass' title was not at stake.

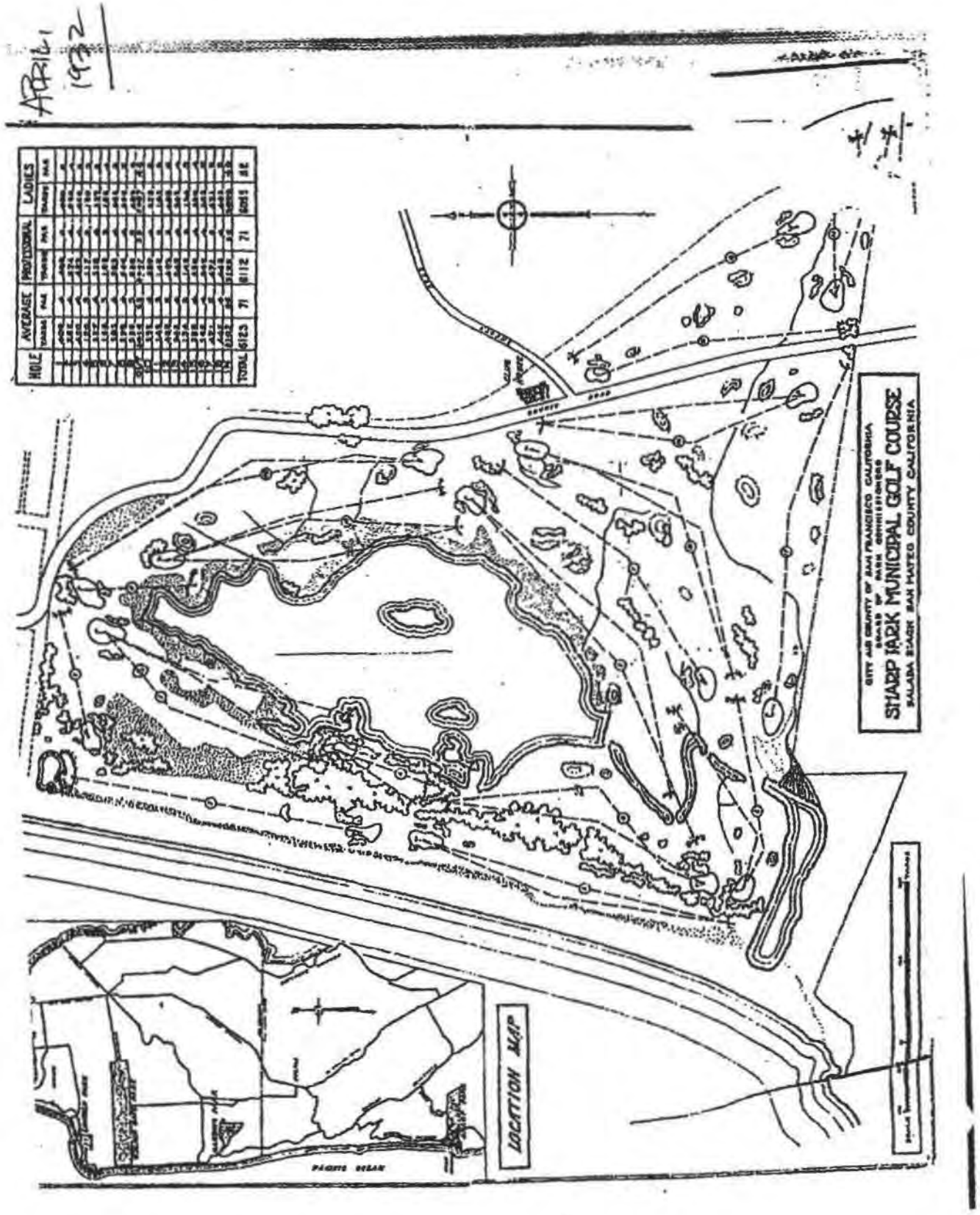
The ninth round, with both fighters endeavoring to land a knockout punch, was replete with thrills. During this session the champion was knocked dizzy twice, while Anderson was on the canvas three times. Anderson had been on the floor four times in previous rounds, but always managed to weather the jolts to come back strong. The decision of the referee in calling the bout a draw met with favor of the fans.

Lou Magnolia Will Referee Miami Bout

MIAMI, Feb. 22 (AP)—Lou Magnolia of New York has been selected to referee the fifteen-round heavyweight elimination battle between Jack Sharkey of Boston and Phil Scott of England at Madison Square Garden's second "Battle of the Palms" February 27.

The selection was announced after a conference between fighters, managers and promoters of the af-

15


APRIL 1
1932
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AVERAGE
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LADIES
TOTAL
6123
71
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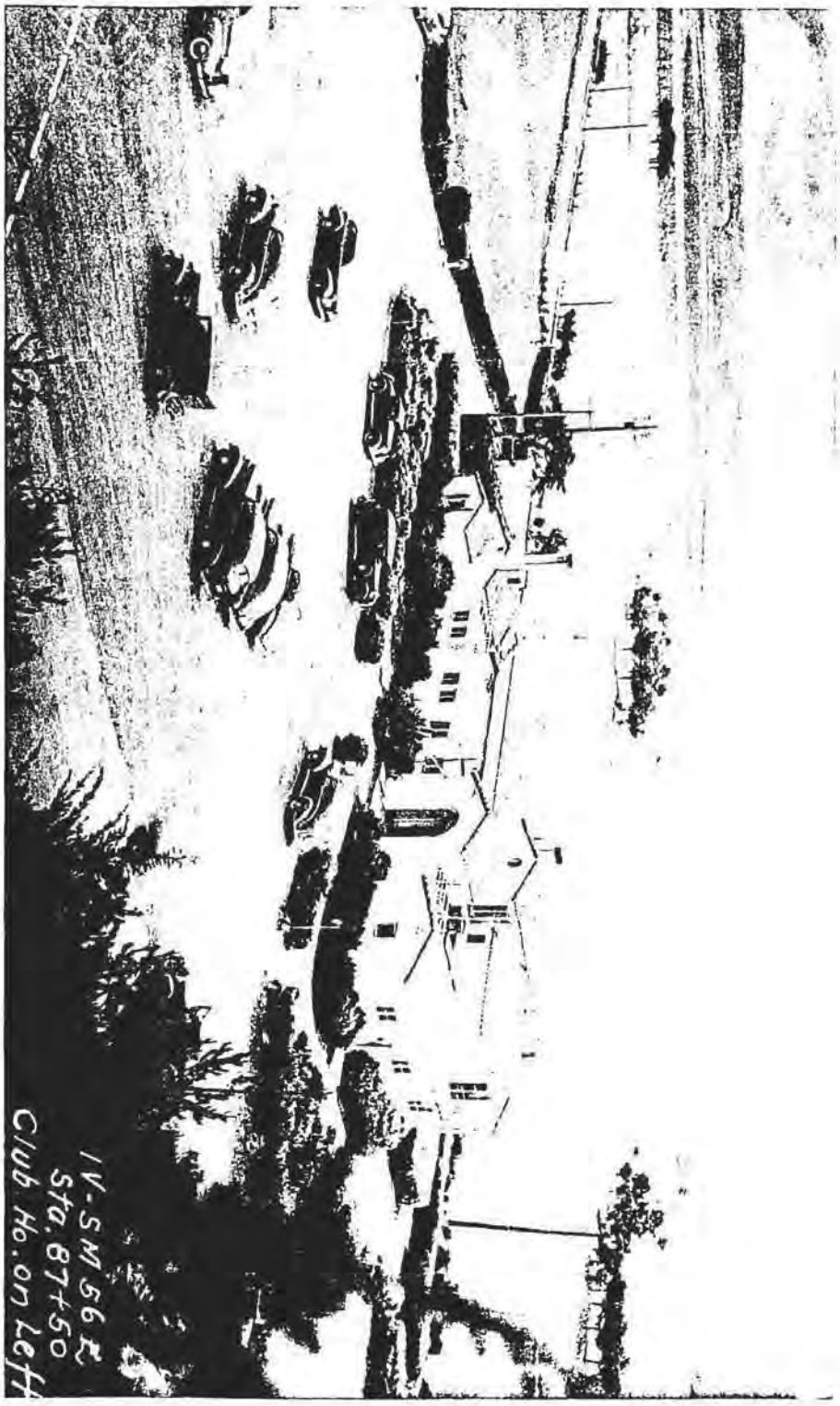
SHARP PARK MUNICIPAL GOLF COURSE
SALADA BEACH SAN MATEO COUNTY CALIFORNIA
LOCATION MAP

16

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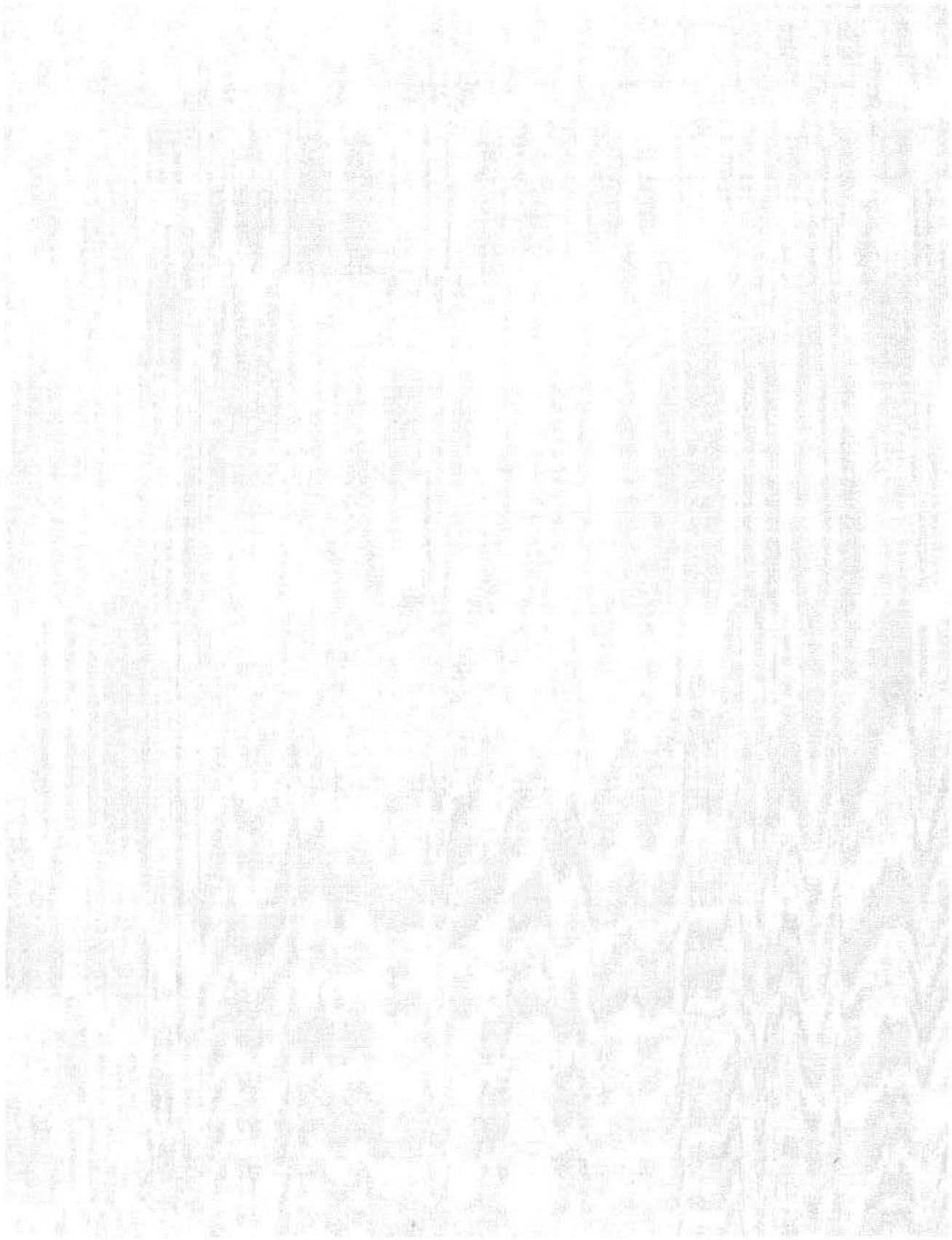



17

San Francisco Examiner Sports
Monarch of the Dailies
SATURDAY SAN FRANCISCO, FEBRUARY 22, 1930 SATURDAY 15

75,000 GATE REDICTED FOR ELTERWEIGHT ATTLE TODAY

...ed Listed as Predominant Asset Favoring Champion in Non-Title Bout at Recreation

...y ALEC X. McCAUSLAND
...ADES OF BENNY LEON-...ARD AND LEW TENDLER!

...kie Fields, brilliant welter-...ght champion, likened by some ...nny Leonard, master ringman ... time, clashes with Young ...ett III, outstanding southpaw ...ior since the advent of "Lefty" Tendler, this afternoon at Rec-...on Park.

...e attraction, Northern Califor-... most pretentious pugilistic ...l" of the past five years, ...ted to attract a $70,000 gate. ...unny skies, Promoter Ancil ...fman last night estimated that ... gate receipts would exceed ...000.

...N PREDICTED.

...eather predictions for today ... not the least bit favorable. ...vy rain has been forecast with ...h winds from the south. Pro-...ter Hoffman stated last night ...t nothing short of a downpour ...ld cause him to postpone the ...

"There isn't any chance of the ...ght taking place in the Audi-...rium in case of a heavy rain," ...id Hoffman.

"If the fight can't be held in ... afternoon I'll try to stage it ...aturday night. If the weather ...ill is such that the fight can't ... held tomorrow night I will-...stpone it until Monday."

...s to the two fighters, they are ... perfect physical trim. More ... two weeks in arduous training ...tions have whipped the kingpin ...welterweights and his opponent ...h the unorthodox stance into ... best fighting form.

...revailing odds are 2 to 1 that ...ields will emerge victorious. ...here is plenty of Fields' money ...th few Corbett backers.

... champion appears to be the ...ous choice of experts and ...res. His gymnasium spar-...g has been such as to generate ...fidence and far more spectacu-... than the methodical work of ...bett.

...EASY TARGET.

Speed, we believe will be the ...edominant factor in this battle. ...ields possesses the speed.

...orbett's southpaw style is ex-...ed to be bothersome to the title

No Broadcast

Ancil Hoffman, Monarch Athletic Club promoter, announced yesterday there will be no radio broadcast of the Jackie Fields-Young Corbett welterweight match scheduled this afternoon at Recreation Baseball Park.

Good Luck, Son!

JACKIE FIELDS, welterweight champion, and his mother, Mrs. Finkelstein, who had a happy reunion at the Hotel Whitcomb Thursday night. Jackie's Ma paid him a surprise visit from Los Angeles, where he bid her good-bye two weeks ago, not expecting to see her until after his bout with Young Corbett at Rec Park this afternoon.



Jackie Fields' Mother, Corbett's Father in S. F.

APPROPRIATION FOR THIRD S. F. GOLF COURSE RECEIVES OKEH

Finance Committee Approves of $25,000 Fund for Sharp's Park Links; Supervisors to Act

By EARLE BROWN

SAN FRANCISCO will have a third municipal golf course, and it will be at Sharp's Park.

The major hurdle assuring the construction of a course to alleviate the present overcrowded conditions at Lincoln and Harding Parks was taken yesterday when the finance committee of the Board of Supervisors approved an appropriation of $25,000 from the city treasury and will make the necessary recommendation for the amount at the next meeting of the supervisorial board.

RESOLUTION MADE.

Supervisor James E. Power made the resolution at a meeting of the finance committee yesterday, a meeting attended by representatives of the Municipal Golfers' Association, the Junior Chamber of Commerce, and other civic organizations. It was seconded by Supervisor J. Emmet Hayden and concurred in by Chairman Angelo Rossi.

The sum will be taken from less present pressing projects when passed by the board, and construction will begin within the next 10 days, according to Captain Bernard Lamb, secretary of the Park Commission; Joseph R. Hickey, managing director of recreation facilities and John McLaren, superintendent of parks.

$100,000 NECESSARY.

With over $20,000 remaining from the bequest of Mrs. Honora B. Sharp, donor of the 417 acreage at Salada Beach, plus the $25,000 appropriated, work on the layout to build a championship course may be carried on until the remaining $100,000 necessary is included in the June budget.

In addition to a golf course, a recreational grounds and other public facilities will be erected.

BUILD IT IN YEAR.

Construction of the course, according to McLaren, should be completed within a year when started immediately. McLaren pointed out to the Finance Committee that unless the necessary appropriation was passed, the layout could not be ready for two years, at which time, it was stated by others, conditions at Lincoln and Harding Parks would be unbearable.

Plans drawn by noted architects, Dr. Alister Mackenzie and Robert Hunter, have rested in the hands of the Park Commission for the past year. They will be used now to create a seaside municipal course of outstanding character akin to those of the English and Scottish coasts. Already 100,000 trees have been planted on the site by McLaren, and well dug, insuring adequate water supply.

Sharp's Park is located near ...

BELL...
On request, sent...

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AMERI...
MILLION...

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OF NORT...
ROME, Italy...
NORTH POLL...
RENO, Nevad...
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PACIFIC OCEA...
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O'DOUL, FON...
TO TEACH...

18

FEBRUARY 26, 1930 — SAN FRANCISCO CHRONICLE DAILY SPORTING GREEN

H. Chandler Egan Praises Possibilit[i]

NEW MUNICIPAL COURSE IDEAL, CLAIMS EXPERT

Ocean Holes Have Great Possibilities, Says Former Champ

By GERALD J. O'GARA

Sharp Park, a second St. Andrews and the finest municipal golf course in America.

That was the ideal expressed yesterday by H. Chandler Egan, former national amateur champion and the man who will direct construction of the city's third municipal links. Egan had just had his first view of the site at Salada Beach.

He tramped through rain on his first inspection tour, with John McLaren, veteran park superintendent; Joseph R. Hickey and Captain Bernard P. Lamb, Park Commission executives.

As soon as Egan had glimpsed the property, McLaren put a surveying gang on the job.

"The first step in construction will be pumping of 400,000 cubic yards of sand from the beach on to the links," McLaren stated yesterday. "That is to begin as soon as contracts can be let. Over the sand we will spread 90,000 yards of loam.

"Seeding is to commence and will continue as fast as fairways and greens are graded. Construction must be well under way within sixty days in order to have the entire course seeded by September, which will give the grass ample time to grow and make possible opening of the course by April 1, 1931."

Egan expressed himself as delighted with Sharp Park.

"I have played at St. Andrews and I frankly believe Sharp Park will be a worthy imitation of the classic course," he stated. "Two tees and two greens will be right beside the ocean. It is a remarkable seascape, this bit between Mussel Rock and Point San Pedro. The fairways reach from the beach into deep valleys, all splendidly wooded by Mr. McLaren, who has planted already 100,000 trees. I will follow the plans prepared by Alister MacKenzie, my associate architect, for they make best possible use of a fine site." Egan left for Los Angeles last night. He will return next week to take personal charge of construction at Sharp Park.

Local Cage Teams Form New League

Five San Francisco basketball clubs last night organized themselves into a new league, under whose banner they will operate in games next season. The charter members of the new organization include the Olympic Club, Y. M. I., Roesi, Twin Peaks Parlor and the Governor Club. The Athens Club of Oakland, represented by Don Brothers at last night's meeting, did not formally enter, but is expected to do so within the next few days.

St. Ignatius College and Santa Clara University were represented at the session, but, pending action by their respective faculties, neither enrolled in the circuit.

[illegible]

Emporium Tourney Sets a New Record for Big Entry

Pairings and Starting Times for Saturday and Sunday Prepared by Director of Event

ENTRIES closed in the San Francisco municipal golf championship yesterday at the Emporium with the largest list of golfers ever registered in the tournament.

A record shattering number, 1218, golfers registered in the tournament for the three days of the qualifying round at Lincoln Park, February 28, March 1, March 2. This breaks the mark of last year, 1180, the largest number in any tournament in America in 1929.

Starting times for Saturday and Sunday were announced yesterday as follows:

SATURDAY

7:00—E. Johnson, E. Bard, J. Kreman, E. A. Smith.
7:05—C. Dahlgren, B. Thompson, O. Hoover, J. D. Hansen.
7:10—J. G. Sharp, C. Lewis, H. Johnston, E. Kay.
7:15—P. M. Cotton, J. C. Perkin, E. E. Morrison, W. F. McGee.
7:20—J. Myers, G. Blanchard, E. J. Shearer, J. Williams.
7:25—R. Chiopa, J. Adams, F. Schinas.
7:30—P. Mahoney, Rene Pirch, J. Carr, F. Adams.
8:00—H. Warden, Ted Torrise, J. Stein, A. West.
8:10—F. L. Primelli, Ray Carlson, James W. Kleinham, Phil S. Toleman.
[illegible]
8:20—T. L. Conlan Jr., E. Haber, E. Brown, E. Dumbar.
8:30—Charles Friedrich, I. B. Martin, Earl Leonard, G. J. Hall.
8:35—E. J. Bosch, A. Duff, J. M. Ostivie, A. T. Peterson.
8:40—P. J. O'Brien, G. M. McElhen, Irwin Horwitz, Gordon Warner.
8:45—Ernest Orsolino, W. E. Lynch, Calvin Toland.
8:50—E. Cahill, E. Cross, H. R. Goff, W. M. Sellers.
8:55—C. J. Van Praag, S. J. Seaberg, C. Langridge, W. O'Brien.
9:00—H. Dirtola, R. Ostrich, F. Bramhall, R. Belasco.
9:05—J. Murray, George Stevens, Dick Kendall.
9:10—A. Almeraste, J. Quinley, G. J. Silverstein, W. J. Kennedy.
9:15—W. Kilmer, G. H. Collins, W. Bresnahan, Dr. Shelton.
9:20—J. Rosenblum, G. A. Stewart, Ed L. Brown, A. Sterling.
9:25—Dr. John D. Atkinson, J. F. Lynch, S. J. Leider, A. O. Spitzer.
9:30—George Marsh, George Dwyer, William Morgan, G. E. Bowen.
9:35—W. G. Hammill, H. Carroll, R. O. Smith, F. G. Burns.
9:40—O. Ferrier, D. MacDonald, J. Tommy, J. F. Weber.
9:45—M. W. Martin, W. E. Fields, A. Van Tricht, G. A. Burke.
9:50—L. A. Stewart, H. F. Dolphin, E. C. Harper, D. Burton.
9:55—Leo McAllister, John Harder, Earl Barth, A. McGann.
10:00—F. Sorbel, A. Devier, J. Gewhine, E. F. Brandt.
10:05—O. Almber, E. Everitt, R. Spencer, L. Macquillard.
10:10—W. A. Siebert, William Stewart, F. C. Tallon, Ned Hill.
10:15—R. Barber, J. Jordan, W. D. Shea, E. O'Connor.
10:20—J. Barbour, O. Stone, R. Mort, J. O'Reilly.
10:25—O. Dellamoni, O. Greenwood, F. F. Olswillat, R. Metalbek.
10:30—H. Schmidt, Blair Hart Jr., J. A. May, R. Holloway.
10:35—John Fischer, Henry Broderick, Frank Ryan, Harvey Russell.
10:40—F. Begley, R. M. Sherry, L. Berkson, J. Haight.
10:45—L. Frammersford, Bud Gallagher, J. M. Cole.
10:50—R. Cook, Tom Cronin, O. W. Bassler.
10:55—J. W. Connell, L. Trumbull, F. Herbert, J. McCarthy.
11:00—R. MacIntyre, C. K. Murphy, W. Moreton, E. L. Kealey.
11:05—Ray Hardison, O. Helwig, Thomas Rooney, O. Kirchebel.
11:10—O. Wardlow, T. J. Bauer, Winifred Dotsch, A. Wright.
11:15—O. Ornstein, A. Brush, G. E. Donnelly, E. Weisberg.
11:20—J. H. Blackwell Jr., E. W. Pelton, E. R. Ross, William Blosser.
11:25—O. C. Beeslin, R. O. Nolan, Albert Brown, L. W. Apgar.
11:30—O. Dowberty, E. Haight, E. Brown, F. Meyers.
11:35—E. Trevor, A. B. Healy, Jim A. Doughan, F. W. Philliot.
11:40—J. R. Preston, J. F. Barry, A. Merrill, E. Lyder.
11:50—F. A. Little, A. F. McCullough, McCann, O. Cavanaugh.
8:20—Mark West, Joseph Salz, Erich Schneider, Herman Schade.
8:25—L. Barsocchini, R. Barselo, E. Johnson, F. Barsocchini.
8:40—P. Nathan, W. Jewett, R. Anderson, T. Madden.
8:45—L. Belfore, M. Rutenblatt, R. Buhr, P. Levey.
8:50—Dr. Hrecourt, A. Tait, R. Huntley, Charles McLaughlin.
8:55—A. F. McDermid, W. O'Brien, E. Scully, E. Schneider.
9:00—Peter McGurk, Ray Harris.
9:05—Bob Marsky Jr., Ed Lester, A. O. Bale, J. Cannon.
9:10—E. A. Larrowe, M. S. Brown, Walter Pratt, G. Bender.
9:15—A. Otter, E. Weber, T. F. McThee, D. Watkins.
9:20—Herb Schmulian, E. O'Brien, V. Gilstrap, M. Thompson.
9:25—J. Kuhn, W. Hamilton, A. L. Frank, F. King.
9:30—J. E. Lalderhauser, W. J. Cullen, W. H. Kenmore, A. O. Schlock.
9:35—P. Hawkins, O. Ferreira, G. Moran, R. McGovern.
9:40—E. O. Lipman, R. P. Connolly, F. P. Ross, G. R. McDonough.
9:45—R. Croll, O. Tiernan, L. Oppenheim, A. D. Deane.
9:50—D. E. McMillan, J. D. Reid, G. C. Mackenroth, W. R. Avril.
9:55—G. W. Decker, Ed Beebe, Jerry Marshall, Francis Curry.
10:00—L. D. Morrison, H. Young, F. Henderson, R. J. Behrer.
10:05—L. Little, F. Murphy, F. Palmer, G. Mullin.
10:10—W. Preddy, F. Francis, M. Reed, R. Hess.
10:15—Dr. Wilson, J. W. Straw, Frank A. Mixer, Howard Harding.
10:20—M. E. Lindner, A. J. Preston, O. D. Shepard, C. R. Taylor.
10:25—Kenneth Zahn, E. Fairey, F. O'Neill, R. D. Pelham.
10:30—T. Rhodes, T. Dillon, F. Molson, C. Coffey.
10:35—R. P. Williamson, J. McRoan, R. Dockman, F. L. Baillache.
10:40—R. Sandeker, Ed Bouther, J. Foley, T. Amorth.
10:45—J. McKinnon, E. E. Baedeker, R. R. Crump, Ed Berneman.
10:50—R. Holman, W. T. Murray, J. Dillon, Al Dale.
10:55—O. Lovell, E. J. Crowley, A. Schramm, O. Henry.
11:00—Walter Otto, A. Courtiden, W. J. Barry, Roy Phillips.
11:05—E. Sachs, F. Murray, B. Minahan, R. McDonald.
11:10—R. Todt, J. Lynch, A. Lynor, T. Crue.
11:15—D. D. Tolanelli, P. Willey, C. Milton, W. A. Siebert.
11:20—H. H. Dowling, J. Lustig, W. A. Murray, C. W. Stoeberr.
11:25—H. Lovell, H. J. Thomas.
11:30—Ed Rodell, J. J. Wall, F. Eitzmiller, E. T. Lindner.
11:35—A. Enseleen, A. E. Ames, Marvin Abrams, Tim Miraldo.
11:40—E. Gregory, W. Nelson, C. Jordan, R. Hollenbert.
11:45—E. G. Barrett, Dr. Arrett, G. L. Rankin, H. Nelson.
11:50—W. Holloway, W. Oresham, E. Blackburne, F. E. Tulline.
11:55—G. W. Avril, J. Daniel, O. E. Kahlmann, H. Terry.
12:00—J. McInerney, T. Horan, L. E. Johnson.
12:05—J. B. Whittel, F. F. Comer, A. Kaufman, L. A. Harner.
12:10—F. Barth, W. E. Brizee, T. J. Lowe, P. Quale.
12:15—H. D. Moore, L. W. Brindle, J. Tulline, E. Cummins.
12:20—T. McHugh, J. M. Bailey, F. O. Brown, T. Kelb.
12:25—J. Kinerle, J. Charles, M. Bertie, R. E. Gebbins.
12:30—O. A. Cameron, F. O. Leffelman, E. J. Sierra, W. Horan.
12:35—M. Reed, Al Wagner, G. Harder, J. Kane.
12:40—W. O. Jeffries, F. J. Abunette, W. McCloskey, J. Victor.
12:45—F. Sierra, H. Kalmbach, P. Scully, R. C. Brown.
12:50—F. S. Gallaher, F. Hay, Dr. O. O. [illegible]

COMMUTERS OF ALAMEDA OPEN PLAY SUNDAY

Pairings and Starting Times Announced for 208 Competitors

A total of 208 players will compete in the annual Alameda Commuters' golf tournament that starts next Sunday morning on the Alameda municipal course. Play gets under way as early as 8:30 a. m., when the fifth flighters tee off.

Pairings and starting times:

FIRST FLIGHT—8:10 A. M.
L. J. Mussone v. Bob Birchlow
H. O. Merrel v. Max Williams
R. R. Wagner v. Earl Cove.
Ray Croll v. D. V. Kellogg.
J. H. Jordan v. A. Corlett.
J. F. Purse v. Milton Gabbs.
E. F. Schultz v. R. E. Wagner
R. F. Jackson v. C. W. Hill
SECOND FLIGHT—7:50 A. M.
J. A. Jacobs v. E. L. Cody.
M. B. Reed v. J. R. Scarborough
H. O. Hart v. W. J. Simmons
George W. Daly v. Joe Klein
O. E. Nelson v. O. C. Morris.
J. M. Howell v. John Tiedemann.
O. S. Gaunt v. George Oreary.
E. O. Welch v. Harry Nielsen.
THIRD FLIGHT—7:30 A. M.
R. O. Wallis v. Frank Carter.
Dr. F. M. Williams v. E. I. Speer.
C. N. Moody v. George A. Rear.
J. W. Knight v. W. E. "Bill" Perkins.
A. H. Forrester v. Fred Coupe.
F. P. Osborn v. W. C. Forrester.
Charles Reinhold v. R. W. Paulsen.
M. McGee v. S. R. Shepard.
FOURTH FLIGHT—7:10 A. M.
J. W. Hogan v. R. J. Rose.
Charles Thompson v. O. A. Orear.
D. McMillan v. O. H. Delnick.
R. A. Johnson v. Marc Oarratt
J. B. Smith v. E. F. Teall.
S. J. Worth v. R. S. Choice.
L. R. Orman v. Wilbert Gaelis.
Paul Faulkner v. O. F. Olmsey
FIFTH FLIGHT—6:50 A. M.
T. O. Wood v. Ed. Foley.
H. W. Brinkhall v. W. R. Jardine.
O. D. Shepard v. J. E. O'Brien.
L. O. Steele v. R. B. Ruff.
A. A. Hobe Jr. v. Fritz Hall.
William F. Schultz v. A. J. Stauber.
O. A. Mellin v. E. R. Benjamin.
F. H. Scott v. F. Thompson.
SIXTH FLIGHT—6:30 A. M.
Peter Palma Jr. v. H. O. Meinecke
Walter Hauch v. A. V. Merrill.
R. C. Wagner v. T. W. Smith.
F. A. Kiehne v. F. F. Erbe.
N. S. Marston v. W. L. Gannine
A. M. Smith v. W. M. Oliffe.
J. W. Fallon v. A. E. Kihn.
J. W. Bailey v. E. W. Southwell
SEVENTH FLIGHT—9:00 A. M.
Ray Lutich v. J. E. Brossine.
C. C. Paul v. H. M. Coffey.
W. B. Johnson v. F. F. McClintock
Sherwood Jones v. Leon Ades.
H. J. Carroll v. Ralph Harvey.
W. W. Carter v. R. L. Danley.
Roy Bishop v. R. O. Saunders.
Arthur Grant v. J. McCloskey
EIGHTH FLIGHT—9:10 A. M.
L. L. Rooney v. L. D. Morgan.
Chris Stroud v. John B. Trale.
E. E. Bricker v. John Robson.
G. F. Davies v. T. J. Owen
Ed Hathaway v. W. C. Brooks
J. Ellis v. E. W. Carey
Bob Bertram v. D. G. Schnabel.
T. A. Reynolds v. H. O. Reid.
NINTH FLIGHT—9:30 A. M.
Harry Gushing v. Art. Birchlow.
Stanley Price v. J. Murphy.
E. F. Kern v. Clyde Leisure
L. O. Wichman v. E. A. McAllister
Ralph Fraser v. Max Cunningham.
H. T. Crandall v. Ray Bird
Otto Hassemeyer v. W. R. Morton.
Charles Liedemann v. Wayne Dean.
TENTH FLIGHT—9:50 A. M.
Ted Vonah v. A. Reid.
O. W. Rankmeyer v. Al Brooks.
F. E. Stuart v. William Pratt.
Ed Morgan v. W. O. Buhles.
N. S. Walker v. A. Low.
W. J. O'Brien v. F. J. Holtz.
M. L. Rasore v. J. O. Jordan
T. W. Ross v. L. A. Wetzel.
ELEVENTH FLIGHT—10:10 A. M.
Doc McKenny v. George W. Donald
K. H. Dixon v. H. C. Trandel
R. W. Hollenberg v. Dwight Steele.
Walter Hose v. Fall Jurney

M[illegible]



Con[illegible]
Tw[illegible]
In[illegible]

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2/26/1930

CLE DAILY SPORTING GREEN ✦ ✦ ✦ ✦ WRITTEN BY EXPERTS ✦ ✦ ✦ ✦ CCC H3

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Pairings and starting times:

FIRST FLIGHT—6:50 A. M.
L. J. Mussano v. Bob Streiber.
H. G. Stovel v. Max Wilkenin.
R. B. Wagner v. Earl Capa.
Ross Croll v. D. V. Kellogg.
J. H. Jordan v. A. Derbes.
J. F. Jurus v. Milton Gubbs.
E. F. Schulte v. R. E. Wagner.
R. F. Jackson v. O. W. Neff.

SECOND FLIGHT—7:10 A. M.
J. A. Jacobs v. E. L. Ondy.
M. B. Reed v. J. R. Scarborough.
H. G. Hart v. W. J. Simmons.
George W. Daly v. Joe Klein.
G. E. Nelson v. O. C. Morris.
J. M. Newell v. John Tiedemann.
O. R. Gaunt v. George Cleary.
H. C. Welch v. Harry Wilbers.

THIRD FLIGHT—7:30 A. M.
R. G. Wallis v. Frank Carter.
Dr. F. M. Wilkenin v. E. I. Speer.
C. H. Moody v. George A. Boer.
J. W. Knight v. W. E. "Bill" Ferguson.
A. H. Forster v. Fred Cooper.
F. P. Osborn v. W. C. Forster.
Charles Reinhold v. R. W. Parkes.
M. McGee v. E. R. Shepard.

FOURTH FLIGHT—7:10 A. M.
J. W. Hazan v. E. J. Rose.
Charles Thomsen v. O. A. Greer.
D. McMillan v. O. H. Dalrith.
N. A. Johnson v. Mana. Correa.
J. B. Smith v. R. P. Pratt.
E. J. Werth v. H. E. Clarke.
L. R. Orsen v. Wilbert Oakes.
Paul Faulkner v. C. F. Gleeney.

FIFTH FLIGHT—6:50 A. M.
T. C. West v. Ed. Foley.
H. W. Brintnall v. W. H. Jardine.
O. D. Shepard v. J. E. O'Brien.
I. C. Hirvie v. R. S. Ruff.
A. A. Hohe Jr. v. Pete Hall.
William F. Schulte v. A. J. Stasher.
O. A. Mellin v. R. R. Benjamin.
F. H. Scott v. P. Thompson.

SIXTH FLIGHT—6:50 A. M.
Peter Paige Jr. v. H. O. Meinecke.
Walter Hauck v. A. V. Merrill.
R. C. Wagner v. T. W. Smith.
P. A. Kirner v. F. F. Kirner.
N. B. Martine v. W. L. Cannine.
A. M. Smith v. W. M. Giffin.
J. W. Pitzer v. A. F. Kirn.
J. W. Dailey v. S. W. Southwell.

SEVENTH FLIGHT—7:30 A. M.
Ray Lyon v. J. F. Rogers.

MIRACLES OF SPORTS By Robert Edgren



HEAVY WEIGHTS FIGHT TONIGHT IN LOCAL RINK

Stewart, Rowe Tangle in Main Event Bout at National Hall

Two of the most promising of the young heavyweights to bob up in this section the past six months will headline tonight's boxing program at the National Hall arena.

Jack Stewart and Alex Rowe are the gents and they will tangle in a ten-round contest. Both are in the hands of experienced managers and trainers, Stewart being with Dolph Thomas, Rowe with Tim McGrath.

The match, in the opinion of the fight fans, will not go very far, for both can hit and are of the type that is willing to take a chance. The remainder of the bouts on Promoter Al Young's card follow:

Johnny O'Donnell vs. Benny Gallup, six rounds, bantam weights; Joe Elrene vs. Matt Calo, six rounds, lightweights; "Red" Millett vs. Jack Silva, four rounds, middleweights; Johnny Russell vs. Louie Gallino, four rounds, bantam weights; Don Dority vs. Andy Kelchert, four rounds, junior lightweights.

Card Mermen Will Compete in East

STANFORD UNIVERSITY, Feb. 25.—Stanford's varsity swimming team will be entered in the national intercollegiate meet, to be held at Boston, March 28 and 29, it was announced today by Alfred R. Masters, general manager of the board of athletic control.

The varsity paddlers will leave Palo Alto March 20 and have scheduled a dual meet with the Northwestern University squad, to be held in Evanston March 26. Efforts are being made to arrange for other dual meets with college teams along the route the Stanford squad will follow. The Cards hope to be able to enter the National A. A. U meets in Chicago April 2, 3, 4 and 5, but it is not yet definitely known whether they will be able to pro-

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Western States Golf Association
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OUR LEGACY

HISTORY OF WESTERN STATES GOLF ASSOCIATION
1954-2011

Western States Golf Association was founded in 1954 with a small group of golf clubs. The charter member clubs were:

- Bay Area Golf Club, San Francisco California
- Cosmopolitan Golf Club, Los Angeles California
- Los Angeles Postal Golf Club, Los Angeles California
- Paramount Golf Club, San Diego California
- Verondale Golf Club, Los Angeles California (subsequently changed to Vernoncrest)
- Desert Mashie Golf Club, Phoenix Arizona
- Fir State Golf Club, Seattle Washington
- Leisure Hour Golf Club, Portland Oregon

Recognition of and appreciation for its founders, co-founders and prime movers of WSGA:

Vernon Gaskin of Portland Oregon was the first person to talk about the formation of such an organization. His efforts were supplemented by those of the late Bay Area Golf Club's Captain Morris Henderson of San Francisco. Mr. Gaskin served as Area Vice President of the Pacific Northwest from 1953-1973. Mr. Gaskin retired with the honor of Honorary Vice President of the Association.

Next to appear on the scene was J. Cullen Fentress of Los Angeles California. Mr. Fentress, in his first year as President of Cosmopolitan Golf Club, participated in all of the member clubs Annual Tournaments on the West Coast. It was through this participation that the idea of the formation of a central governing body evolved. Mr. Fentress became the Founding President and served as President of WSGA from 1954-1971. Upon his retirement in 1971, the honor of President Emeritus was conferred upon him. On April 8, 1989, we were diminished by our loved one's death, but we feel vastly enriched by the wealth of his legacy.

The first Association Championship was held in 1955 at Sharp Park Golf Course in San Francisco California. This event was hosted by the Bay Area Golf Club with Mr. Jim Stratten serving as the Tournament Chairman. Mr. Stratten was the immediate successor to Bay Area Golf Club's President Captain Henderson who passed suddenly. WSGA began sponsorship of the Championships in 1962 and in 1963 the Championships were sponsored for the first time.

During the period of 1971-1994, the following distinguished people served as President of WSGA. Mr. Kermit Burns of Los Angeles California served during 1971-1973 and developed procedures toward the incorporation of the Association. Mr. Jahue L. Earles of Los Angeles, California served during 1973-1975 and initiated the President's Ball. Mr. Fred Horton III of Oakland, California served during 1975-1977 and spearheaded the Association's "HALL OF FAME"

In June of 1977, Mrs. Pearl Carey of Seaside California became the first female elected to be President of WSGA. This historical event took place at the 23rd Annual Championships in Palm Springs California. Mrs. Carey presided over the Association very efficiently for four years (1977-1981). Her major accomplishments were to rejuvenate and revise the Association's Junior Golf and Women's Golf programs. She increased the five area Annual Scholarships to $1,000.00 each and established an Annual WSGA Junior Golf Championship.

On June 19, 1981, the affable and articulate William "Bill" Dickey of Phoenix, Arizona was elected president of WSGA. During Mr. Dickey's term of office from 1981-1983, several major goals were achieved. Mr. Dickey ordained a Standing Committee to establish a Computerized Handicapping System to calculate and distribute handicaps for WSGA members. He promoted a strong Jr. Golf Program and obtained the 7-UP company as a sponsor of the Junior Championship and acquired Anheuser Busch, Inc. as sponsor of WSGA's Annual Championship.

Mr. Fred Parker took over the helm as president of WSGA in June 1983 and served two terms (1983-1987). Mr. Parker kept in tune with his predecessors by emphasizing and perfecting specific goals for progress and expansion. Through Mr. Parker's initiative, consistency and enthusiasm, WSGA continued to move forward

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with increased membership and expanded the Annual Championships. Mr. Parker initiated efforts to increase support for college students.

Mr. Gus Robinson, a gentleman of wisdom and integrity, was elected as the 8th President of WSGA on June 25, 1987. Mr. Robinson served for two 3-year terms (1988-1993). During this period, Mr. Robinson was very diligent and effective in performing his duties as an untiring, progressive leader. Among other accomplishments, Mr. Robinson led a constructive movement toward establishing "Tee-Cup Magazine" as the official publication of WSGA, which became a reality in 1988. He dedicated himself to illuminating the myth that there was friction between the Northern California and Southern California Areas of WSGA. Mr. Robinson was instrumental in the development of the "North/South Shoot-out" (a tournament between the women in WSGA). Although he maintained an exhilarating schedule participating in all of WSGA's sanction tournaments, he undertook the rewriting and clarification of WSGA'S Constitution and By-Laws. Mr. Robinson exemplified a total commitment to the Jr. Golf Program. During his administration, Mr. Robinson became a member of the United States Golf Association and the winners of WSGA's Junior Championships were invited to the Maxfli/PGA Junior Championships.

In June 1993, Mr. Hank Marshall became the 9th president of WSGA. Mr. Marshall made a commitment to continue building the youth programs. During Mr. Marshall's administration, WSGA's computer equipment was updated. He organized the women's golf program so it would function like other WSGA programs. Mr. Marshall initiated efforts to complete the revision of WSGA's Constitution and By-laws and set a five year plan for WSGA.

In June 1998, Mr. Gus Robinson became the 10th President of WSGA. It should be noted that this is Mr. Robinson's second time (recycled) as WSGA President. His incumbency during this time encompassed 1999-2003. Mr. Robinson continued his commitment to the junior golf programs and, again, performed his duties as an untiring and progressive leader.

In June 2003, Mr. George Colebrook became the 11th president of WSGA and served two terms from 2003-2009. During Mr. Colebrook's tenure as president, he stressed the importance of communication. He created and maintained a WSGA Hot-Line which enabled members to communicate directly with the President. He conducted Town Hall meetings in each of the five areas and worked closely with the Area Vice Presidents and appointed Chairpersons. Mr. Colebrook was the Editor of WSGA's newsletter during his tenure as President and along with his appointed committee, was responsible for the latest update (2007) of WSGA's Constitution, Bylaws, and Standard Operating Procedures. Mr. Colebrook initiated the 501(c)3 status for the Association's junior golf program (Western States Junior Golf Program). He was also responsible for WSGA receiving Hall of Fame honors from the National Negro Golf Association.

In June 2009, the second female president in WSGA's history was installed as its 12th president. Ms. Tamara Baxter's platform was based upon bringing greater visibility to WSGA's legacy, an expansion plan to increase the number of member clubs, and the utilization of technology for the purpose of Promotion, Acquisition, and Retention (PAR). One of the more successful PAR initiatives was the "Gimme 4." This initiative encouraged all member clubs to send a minimum of one (1) foursome from their respective clubs to participate in each Sanctioned tournament. This effort would ensure a greater number of participants at each tournament and increase the exposure of each hosting club. Recognizing the need to bring WSGA into the 21st Century, Ms. Baxter also implemented the redesign of the organization's website and increased the promotion of the Association utilizing various Internet platforms including social media sites Facebook and Twitter, and developing marketing collateral. Ms. Baxter's desire was to give the Association a facelift and facilitate the process of re-branding the organization.

Ms. Baxter initiated the total revision of the Association's Constitution/Bylaws & Standard Operating Procedures to update the language for relevance and clarity. Additionally, she initiated the first investment policy where the Association's assets could be invested to generate additional revenue.

During her tenure, Ms. Baxter also facilitated partnerships with World Golf Foundation (WGF) and AdvocatesUSA. WGF is the parent organization of The First Tee, the preeminent youth development program, World Golf Hall of Fame, and Golf 20/20, a research and development initiative of WGF to promote and sustain the game of golf. Mike Cooper, Ph.D, Southwest Regional Affairs Director, with The First Tee embraced WSGA's Junior Golf and Women in Golf programs. AdvocatesUSA, is a national association of African-American male professionals and entrepreneurs who promote mentoring, health and wellness, and education to inner-city male youth using golf as the medium. AdvocatesUSA founder, Ken Bentley, and their Board of Directors launched Advocates Invitational Pro Tour in 2010, a developmental tour that allows African-American males in pursuit of the PGA Tour to compete for prize money and a sponsorship into the Tour's qualifying school (Q-School). WSGA hosted the second leg of the Advocates Pro Tour in June 2010 during its Annual Championship in Denver, CO.

WSGA's Genesis for Recognition of individual performances of duties beyond expectation:

On December 10, 1978, WSGA reached a milestone when the first Hall of Fame ceremony was held at the Broadway Federal Savings and Loan Association in Los Angeles, California.

Recognizing their loyal and dedicated services the Association over the years, the following members were inducted by President Pearl Carey into WSGA's Hall of Fame:

- Mr. J. Cullen Fentress, WSGA President Emeritus
- Mr. Vernon Gaskin, WSGA Honorary Vice President
- Captain Morris Henderson, President of Bay Area Golf Club (deceased at the time of induction)
- Mrs. Mary Woodard, (deceased at the time of induction)
- Mr. James Stratton WSGA's first General Tournament Chairman
- Mrs. Mae Crowder, WSGA Honorary Vice President

The First Tee of South Los Angeles
USGA (United States Golf Association)
World Golf Foundation

- Mr. Clifton Walker, WSGA's first General Handicap Chairman (deceased at the time of induction)
- Mr. Felbert Cobbs, WSGA's first Northern California Area Vice President

In complying with tradition as established by the Association, over 20 worthy members of long standing and meritorious service have been inducted into WSGA's Hall of Fame.

- Mr. Frank Adams Sr., June 1980, member of Cosmopolitan Golf Club(deceased)
- Mrs. Lillian Fentress, June 1983, member of Vernoncrest Golf Club (deceased)
- Mr. William "Bill" Dickey, June 1985, Desert Mashie Golf Club
- Ms. L. Diane Marbury, June 1987, member of Golden Tees Golf Club
- Mr. A. B. Mansfield, June 1987, member of Metropolitan Golf Club (deceased)
- Ms. Ella Mae Reason, June 1987, member of Vernoncrest Golf Club (deceased)
- Mr. Joseph Charbonnet Sr., June 1989, member of Tee Masters Golf Club
- Mrs. Mercedes Sanford, June 1989, member of Aberdeen Golf Club (deceased)
- Mr. Lesley A. Williams, June 1989, member of Bay Area Golf Club
- Ms. Pearl Carey, June 1991, member of Ebony Seaview Golf Club (deceased)
- Mr. Joseph Gardner, June 1991, member of Cosmopolitan Golf Club
- Mrs. Alma Jackson, June 1993, member of Golden Gaters Golf Club
- Mr. Charlie Peoples, June 1993, member of Bay Area Golf Club
- Mr. William "Bill" Buller, June 1993, member of Inland Empire Golf Club
- Mr. Sylvester Marshall, June 1993, member of Leisure Hour Golf Club (deceased)
- Mr. Carol Clark, June 1996, member Golden Tees Golf Cub
- Mr. Fredrick Horton III, June 1996, member Bay Area Golf Club (deceased)
- Mr. Joe W. Boyd, June 2002, member of Cosmopolitan Golf Club
- Mrs. Augalie S. Earles June 2002, member Golden Tees Golf Club, founder Vernoncrest (deceased)
- Mr. Joseph N. Robinson, June 2002, member of Desert Trails Golf Club
- Mr. Gus Robinson, June 2011, member of Tee Masters Golf Club

Advancement in WSGA has extended to 30 golf clubs located in the states of Arizona, California, Colorado, Nevada, Oregon and Washington. WSGA is proud of the role it has played in golf since it's inception in 1954.

WSGA acknowledges:

- Mr. Bill Wright of Fir State Golf Club for becoming the first African-American National Champion when he won the USGA National Public Links title.
- The financial assistance extended to Charlie Sifford prior to his joining the PGA Tour, as the Professional Golfers Association lifted its Caucasian-only clause in 1960.
- Mr. Ashley Smith (deceased) of Bay Area Golf Club, a perennial WSGA champion, also distinguished himself by winning the San Francisco, Hayward, and Oakland City Championships, and the Alameda Commuters Championships.
- Mr. Alton Duhon of Cosmopolitan Golf Club became the second African-American to win a National Championship when he won the 1982 USGA National Seniors Amateur Championship.

We also acknowledge the names Mr. Al McDaniel of Pasadena, Frank Huff of Desert Mashie, Gordon Brown of San Diego (Paramount), and Gina Daniels (Aberdeen) winners of the Pasadena, Phoenix, San Diego and Los Angeles City Title, respectively. WSGA is also proud of the following Juniors representing WSGA at the "MAXFLI/PGA" tournament: Andy Walker (Desert Mashie Golf Club), Dara Broadus (Atlanta, Georgia), Felicia Herrington and Randall Hunt (Tee Masters Golf Club – 1983), and Brandi Seymour and Randall Hunt (Tee Masters Golf Club) were 1994 representatives.

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WIG NORTH/SOUTH SHOOTOUT – SEP 24-25

The ladies of WSGA will come together for another North/South Shootout. The two day event is

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San Francisco Call-Bulletin, March (?), 1932

TEE TOPICS

By FRANK P. NOON

Here's What You'll Find at Sharps Park

Fleming Describes City's Newest Layout

With the opening of the Sharps Park course set for April 1, a lot of fairway folks want to know what the "going" is like between the first tee and the eighteenth green.

Playing the layout the other afternoon with Dr. Alister Mackenzie, its designer; Bob Hunter Jr., who played a prominent part in the construction of the course, and Jimmy McGee, the writer agrees with Jack Fleming, the superintendent of the course, that he has had one whale of a time trying to grow grass on the acreage circling Laguna Salada.

The soil itself is not good, and innumerable top dressings have not benefited it much. There is sufficient water available, but until a reservoir is constructed in the canyon east of the course to guarantee an adequate supply of fresh water, I am inclined to the belief that growing grass will remain a problem to Fleming.

Water now used on the course is pumped from a reservoir near the beach, and, naturally, contains salt. The result is that the grass isn't growing as it should, and the course at present presents a "splotchy" appearance. The greens are excellent.

* * *

You want to know about the course, don't you? Well, here is a description of the layout as written by Jack Fleming. You will be interested, I know, in knowing that Fleming is rated by none other than Dr. Mackenzie as one of the most expert greenkeepers in the country.

* * *

Here is Fleming's hole by hole description of the course:

FIRST NINE

No. 1—408 yards, par 4. A fairly long two shot hole, slightly dog legged. No particular difficulties to a straight hitter.

* * *

No. 2—362 yards, par 4. A short two shotter. Drive must clear an arm of lake at about 190 yards, but a wide fairway available at 170 yards out. Greens set back against trees and trapped in front right.

* * *

No. 3—420 yards, par 4. One of the ocean holes constructed on the beach—in a slight depression bounded by sand and sand grass embankment on left, trees on right. Entrance to green slightly advantageous from left on account of trap.

* * *

No. 4—130 yards, par 3. A one shotter. Green very large, but well trapped in front and right, trees on left and rear.

* * *

No. 5—327 yards, par 4. A lakeside hole and one of the most interesting holes on the course, similar to Dr. Mackenzie's "ideal golf hole." Three trees, four routes. Easy route probably will cost at least one extra stroke to get on, while the other combinations of tees and routes give rewards proportionate to their respective risks.

* * *

No. 6—152 yards, par 3. A difficult par. Green well trapped.

* * *

No. 7—333 yards, par 4. Similar to No. 3, but in opposite direction. A trap endangers the short player on his second, but properly played as a two shot hole a par is possible.

* * *

No. 8—336 yards, par 4. A dog-leg, quite difficult for two shots. Drive is blind and over trees if played close to get in opening for a good second. Plenty of fairway, however, for those who play short and do not care to risk trees on right for possible par. The wide play practically requires three strokes to get on.

* * *

No. 9—438 yards, par 5. A lakeside hole with wide, sandy beach on water side. Back tee should be used by all, as water carry is very short and close to tee. Requires three good shots to get on if dog-leg is played, but possibly a very long sure spoon and get in under par.

SECOND NINE

No. 10—332 yards, par 4. One of the best holes, two tees, four possible routes, sand and water carries optional. The ideal shot is an accurately placed ball on an island with a water carry on both first and second shots. If well placed on first, the green opens well for a pitch and run second. All other approaches to the green are guarded.

* * *

No. 11—142 yards, par 3. A fairly typical short hole. Water and sand carry, trap green. Green, however, is long and should receive an average straight ball easily.

* * *

No. 12—422 yards, par 5. Fairway flat, double dogleg. Not difficult except to get two good, straight drives in succession.

* * *

No. 13—345 yards, par 4. Passing the clubhouse from No. 12 green to No. 12 tee. The thirteenth, fourteenth and fifteenth are all holes of a different type than the lakeside and ocean side holes. No. 13 is an upland type of hole of average difficulty. The green is well trapped.

* * *

No. 14—134 yards, par 3. This short hole has two tees. The top with the carry across the creek opens into green easily, while on crossing creek to the other tee a more difficult shot over a trap at the green is encountered. Directly into prevailing winds.

* * *

No. 15—320 yards, par 4. Similar to No. 12. At present along the edge of the county road, which it is planned to re-locate. No. 15 green is near clubhouse.

* * *

No. 16—362 yards, par 4. A nice hole with two optional routes and a creek to cross.

* * *

No. 17—471 yards, par 5. A long hole down the south property line. The green is on a 15 foot fill.

* * *

No. 18—441 yards, par 4. The finishing hole is long and hazardous if not successfully played on both long shots, but the green is wide, open and nicely rolling in order to lend interest to the many thrilling final decisions which will no doubt be made on it. A clump of trees guards the green on the left.

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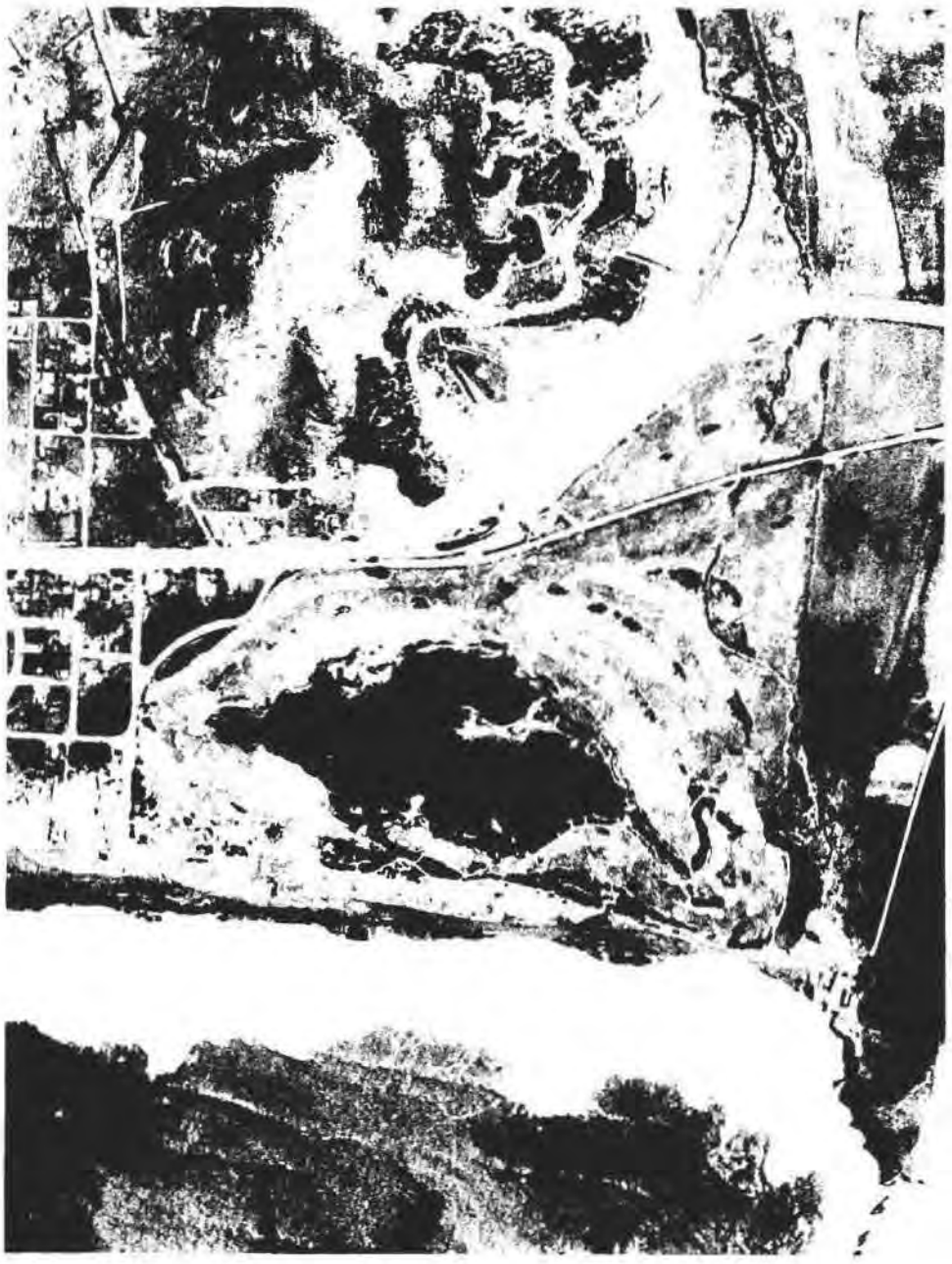

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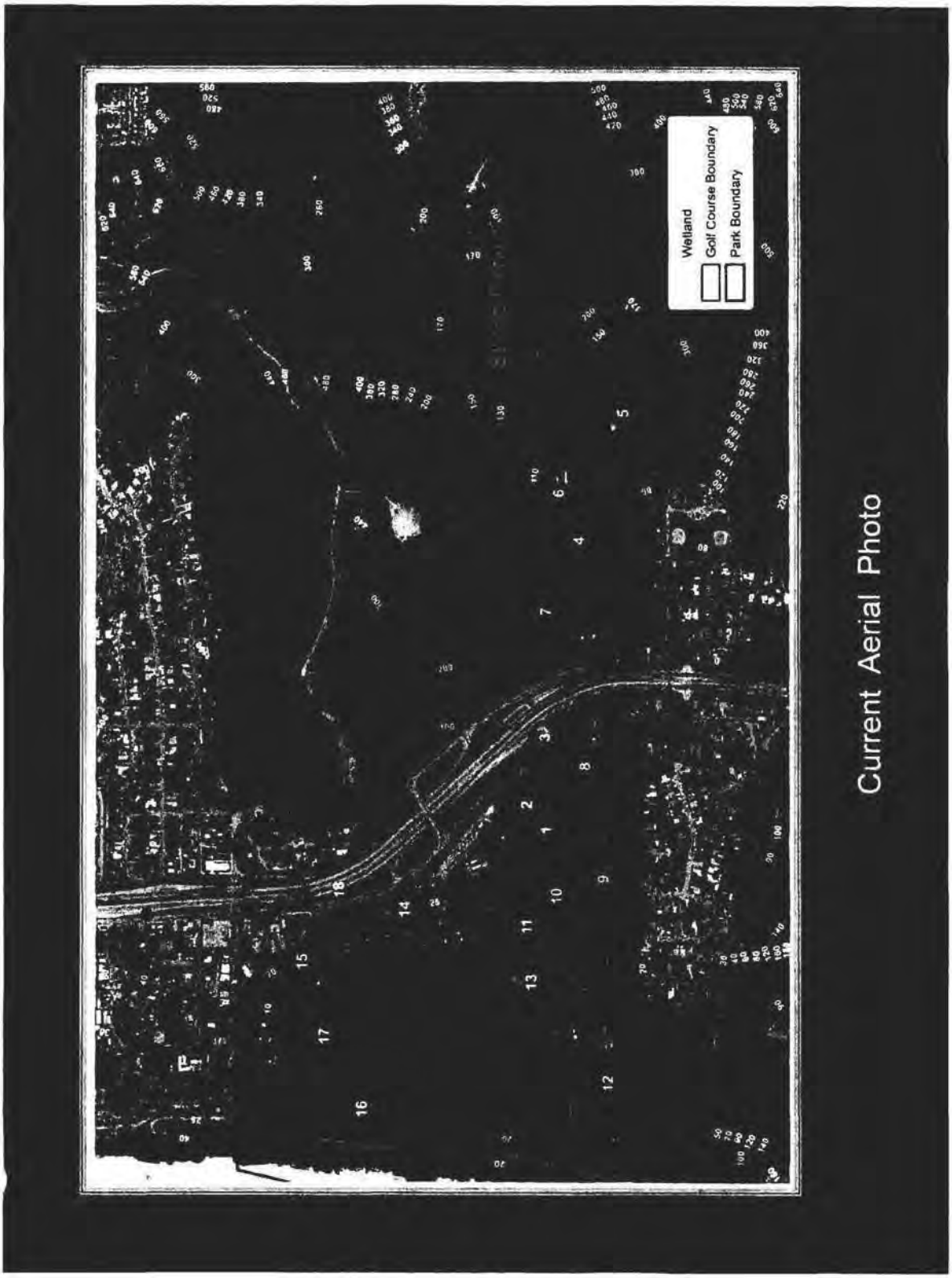
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Wetland
Golf Course Boundary
Park Boundary

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Golf Digest GolfWorld

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Sharply Divided

What's best for Sharp Park, a dandy Pacifica, Calif., muny designed by Alister Mackenzie? Conservation advocates, pro-golf locals have very different answers



STAY THE COURSE: Links and self-described environmentalists Lancelle and Harris are working to keep Sharp Park a course (the par-3 12th, shown above).

BY GEOFF SHACKELFORD
PHOTOS BY THOMAS BROENING

July 20, 2009

Bo Links calls Alister MacKenzie's Sharp Park the golf architectural equivalent of the Golden Gate Bridge. The lawyer and San Francisco Public Golf Alliance co-founder has played the oceanside muny since 1966 and makes the analogy based on the layout's arduous two-year construction window, the combination of complex engineering issues and an architectural lineage noteworthy even in a region that relishes its ties to esteemed architects.

"If the city of San Francisco owned a studio where Leonardo da Vinci worked, they wouldn't touch it," says Links. Yet in the accelerating dispute over Sharp Park's future pitting golfers, politicians, cities, counties, Sierra Club chapters, neighbors, soccer advocates and other constituents, even long-dead master golf architect Mackenzie has been slammed for architectural "hubris."

"The original McKenzie [sic] design was fundamentally flawed to begin with, and built in an inappropriate location to boot," writes Brent Plater, a San Francisco State environmental studies lecturer who wants to see Sharp Park shut down "for the good of the game." Plater told Golf World by e-mail how Sharp Park "is losing money, killing two endangered species, and puts the surrounding community at risk every year when it floods."

That community is Pacifica, a 40,000-strong beachside enclave known for progressive environmentalism and a bold open-space agenda. Yet the city has had little say in the 79-year-old course's future.

That responsibility rests with San Francisco and its Board of Supervisors, overseers of Sharp Park since 1917 when the land was bequeathed to the city for "recreational purposes." Though Pacifica has been shut out of

the process, a last-minute move by pro-golf San Francisco supervisor Sean Elsbernd allows for transfer or joint management with Pacifica depending on the board's handling of a pending Park and Recreation study, which has a July 31 deadline. The report must offer solutions to restore habitat for the endangered California red-legged frog and the San Francisco garter snake.

One option is Plater's vision for a golf-free Sharp Park—an idea supported by the Center for Biological Diversity (CBD), a Tucson-based group that has litigated and won nearly 90 percent of the 500 suits over endangered species. Plater and the CBD hope to see the course converted into a biological preserve for "place based" nature education and then bequeathed to the neighboring Golden Gate National Recreation Area (GGNRA).

One glitch: The federally controlled GGNRA issued a statement that it's "not likely" to accept the golf course and would only do so as a "gift," meaning San Francisco must spend millions converting the property into a preserve before giving it away. Prior to that scenario playing out, state law gives the city of Pacifica land-use jurisdiction, meaning San Francisco must receive a Coastal Development Permit from Pacifica for any change in "land use."

Pacifica mayor Julie Lancelle is a self-described progressive, environmental advocate and golfer who appreciates the "value of the sport as an activity for people of any age."

"It's been an interesting experience being on the other side of the discussion," says Lancelle, who, along with several environmentalists interviewed, is discouraged by the "hubris" of Plater and the Center for Biological Diversity.

"There could be serious impacts to the species if a wholesale re-structuring of the land use and forms takes place as they propose," Lancelle contends. "Species have histories. They adapt themselves to their surroundings. So while human beings may think they know what's best for species, I don't think that's always the case. The species have done well at this location under the current use, which limits human impact."

The CBD counters that while frogs and snakes are found at Sharp Park, their numbers are only a fraction of "historic [pre-golf course] levels."

A key target of Plater and the Center has been the architect of some of the world's greatest golf courses.



Sierra Club member Ferreira says opponents of preserving the course have exaggerated Sharp Park's financial state.

Fresh off Cypress Point and in the process of building Augusta National, Mackenzie was a Bay Area resident when hired to design Sharp Park by transplanted Scot John McLaren, San Francisco's answer to Central Park visionary Frederick Law Olmsted. McLaren devoted his storied life to public-park creation in the otherwise cramped city. His legacy of political savvy and landscape ingenuity produced the 1,017-acre Golden Gate Park,

annually the most visited in the United States with 13 million visitors. McLaren planted more than two million trees during his reign, including at least 100,000 in and around Sharp Park where, according to Mackenzie, "we had the greatest assistance" from McLaren who helped "not only in the artistic planting of trees but in creating other delightful features."

As Sharp Park's project supervisor, McLaren worked with golf's most legendary course architect and the firm's legendary associates. Robert Hunter, author of The Links and co-designer of Cypress Point, came out of retirement to assist, while H. Chandler Egan, the former U.S. Amateur champion and Olympic golf gold medalist-turned- architect visited regularly just two years after his transformation of Pebble Beach. Even shaper-turned-architect Jack Fleming would become the first Sharp Park superintendent and eventual creator of four beautiful forest holes after damaged seaside holes were abandoned.



McLaren's trees and Laguna Salada are part of the course's look.

"Mackenzie did things at Sharp he didn't do anywhere else," says Links, who has won the last two Golf World Lido Design contests, named after the famed Country Life magazine contest that launched Mackenzie's career in 1914.

The original Sharp Park layout included two stunning multi-option fairway holes incorporating the now-controversial Laguna Salada, which has shrunk due to silt build- up. The fascinating par-4 fifth (current 17th) teed off from an island tee while the two-shot 10th (current 14th) paid homage to the original contest-winning Lido hole. More than $400,000 was spent to fill areas around the Laguna with beach sand and top soil, including, by Mackenzie's estimate, $200,000 for one hole.

While Sharp did suffer highly publicized early flooding and turf issues due to salty irrigation water, Plater's assertion that a coastal storm destroyed "all seven oceanfront holes six years after the course opened" is in question. Several aerial photographs from 1941 show all 18 still in play along with the trademark Mackenzie details that defined masterworks such as Cypress Point, Augusta National and Pasatiempo: quirky green shapes, approximately 50 carefully sculpted bunkers giving the impression of erosion and the trademark use of camouflage-inspired mounding. Six holes brought the Laguna into play.

Sharp Park fell into the same resource-deprived disrepair that plagued many Golden Age courses during World War II. It was tweaked by Robert Muir Graves in 1972 and suffered more damage in a 1982 flood, which led to a seawall that kept brackish water out while guaranteeing the fresh water required for garter snakes and red-legged frogs to survive.

Newspaper reports compared the April 16, 1932, opening-day yardage of 6,123 yards to the Old Course's 6,189 tally. Egan even pronounced Sharp Park a "worthy imitation of the classic course" at St. Andrews. Perhaps only H.S. Colt's Timber Point or C.B. Macdonald's Lido designs trumped Sharp Park for sheer creativity and audacity. Certainly no municipal-course design has ever come close to matching the overall package of beauty and affordable links-style golf. (The initial $1 weekend green fee works out to about $15 in modern dollars. Residents currently pay $26 on weekends.)

Sharp Park achieved Mackenzie's dream of using cheap municipal golf to "help enormously in increasing the health, the virility and the prosperity of nations." While today's design features 12 of the original green complexes in deteriorated form, Mackenzie would surely embrace Sharp Park's continued affordability,

accessibility and friendly atmosphere.

Even the look produced by an outdated irrigation system and minimal maintenance resources—a six-man union crew mowing greens daily and fairways once a week—might delight Mackenzie, who wrote in The Spirit of St. Andrews that there was "great charm in the varying shades of color on a golf course" and a layout consisting "of one shade of green would be merely ugly."

Much of Sharp's multicolored look stems from its move to organic practices, dating to 1998 as part of a city-mandated program to wean parks from pesticides. As of June 1 this year, the course moved to an entirely organic program, believed to make it one of only a handful of such courses in the world.

Since 2005 the Laguna and rain-drenched fairways have not been pumped to protect the red-legged frog's annual egg-laying. As for the garter snake, Jeff Miller of the Center for Biological Diversity's San Francisco's office says the colorful serpent has been negatively impacted by a combination of mowing accidents and herbicide applications. According to U.S. Fish and Wildlife, there has been one documented case of a mower killing a garter snake; Miller cites a consultant's report which concluded mowing is an ongoing threat.

Miller and the Center suggest the use of herbicides with the active ingredient Dicamba continue to constitute the "activities" killing the species, prompting the center's September 2008 press release (which also cited pumping and mowing practices) threatening a lawsuit against the city of San Francisco. But Parks and Recreation golf division manager Sean Sweeney notes the city last used a newer weed-control formula July 9, 2008, and it contained just 00.70 percent Dicamba. Subsequently, natural products have been used. Miller says it was "news" to him that Sharp Park had gone organic.

Former Sharp Park superintendent Dan Briesach, who still plays the course once a week and sits on Pacifica's Open Space Committee, is not surprised. "They're making a lot of assumptions," Briesach says of the Center. "I understand the need for habitat restoration; I don't understand the need to be belligerent about it."

Club president and retired school principal Dave Diller says Sharp Park golfers cover the spectrum of age, race and ability, enjoying the stunning surroundings, mature Monterey Cypress and sea breezes. That prompts his outrage at the "injustice" of the battle against his home course, where he has watched in frustration as neglect of the course's main water feature has heightened drainage problems.



Oceanside Sharp Park is in Pacifica, Calif., but is under the jurisdiction of San Francisco's board of supervisors.

The course still logs between 50,000 and 60,000 rounds a year. Thanks to month-to-month operator Mark Duane's efforts, it takes in an impressive $1 million in food and beverage gross revenue at the charming Angus McSweeney-designed clubhouse. (McSweeney was a disciple of Bay Area master architect, Willis Polk.)

Opponents of Sharp Park's existence as a golf course insist it is a huge financial drain on the city, but according to a Dec. 17, 2008, report from city controller Ben Rosenfeld, the course has been profitable twice since 2004 when course-by-course income and expenses began to be detailed. Sharp Park is annually charged with "overhead" figures that include "inter-departmental transfers" and "general fund support." Such mysterious figures prompted former supervisor Jake McGoldrick to say, "We have an accounting problem here; we don't necessarily have a golfer problem."

Loma Prieta Sierra Club member Mike Ferreira says Sharp Park provides a "hell of an opportunity" to show that golf and endangered species can co-exist and contends the economic argument is unfair in light of the city's massive deficits and the course's relatively minor losses. "Some of the folks are trying to use the financial side of this to leverage their other agenda," Ferreira says. "I find that hugely irritating. It's amazing how many alleged 'enviros' are suddenly sounding like Howard Jarvis."

Recently retired San Francisco Neighborhood Parks Council head Isabel Wade has also been lobbying for Sharp Park's closure, telling radio station KQED that golf is "predominantly a white sport" and not "a family-oriented sport that you do with other folks." She has been lobbying to use Sharp Park to make up for the city's shortage of soccer fields, skate parks and hiking trails, even though the property is outside of San Francisco city limits. Miller confirms that city-adoption of the Parks Council solutions—if they involve environmentally sensitive areas—could invite the same legal threats. Wade did not return repeated calls for comment from Golf World.

Ultimately the debate transcends soccer fields, critters and city limits. Despite Sharp Park's egalitarian atmosphere, the course appears to be a victim of a long-festering disdain for what golf represents.

As co-founder of the San Francisco Public Golf Alliance, attorney Richard Harris has slowly allied golfers into a united front after early friction. In 2000 he thwarted his alma mater Stanford University's plan to convert holes at its course into faculty housing. A self-described "enviro" who got his start in politics fighting an Army Corps of Engineer dam project on California's Mad River, Harris finds himself defending the sport he loves.

"Golf has historically been attacked by people who have seen golfers as subversive of socially useful activities, such as church-going and military service," Harris says. "We face the same kind of opposition today. Something like religious intolerance is at work in the most zealous opposition to golf. Dedicated golfers—like dedicated surfers, or rock-climbers or fly-fishermen—are nature worshipers. And our most zealous opponents are those who think they have the one true religion."

Keywords: GOLF WORLD, GOLF, COURSES, SHARP PARK, ALISTER MACKENZIE

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Attorneys for Defendant-Intervenor
SAN FRANCISCO PUBLIC GOLF ALLIANCE

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

WILD EQUITY INSTITUTE, a non-profit corporation, CENTER FOR BIOLOGICAL DIVERSITY, a non-profit corporation, NATIONAL PARKS CONSERVATION ASSOCIATION, a non-profit corporation, SURFRIDER FOUNDATION, a non-profit corporation, SEQUOIA AUDUBON, a non-profit corporation, and SIERRA CLUB, a non-profit corporation,

Plaintiffs,

v.

CITY AND COUNTY OF SAN FRANCISCO, ED LEE, Mayor of the City and County of San Francisco, PHIL GINSBURG, Director, City and County of San Francisco Recreation and Park Department,

Defendants.

Case No. 3:11-cv-00958 SI

DECLARATION OF ROBERT TRENT JONES, JR. IN SUPPORT OF MOTION TO INTERVENE BY SAN FRANCISCO PUBLIC GOLF ALLIANCE ("SFPGA")

Date: June 24, 2011
Time: 9:00 a.m.
Courtroom: 10, 19th Floor
Judge: Hon. Susan Illston

I, Robert Trent Jones, Jr., declare as follows:

1. I am a golf course architect. I have personal knowledge of all facts stated in this declaration, and if called as a witness I could and would testify competently to them.

2. I have been designing golf courses for over four decades. I have designed over 270 golf courses in 40 countries on six different continents. I also am a lifetime member and former President of the American Society of Golf Course Architects.

3. I am a former member and Chairman of the California Park & Recreation Commission. I am currently and have been for the past six years, Emeritus Director of Refugees International. I serve on the Town of Woodside Open Space Committee. I am also a member of the California Golf Hall of Fame.

4. I have been called the father of environmental golf course design, as I "listen to the land" when designing a course and ensure my design fits with the natural landscape. My work and philosophy regarding golf course design has led to several of my courses being recognized by Audubon International, the highest ecological and environmental protection standard in golf.

5. My golf course designs have received numerous recognitions and accolades and they have consistently ranked among the best layouts throughout the world. A few of these recognitions and awards are:

a. *Golf Digest* ranked the Prince Course in Kauai, Hawaii, designed by my firm, in the Top 10 of America's Greatest Public Courses and has been rated Hawaii's No. 1 golf course.

b. I was recently voted #1 Golf Architect in Asia for the third year in a row by the readers of *Asia Golf Monthly*.

c. The Osprey Meadows course in Idaho designed by my firm was awarded *Golf Digest's* Best New Public Course for greens fees $75 and over.

d. Chambers Bay in Pierce County, Washington, one of the more recent courses, has been awarded:

> Best New Course for 2007 by *Travel & Leisure Golf* capturing the course as "A *Brand* New Bay" (emphasis added).

Number 2 spot in *Golfweek's* Best New Courses Awarded Signature Status by Audubon International for reclamation of an abandoned rock quarry that became a trail system, a 20-acre park, an amphitheater and a water treatment facility on the property that will allow the course to use gray water exclusively.

e. In 2010, Celtic Manor's Wentwood Hills Championship Course (designed by my firm) hosted the Ryder Cup (the first time that Wales has ever hosted this event).

f. Crystal Springs Golf Course in Burlingame, CA was awarded *Golf Digest's* Environmental Leader Award.

g. Rancho San Marcos Golf Course, Santa Barbara, CA was rated among the Top 10 Public Golf Courses by *Golf Magazine*.

h. Woodlands Golf Course at Sunriver Resort, OR was rated "One of the 100 Best Women-Friendly Courses" by *Golf For Women*.

i. Spring City Golf & Lake Resort, Yunnan Province, China was rated #1 of Top 10 Courses in China by *Golf Digest China*.

j. Harbour Plaza Golf Club, Donnguan City, Guangdong, China was ranked in the Top 10 Golf Courses in China by *Golf Digest China*.

k. Professional and amateur golf championships for men and women have been played on over 100 of my courses.

6. As part of my dedication to excellence and aiding golfers to achieve their best, I authored the nationally distributed book *Golf by Design* published by Little, Brown & Company. The book instructs golfers how to lower their score by reading the features of a golf course.

7. A complete profile of my work can be found at my company Robert Trent Jones II, LLC's website, www.rtj2.com.

8. I am quite familiar with the work of Dr. Alister MacKenzie and with the course he created at Sharp Park in Pacifica, California. I will explain Dr. MacKenzie's design philosophy and the work he did at Sharp Park in the following paragraphs. The main point, however, is that Sharp Park is a very historic golf course that is worth preserving for the next generation. By any

standard, Sharp Park is an incredible design achievement, for out of a brackish salt marsh, Dr. MacKenzie (with the help of the legendary John McLaren, who Dr. MacKenzie acknowledged in his book *The Spirit of St. Andrews*) he created a spectacular course that mimics the features of traditional Scottish links land.

9. Dr. Alister MacKenzie lived between 1879 and 1934 and was trained as a physician. He served in the Boer War and became fascinated with camouflage and when he later turned to golf course architecture, he incorporated many camouflage concepts into his design work. One of the reasons Dr. MacKenzie made the transition from doctor to golf course architect was because he could see firsthand the health effects the game of golf had on his patients. He also knew that good golf course design was something that could engage the player and invigorate the human spirit—thus, he sought to create courses that had a true spirit of adventure built into them, designed to make golfers feel as if they were playing a course that looked fiercer than it really was, all for the benefit of making a player's blood rush.

10. Dr. MacKenzie was a most complete golf architect of his time. His courses can be found all over the world and include many courses considered by the most knowledgeable authorities to be among the finest ever constructed, including Augusta National Golf Club (site of the annual Masters Tournament) and the Cypress Point Club at Pebble Beach (one of the most scenic and delightful courses ever conceived). Dr. MacKenzie's courses are in Australia, New Zealand, England, Scotland, Ireland, Canada, South America, and many are here in the United States. He was so highly thought of that he was named the Consulting Architect at St. Andrews, the home of golf.

11. Dr. MacKenzie laid out his design principles in a book titled "Golf Architecture," first published in 1920. It is one of the first books ever written about the subject. He also wrote a manuscript titled, "The Spirit of St. Andrews," which had lain dormant for many years, but was finally published in 1995 over 60 years after Dr. MacKenzie passed away. Dr. MacKenzie's design philosophy is captured in these two books, and can be summarized by several key principles:

///

(a) The course, where possible, should be arranged in two loops of nine holes;

(b) There should be a large proportion of two shot holes (par 4's), two or three drive and pitch holes, and at least four one-shot holes (par 3's);

(c) There should be little walking between the greens and tees and the holes should be sufficiently "elastic" so they can be lengthened in the future if necessary;

(d) The greens and fairways should be sufficiently undulating, but there should be no hill climbing;

(e) Every hole should have a different character;

(f) There should be a minimum of blindness for the approach shots;

(g) The course should have beautiful surroundings and all artificial features should have so natural an appearance that a stranger is unable to distinguish them from nature itself;

(h) There should be a sufficient number of "heroic carries" from the tee, but the course should be arranged so that the weaker player with the loss of a stroke or portion of a stroke shall always have an alternate route open to play;

(i) There should be infinite variety in the strokes required to play the various holes;

(j) There should be complete absence of the annoyance and irritation caused by the necessity of searching for lost balls; and

(k) The course should be so interesting that even a beginner or weak player is constantly stimulated to improve in an attempt to get better at scoring, and such players should be able to enjoy the course in spite of piling up a big score.

12. Among these principles, perhaps the best known is that Dr. MacKenzie tended to build holes where there was more than one route from tee to green. He created holes like these so different players, of varying abilities, could play the same hole in different ways and always enjoy the journey and give each other a spirited game in the process. In many cases, a "MacKenzie hole" offers an advantage to a player who was willing to take an increased risk (such as carrying

over a hazard) and who successfully pulled off the gamble. In addition, he believed in rolling putting greens, so players of every age would find endless challenges when they got close to the flagstick. He also favored wide fairways, so even beginners could enjoy the game despite hitting an occasional wild shot. In MacKenzie's view, the "penalty" for wildness was not a lost ball, but rather, a strategic disadvantage when playing the next shot. He rewarded players who had control, but especially rewarded players who plan their line of attack. On a MacKenzie course, it is the intelligent player who enjoyed the most success; brute strength may prove helpful on occasion, but on a course designed by Dr. MacKenzie, it is never a total solution.

13. But control, too, is not everything. MacKenzie also knew that undulation and odd bounces must be a part of the game, for they provide not only charm but mystery to a round of golf. Indeed, on a great course, the same shot will not play the same way twice in a row—it will bounce differently, for one thing, and it will also be susceptible to weather, particularly wind.

14. An unfortunate aspect of Dr. MacKenzie's work is that most of it was for private parties. Thus, most of his courses are privately owned and not readily accessible to the public. That is the key aspect of Sharp Park that makes it a rare gem—it is a "public course designed by a master architect." In addition, it is the only MacKenzie public course that is located next to the ocean, a circumstance that in many respects takes golf back to its roots, for the game was born on links land—land located near an open sea or bay that happens also to be connected directly to the sea through natural drainage patterns. Traditional links land is low lying land which has been formed by centuries of drainage, tidal changes and the brisk weather along the sea. It generally possesses the characteristics of naturally rolling sand dunes and natural features which have been formed by the wind, the ocean, and the action of receding tides in ancient times.

15. The golf course Dr. MacKenzie laid out at Sharp Park illustrates many of his noted design concepts. His original layout, depicted in the hereto attached Exhibit A, includes holes where there are multiple tees, multiple fairways, cross bunkering (sand bunkers crossing the fairway, not merely running alongside the fairway), water carries, creatively shaped greens and, in short, shots for every level of player. And Dr. MacKenzie used his famous camouflage techniques at Sharp Park; prime examples of this are in the approaches to the first hole (which

was the original 16th hole); the third hole (original 13th) and the 14th (original 10th) – in each case, the green is further away than it looks, and this is due to the contours and bunkering that Dr. MacKenzie designed into these holes.

16. I have walked the course at Sharp Park many times and to my eye the features Dr. MacKenzie conceived 80 years ago are still there, and the ones that time has worn down are also there, waiting patiently for loving hands to restore them. Indeed, the restoration and renovation of storied golf courses with proper consideration for the environment is a significant part of the work I do. Every course in the world needs restoration work as the years roll by, especially courses near the sea that are subject to wind and erosion. In fact, the bunkers at St. Andrews are rebuilt every few years; and virtually every great venue in the world, including the sites of the great championships of the game, are regularly restored and preserved for a new generation of golfers. The course is so beautiful it is hard to conceive of it as a barren sand dune; and indeed, that to me is the genius of Dr. MacKenzie: that he could transform the land into such a wonderful golf course that has been so well loved over the last 80 years. It is really reminiscent of the links at North Berwick, or St. Andrews itself, which sits in the middle of a Scottish town. One gets the same feeling walking and playing Sharp Park.

17. Restoration work is especially important for public golf courses, as the vast majority of the game is played on public facilities. There are countless examples of this restoration work, but one of the most poignant is the work that was done to discover and restore a "lost" course created originally by Old Tom Morris. The course is Askernish, located on South Uist (pronounced "yew-ist") in the Outer Hebrides off the coast of Scotland. That work was chronicled in an article titled "The Ghost Course," by David Owen, which appeared in the April 20, 2009 edition of *The New Yorker* magazine, and a copy of which is attached hereto as Exhibit B. This is precisely the type of work called for at Sharp Park—work on a low budget so the course can be restored in a minimalist fashion, preserving the features Dr. MacKenzie created, but at the same time making certain that this magnificent gem of a golf course will be there for many generations of golfers, just as Dr. MacKenzie dreamed it would be.

18. There is no question that Sharp Park is an historic property well worth preserving. I can tell the Court, first hand, that often when I gather with colleagues at the American Society of Golf Course Architects (of which I am a past President), I get a question or two about "that MacKenzie course at Sharp Park" and what is being done to save it.

19. It should also be noted that there are any number of competent strategies for the environmental issues at Sharp Park. I have given the course a considerable amount of study, as have my colleagues at Robert Trent Jones II, namely accomplished golf course architects Bruce Charlton and Jay Blasi. We have no doubt that Dr. MacKenzie's historically significant original design—or at least major portions of it—can be saved while at the same time expanding the amount of available habitat for the California red-legged frog and the San Francisco garter snake.

20. I make this declaration based on information personally known to me, except as to those matters based on information received, and as to those matters, I believe them to be true.

I declare under penalty of peljury that the foregoing is true and correct and that this declaration was executed at Palo Alto on May 12 2011.

Robert Trent Jones, Jr.

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DANIEL WEXLER
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TEL: 310 322-5534
E-MAIL: MIDD23@AOL.COM

July 19, 2009

To Whom It May Concern:

I am writing this letter as the author of *The Missing Links: America's Greatest Lost Golf Courses & Holes* (Sleeping Bear Press, 2000), a volume which, I understand, is being invoked in the current public debate over the future of Sharp Park by persons who advocate closing the golf course.

Missing Links was designed to profile great pre-World War II American courses which either no longer exist, or have been substantially altered from their original configurations. That Dr. Alister MacKenzie's original Sharp Park design was included in such a volume was not meant to imply that the course is entirely gone; indeed, many profiled facilities retain significant portions of their initial layouts, including the first course in its sister volume *Lost Links*, Augusta National. However, it appears that some confusion has arisen from a closing section of the Sharp Park text, which reads: "...and no appreciable trace of [MacKenzie's] strategy remains in play" – so let me take a moment to clarify two important points.

First, in retrospect, this choice of words was not ideal, as the word "strategy" was intended to refer to tee-to-green strategy, which is today somewhat changed, particularly with a handful of lagoon- and seaside holes no longer being in play. It was absolutely *not* intended to refer to the corridors of play or the green complexes, a great number of which remain very much in their vintage MacKenzie forms. And this is a highly noteworthy point as original greens on a municipal course this old are a relative rarity – and MacKenzie's green complexes were perhaps the single most significant aspect of his renowned design style.

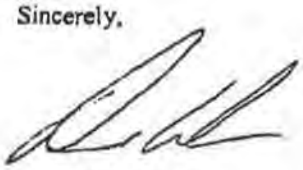
Second, more than a decade has passed since *Missing Links* was researched, and much new information on Sharp Park has since come to light. In re-assessing the golf course today, we know, for example, that most changes have been made by man, quite deliberately, and not by some massive early storm, as was the accepted wisdom back in 1999. We also know that as many as 12 holes remain substantially in their original forms – and nearly all of these could be made virtually original with a relatively modest degree of restoration.

I relate all of this because in using *Missing Links* to bolster any assertion that Sharp Park should be closed, those pushing such an agenda are, unfortunately, mischaracterizing the purpose and spirit of my words. Indeed, as one of only two municipal golf courses ever built by MacKenzie in the United States, Sharp Park is an historic facility which virtually any city would be thrilled to boast of, offering enough vintage playing characteristics to provided all classes of golfer with a real taste of a Hall-of-Fame designer's work. Further, with a bit of restoration and marketing, it is the sort of classically important

facility which can easily become a drawing card for the City of San Francisco, resulting in economic benefits well in excess of simple greens fee revenue.

It is difficult for me to imagine that a city as public-spirited as San Francisco could possibly be doing its thousands of golfers a service by closing Sharp Park, and from an historical perspective, shuttering so venerable a facility would represent one of the sadder moments in the annals of American public golf. But to do so based in any way upon either a misunderstanding or misrepresentation of what was written in *The Missing Links* would be especially unfortunate, and I would urge the relevant parties *not* to fall victim to any such mischaracterizations.

Sincerely,



Daniel Wexler

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Joe Faulkner
2479 45th St.
San Francisco, CA. 94117

July 31, 2009

To Whom It May Concern

Alister MacKenzie and the Sharp Park Golf Course

I write this letter to correct false information about me and my work that has been spread by advocates of closing the Sharp Park Golf Course, including Mr. Brent Plater and the Center for Biological Diversity and related entities. They have been misusing my name and misrepresenting my work and my opinion about the history and design of the golf course. And I want it to stop.

Specifically, I have seen a letter, dated July 20, 2009 from Mr. Plater to Pacifica Planning Director Michael Crabtree, which identified me as "a San Francisco golf program employee and author of a history on San Francisco golf wrote in 1978," and attached a copy of a webpage from the "Restore Sharp Park" project of the Center for Biological Diversity and Nature in the City, that identified me as the author of one of "... the only two published histories about Sharp Park Golf Course, both of which conclude that there is no MacKenzie legacy at the course today." (I enclose a copy of that letter with its attachment.)

I have learned also that Mr. Plater in a July 7, 2009 power point and oral presentation to the San Francisco Park and Recreation Open Space Advisory Committee, made a similar claim that I have published a golf history that concludes that "what exists at Sharp Park today has nothing to do with Alister MacKenzie's design," which "really doesn't exist any more," and was "washed away into oblivion".

Mr. Plater's and his organizations' statements about me and my conclusions about Sharp Park are false and misleading. He did not contact or speak with me before making his July 7 presentation or writing his July 20 letter.

I am not, and have never been a published golf historian. I am a greens keeper at a San Francisco golf course. In 1979, when I was an undergraduate at San Francisco State University, I wrote a class paper on the subject of San Francisco's public golf courses. In 2007, I provided a copy of that paper to the San Francisco Golf Task Force, of which Mr. Plater was a member. (I enclose copies of the two pages of my class paper that deal with Sharp Park.)

1

Nowhere in my college class paper do I say or "conclude" that the Alister MacKenzie-designed golf course at Sharp Park was destroyed or "washed away." or that there "is no MacKenzie legacy at the course today." These are Mr. Plater's arguments, not my statements or my conclusions—or my opinions.

To clear the record, I will here state my opinions and conclusions about the history and architecture of Sharp Park, based upon a lifetime of being a San Francisco resident and a golfer on the city's courses, including Sharp Park, and a greens keeper on golf courses in the city.

As it exists and as golfers play it today, Sharp Park has 12 holes—all lying west of Highway One—that are original holes designed by MacKenzie. Two other holes near the ocean (current holes 12 and 16) are played in original MacKenzie fairways, but do not have original greens. The course today lacks five of its original holes (being original holes numbers 3, 4, 6, 7, and 8) that were taken out of play when a seawall was built some time after MacKenzie's death, and were replaced by four new holes east of Highway One, which I believe were designed by his assistant Jack Fleming. Bo Links, a San Francisco golf writer, historian, and amateur golf architect, has obtained copies of old news reports, including hole descriptions, and course maps from the time of Sharp Park's opening in 1932, as well as old and recent aerial photographs, which clearly show the continuing existence of the original MacKenzie holes west of Highway One. Mr. Links' source materials are more extensive and more reliable than what I used years ago as the basis for my undergraduate class paper.

Today's Sharp Park Golf Course is nearly 80 years old, so naturally there have been some changes in its remaining original holes, but these have been relatively minor, such as trees growing, the shapes of sand traps changing, and some traps filling-in with grass. This sort of change happens over the years at historic golf courses, as at all historic landscapes. It does not mean that Sharp Park's essential character or worth have been lost or destroyed. They have not been. And it certainly does not mean that MacKenzie ceased being the architect.

Alister MacKenzie was one of history's greatest golf architects, renowned for his beautiful, functional landscapes. San Francisco and Pacifica are lucky to have at Sharp Park such a beautiful public golf course created by such an artist. And I hope that the environmentalists, golfers, politicians, and other good people of these cities will work together to preserve the artwork of this master, while preserving as well the creatures—including the golfers—that now inhabit and use and enjoy that masterwork.

Joe Faulkner



cc: Mr. Brent Plater
Center for Biological Diversity

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From: Brent Plater [mailto:bplater@ggnrabigyear.org]
Sent: Monday, July 20, 2009 11:53 AM
To: Crabtree, Michael
Subject: <no subject>

Hi Michael,

My name is Brent Plater, and I'm one of the advocates working to Restore Sharp Park.

I've reviewed the short summary available on-line about the proposal to landmark the links at Sharp Park Golf Course. I think that this summary is short on facts that would help the Commission make a better decision, and therefore I would like equal time to Bo Links to make presentation tonight to the Commission.

I've noted that Pacifica's historic landmark ordinance permits "any interested party" to present testimony or documentary evidence at hearings on applications, and I'm hoping you will grant me the same opportunity afforded Mr. Links.

In the meantime, I've pasted below an article about the historic arguments about the property below, and provide you two links to excerpts from the only two published histories about Sharp Park golf course, both of which conclude that there is no MacKenzie legacy at the course today. In Mr. Links' previous statements about the matter, he has ignored or mis-cited these histories, and I'd like an opportunity to ensure that the Commission receives copies of these documents.

Thank you.

Brent Plater
415-572-6989

http://www.restoresharppark.org/SharpPark/GolfCourseHistory_JFaulkner.pdf

http://www.restoresharppark.org/SharpPark/MissingLinksSharpPark.pdf

The Case for Restoring Sharp Park



The proponents of retaining Sharp Park as a golf course cannot base their case on the popularity of golf, as the sport is declining rapidly across the nation. Nor can they tout the financial benefit of golf, as Sharp Park loses money every year. So they have instead turned to sophistry, claiming the site should be landmarked because Alister MacKenzie

designed it.

MacKenzie helped revolutionize golf architecture in the last century by insisting that courses "imitate the beauty of nature," rather than be in conflict with it. But MacKenzie ignored his own maxim when he designed Sharp Park. The project required dredging and filling this delicate coastal landscape for a staggering fourteen months in order to create enough dry land for an 18-hole golf course. And in perhaps his greatest ecological mistake, MacKenzie leveled a coastal barrier that provided Sharp Park with natural protection from the surging Pacific Ocean, replacing it with seven links so that golfers could view the sea.

The flaws in this design became evident almost immediately. Opening day of the golf course was delayed twice due to excess water on the course. Then in 1938, a massive coastal storm surge, no longer held at bay by the natural barrier MacKenzie destroyed, inundated the course and severely damaged all seven of MacKenzie's signature beach-side holes. The subsequent routing of Highway 1 through Sharp Park destroyed another MacKenzie link, permanently bifurcating MacKenzie's original design.

San Francisco eventually decided to radically alter what remained of MacKenzie's layout. The city constructed a levee along the coastal edge of Sharp Park, in places 30 feet high, destroying the ocean views that were a defining element of MacKenzie's design. And in 1972 Robert Muir Graves redesigned Sharp Park, moving several links into an upland canyon.

But rather than solving the flooding problem, the levee and redesign exacerbated it. The new design blocked the natural water seeps and outflows through Sharp Park to the ocean, and the course now floods annually during normal winter rains: with freshwater.



Normal winter rains flood many areas of Sharp Park, and the Golf Course's attempts to drain the water kills California red-legged frogs, the largest frog in the West, made famous by Mark Twain's Celebrated Jumping Frog of Calaveras County.

Currently San Francisco attempts to prevent the freshwater flooding of the golf course by pumping water through the levee, but this is killing the California red-legged frog—a threatened species also known as Twain's Frog, because it is the central character in Mark Twain's short story "The Celebrated Jumping Frog of Calaveras County. In addition, the operation of the golf course threatens the San Francisco garter snake—an endangered species considered to be the most beautiful serpent in North America—as mowing operations kill the snakes while they bask in the sun on the course's fairways. Because these two species are protected by the Endangered Species Act, the United States Fish and Wildlife Service warned San Francisco in 2005 to stop harming these species or face potential civil and criminal liabilities. The golf course managers responded by leaving standing water on the course for most of the year, causing further damage to the course.



A California red-legged frog at Sharp Park.



A San Francisco garter snake at Sharp Park on September 29, 2008.

Consequently, there is simply no MacKenzie legacy at Sharp Park today. Joe Faulkner, a San Francisco golf program employee and author of a history on San Francisco golf, wrote in 1978 that MacKenzie's design "would never be the same" after the coastal storms decimated the course, and claimed the Robert Muir Graves redesign was like "taking a house with a beach view and turning it 180 degrees to face a mountain slope." Daniel Wexler, writing in his book "Missing Links," noted that MacKenzie's Sharp Park was "shortly lived" and "washed into oblivion by a coastal storm." He concluded that "no appreciable trace of (MacKenzie's) strategy remains in play" at Sharp Park today.

But there are cultural and historic artifacts on the land that can and should be preserved: Sharp Park was the home of a temporary internment camp during World War II, and Native American artifacts have been found throughout the area. Currently these legacies go uninterpreted and remain inaccessible except to individuals with the ability and desire to pay around $40 for a round of golf: all other users are escorted from the course.

Moreover, in 2004 a recreational survey of San Franciscans conducted by PROS Consulting found that the number one recreational demand is for more hiking and biking trails: golf finished 16th out of 19 options in the same survey. Yet the City is currently forced to cut services at recreational centers and open spaces while it subsidizes the underused golf course at Sharp Park, exacerbating the existing inequity in the distribution of recreational services in the Bay Area.

This is why residents of both Pacifica and San Francisco, historians, landscape architects, various recreation proponents, as well as conservationists, environmentalists, and park advocates have come together to urge the restoration of Sharp Park. Restoring Sharp Park will preserve an important ecological landscape, link us to the history of the land, provide increased recreational opportunities that Bay Area residents currently demand, guard our coastline from flooding events exacerbated by climate change, and help recover two endangered species. Nothing could be more prudent or cost-effective for the public than restoring Sharp Park and creating a protective habitat and recreational site that many can enjoy for generations to come.

Isabel Wade, Board Member, San Francisco Neighborhood Parks Council
Chris Carlsson, Director, FoundSF.org, a living archive of San Francisco history
Lawrence Cuevas, Landscape Architect
Brent Plater, Director, Restore Sharp Park, www.restoresharppark.org
Derek Hoye, Golfer Against Sharp Park

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SHARP PARK

Being that the City had come by the lots at Sharp Park so cheaply (free in fact) they decided to bring in one of the world's foremost golf architects, Dr. Alister Mackenzie. The fact that Mackenzie and his assistant at that time, Jack Fleming, were able to design a golf course along the San Mateo County coast line was quite an accomplishment in itself. They managed to accomplish this difficult feat by dredging for fourteen months in order to build up the fairways.

On May 15, 1930 Robert Hunter, Jr. was appointed the superintendent of construction for Sharp Golf Course at a fee of $750 for ten month's work. Four and a half months later on October 2, 1930 Willis Polk and Company was authorized to prepare plans and specfications for the starter's house at the golf course. The original cost of playing golf was $2.00 per month and a card good for all three courses became available in May 1932 for $5.00.

The courses's opening in 1932 was twice delayed due to wet conditions. The golf course officially opened April 1, 1932. Perhaps the fact that even the opening of the course had to be delayed twice due to winter rains should have warned of the drainage problems this site would always face. Normally a golf course will welcome the rest and revitalization the winter rains bring. In Sharp Park's case the winter rains brought about the annual flooding of Laguna Salada out on to playable portions of the golf course. This problem still persists 47 years later even though a 4,000 gallon water pump has been installed. Two factors contribute to the poor drainage problem at the Sharp Park site. First and foremost

is the fact that the course is built at sea level and thus was susceptable to changing tides. The second factor was the annual flooding of Laguna Salada itself.

The golf course that opened on April 1, 1932 was becoming increasingly popular until it was severely damaged by high tides in a storm during the winter of 1938. The holes constructed on or near the beach were unindated by the unchecked tides of the storm. This resulted in severe damage to the beach holes - Numbers 2 through 8. The course, generally considered one of the best tests of golf in Northern California would never be the same. The beach holes had to be abandoned and reconstruction was forced across the Coast Highway up into what is now referred to as "The Canyon Holes". The effect was much the same as taking a house with a beach view and turning it 180 degrees to face a mountain slope. This was the most drastic architectural change the Sharp Park layout would ever face. Even the State Highway construction in the early 1960's that wiped out one par three hole would not have as damaging effect as nature.

Sharp Park remains very busy to this day drawing players both from the City and from down the peninsula. During the winter, however, as the water table rises, the course becomes less playable and suffers a significant drop in play - more so than other municipal courses during the winter. One winter in the early 1970's flooding was so thorough that the unchecked water nearly reached the clubhouse.

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DeVries Designs, Inc.

San Francisco Parks and Recreation Commission
Mr. Jim Lazarus, Chairman
McLaren Lodge
501 Stanyan St.
San Francisco, CA. 94117

November 18, 2009

To San Francisco Parks and Recreation Commission:

I am a golf course architect and am writing to urge you to preserve the historic 18-hole Sharp Park Golf Course. I am an expert on Alister MacKenzie's designs and was responsible for the restoration of his first design in America, the Meadow Club, which is located in Fairfax, in Marin County. I grew up working at Crystal Downs Country Club, which was designed by Alister MacKenzie in Frankfort, MI, in 1929 and is one of the top 20 courses in the world. I have studied and been involved with many MacKenzie courses throughout the world.

To say that Sharp Park is an important part of the history and legacy of golf course architecture is an understatement. Golf courses are the environmental and artistic composition of the land by design for a purposeful pastime and represent an excellent way for people to bond with a place. Sharp Park is the world's greatest golf course architect's most significant public golf course and needs your support to continue providing your constituents a place to experience MacKenzie's brilliance.

The San Francisco garter snake and red-legged frog have found a refuge on the golf course since its inception 80 years ago. The golf course is managed in an environmentally friendly manner and with high environmental ideals; if it wasn't, the San Francisco garter snake and red-legged frog wouldn't be there.

I ask you to support the preservation of this unique golf course for everyone's enjoyment.

Respectfully submitted,

Mike DeVries

Mike DeVries
Phone: (231) 933-9169
Golf Course Architecture
421 West Ninth Street • Traverse City, Michigan 49684
www.devriesdesigns.com
Fax: (231) 933-9353

28

Ken Venturi
Rancho Mirage, CA.

October 12, 2009

Dear Friends of San Francisco Golf,

As a native San Franciscan, I was both thrilled and very proud this week as the greatest golfers from America and around the World met at Harding Park to contest the President's Cup. As I watched the competition unfold, I reflected back through my own seven decades playing golf in the great golfing town of San Francisco.

With my thoughts returning to my youth in San Francisco, however, I have been alarmed by news that the city's other wonderful 18-hole municipal courses, Sharp Park and Lincoln Park, are in jeopardy. The news of Sharp Park is particularly distressing. To me it is unthinkable that San Francisco would seriously contemplate the destruction of that Alister MacKenzie masterwork.

Sharp Park is a great course of the old school: a seaside course, designed by one of history's greatest architects, where the wind and weather dictate the play of the game. Dr. MacKenzie's beautiful design does not punish with narrow fairways and heavy rough, but rather charms and inspires and exhilarates with beauty. Dr. MacKenzie does not force golfers to hit any particular shot, but instead gives them options to challenge their imaginations. Sharp is an unpretentious place, where golfers enjoy a scenic walk in the salt air, then a sandwich and a beer in an old-fashioned pub. In these ways, Sharp connects golfers to the Scottish public course roots of the game. This is Dr. MacKenzie's great gift to the American public golfer.

Without the public courses, golf becomes inaccessible. The game shrivels and dies. The glorious restoration of Harding must not be at the expense of Sharp or Lincoln. So I write this letter to urge my friends and fellow-San Francisco Bay Area golfers to preserve Dr. MacKenzie's legacy, and defend San Francisco's golf heritage and public courses. Defend them with your time, your money, and your passion. Do not let anybody destroy Sharp or Lincoln.

See you around the links.

Ken Venturi

Ken Venturi
Honorary Chairman
San Francisco Public Golf Alliance

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235 Montgomery St., #400, San Francisco, CA. 94104 * 415-392-5431, ext. 203 * info@sfpublicgolf.com

October 25, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Comment Letters on
Significant Natural Resources, etc.
DEIR No. 2005.1912E

Dear Planning Department and Mr. Wycko,

San Francisco Public Golf Alliance has received copies of several public comment letters, addressing the Planning Department's Draft Environmental Impact Report on the San Francisco Natural Areas Management Plan, and in particular the issue of Sharp Park.

We are unclear whether these letters have been separately submitted to the Planning Department. So as a matter of caution, we forward the letters from the following people to you.

Michael L. Keiser, Bandon, Or.
Sean Tully, San Rafael, CA.
Stephen F. Mona, World Golf Foundation,
St. Augustine, Fl.
Allen Wronowski and Joseph P. Steranka,
PGA of America, Palm Beach Gardens, Fl.
J. Rhett Evans, GCSAA, Lawrence, KS.

We ask that you file these letters with the public comment letters in this file.

Very truly yours,

Richard Harris
San Francisco Public Golf Alliance

encls.

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BANDON DUNES

September 22, 2011

San Francisco Planning Department
1650 Mission Street, #400
San Francisco, CA 94103

RE: Sharp Park Golf Course

To Whom It May Concern:

01 I am writing to express my complete and enthusiastic support for designating the incomparable Sharp Park Golf Course a "historical resource." Its architect, Alister MacKenzie, is one of the great masters of the 700 year old craft and Sharp Park is one of his masterpieces. It is truly a work of living art. As the owner of two golf resorts, Bandon Dunes in Bandon, Oregon and Cabot Links in Nova Scotia, I have a very strong opinion that Sharp Park should not only be preserved but maintained to the very highest standard.

Sincerely,

Michael L. Keiser

MLK/ml

cc: Richard Harris

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Sean Tully
10 Golf Ave.
San Rafael, CA
stully@meadowclub.com

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October 1, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department,

My name is Sean Tully and I have been associated with golf in the Bay area for the last 11 years when I became the Assistant Superintendent at Meadow Club, another Alister MacKenzie designed golf course that is in Marin County. From 1999 to 2005, we did a restoration at Meadow Club to restore as close to the original design as possible. In doing some research on Meadow Club, I rediscovered some of the early history of golf in the Bay area. For the last 10 years, I have been researching golf in the Bay area with the intention of writing a book. I'm also involved with a small group of researchers from around the world that are working on a chronology of the life and times of Alister MacKenzie. In addition, I have assisted a number of golf architects engaged in restoring golf courses by providing historical documentation of the work done on those courses.

In 1997, I made my first visit to the Bay area and one of my first stops was to see Sharp Park. I was taken by the seaside setting and what would have been there originally in 1932 when the course was first opened. Over the years of my research I have found some interesting things about Sharp Park:

1

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In 1919, John McClaren envisioned the Sharp Park property to one day be a golf course and was already laying the groundwork to plant trees and make a fresh water lake on the property.

In 1925, even before Harding Park was open there was still concern that there were not enough golf courses to satisfy the number of golfers. There was already talk of adding another golf course to meet the needs of public golfers and some options were looked at including the property at Sharp Park and another at McClaren Park.

In 1929, with nothing done to address the still growing numbers of golfers, additional plans were floated that included turning Harding Park into a 36 hole facility and plans had already been drawn up for both Sharp Park and McClaren Park by both Alister Mackenzie and his partner Robert Hunter!

Sharp Park had at least two benefits that helped to get the golf course built. The first is that the property was already owned by the city and the only cost was building the golf course itself. Secondly, the property would have made it one of, if not the only, municipal seaside links courses in the country.

In giving Sharp Park a historical significance one only needs to look at the body of work that Alister MacKenzie did in his capacity as a Golf Architect. His career spanned 27 years with his latter years showing a very distinguished list of golf courses. He had been a consulting architect for the R&A and St. Andrews in particular. He had only just recently finished the Cypress Point Golf Club, Pasatiempo Country Club, and Union League Golf Club (now Green Hills Country Club)so his work was well known in the Bay area and he was known around the world as one of the best architects in the business. When the Jockey Club in Buenos Aires, Argentina was looking for a world renowned architect, they contacted Findlay Douglas a top amateur golfer and President of the United States Golf Association–he gave them the name of Alister MacKenzie.

In looking at the Top 100 courses in the world as compiled by Golf Magazine for 2011, MacKenzie has four courses in the Top 20! The next closest architect is Old Tom Morris with three, considered one of the greatest golfers in his day as well as a noted architect-not bad company.

MacKenzie not only designed world class golf courses, he also designed and built courses with the simple idea that there should be economy in design and construction. One of his major selling points was the money that he could save

SFPGA-2

on construction costs compared to other architects of the day. If he could build a golf course over a shorter period of time and have it grown in and open for play, the course would be in a better financial situation from day one.

His designs over the later part of his career in the early 1930's show a shift to a reduced use of bunkers that relies on a more strategic placement. This work is exemplified at Augusta National, Bayside Golf Links(no longer existing), and Sharp Park. The added benefit of fewer bunkers is a reduction in construction costs and a reduction in the daily maintenance of the bunkers after the course opens.

Of all the courses MacKenzie built, Sharp Park is the only course where he was able to use one of the most famous holes in golf, the Lido Hole. The Lido Hole is named after The Lido Golf Club that was being built on Long Island in the early 1910's. To draw attention to the project a world–wide competition was formed with the intent of designing a hole for the golf course with the winners drawing being implemented into the design of The Lido Golf Club.
The hole at Sharp Park that follows this design is the original 5th hole, which is now the 17th hole. Annually there is a Lido competition held by the Alister MacKenzie Society that celebrates his original design by holding a similar competition of designing a two-shot hole.

Sharp Park Golf Course was and is a wonderful site for golf and the possibility of restoring parts of it to its original design would be incredible. Increasing the playability and sportiness of the course will bring more golfers to the course and add to the enjoyment of golfers of all age and skill levels.

02 In addition to what the San Francisco Public Golf Alliance has already laid out in making its case for Sharp Park Golf Course, I acknowledge that I have read and strongly agree with the determination that Sharp Park Golf Course be considered a "historical resource" under the California Environmental Quality Act.

Sean Tully

Golf Course Superintendent
Meadow Club

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September 29, 2011

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San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department,

I am writing to you in support of the preservation of Sharp Park Golf Course as we know it today. Sharp Park Golf Course, designed by Master Architect, Dr. Alister MacKenzie, is an historical property, an important part of San Francisco's history, and should be safeguarded from any significant modifications that will change its architectural integrity.

03

The San Francisco Public Golf Alliance, in a letter to you dated September 20, 2011, comprehensively outlined all of the reasons it supports the determination of the San Francisco Planning Department that the Sharp Park Golf Course is an "historical resource" under the California Environmental Quality Act.

The World Golf Foundation agrees with and supports the contention and conclusion of the San Francisco Public Golf Alliance.

Please do not allow the proposed alteration projects to occur. To do so would effectively cause one of America's greatest golf treasures to be irrevocably negatively impacted.

Sincerely,

Stephen F. Mona
Chief Executive Officer

SFM:dlk

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The mission of the World Golf Foundation is to develop and support initiatives that positively impact lives through the game of golf.

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Joseph P. Steranka
Chief Executive Officer

September 27, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural Resource Areas, etc. DEIR No. 2005.1912E

Dear San Francisco Planning Department,

04 We are writing to you today to voice The PGA of America's wholehearted support for the proposed designation of Sharp Park Golf Course as a historical resource of the City and County of San Francisco. We feel strongly that as one of renowned architect Alister MacKenzie's final designs prior to his death, it holds true historic value not only for your region but for the U.S. golf industry as well.

05 We also feel strongly that as a provider of local jobs and as an attraction that can bring golfers to your area from outside your region, there are considerable economic reasons to continue operating Sharp Park Golf Course. The PGA of America is proud to present golf as an important component of local and regional economies as well as a healthy and fun recreational activity that can be enjoyed by young and old, men and women, as a family activity, with friends or business associates, no matter their economic or ethnic background.

Furthermore, municipal golf facilities such as Sharp Park Golf Course are critical to keeping golf affordable and accessible to all who want to participate in this wonderful game. Some of the biggest names in professional golf are products of municipal and military-operated golf courses, as are countless other professional and amateur players. Take away the municipal course option, and many of these highly-successful golfers may never have had the chance to pursue their passion for the game.

Finally, golf facilities across the country have proven themselves to be good stewards of the environment, providing green space and habitat for plants and animals while using considerably less water per acre than developed tracts of land.

THE PROFESSIONAL GOLFERS' ASSOCIATION OF AMERICA
100 Avenue of the Champions | Palm Beach Gardens, Florida 33418
T (561) 624-8400 | www.pga.com

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In closing, we hope that this letter, along with the wide-ranging support from both your local community and golf industry, will convince you of the importance of the historical designation as well as the benefits of continuing to operate Sharp Park Golf Course.

Very Respectfully,

Allen Wronowski, PGA
President
The PGA of America

Joseph P. Steranka
Chief Executive Officer
The PGA of America

cc: Congresswoman Jackie Speier
Hon. Ed Lee, Mayor, City and County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
David Chiu, President, San Francisco Board of Supervisors
Carole Groom, President, San Mateo County Board of Supervisors
Philip Ginsburg, General Manager, San Francisco Recreation and Park Department
Charles Edwin Chase, AIA, President, San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

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GCSAA

1421 Research Park Drive • Lawrence, KS 66049-3859 • Tel 800.472.2808 • Fax 785.832.4400 • www.gcsaa.org

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06

06 Cont.)

October 6, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission Suite 400
San Francisco, CA 94103

Re: Supporting "Historical Resource Designation for the Sharp Park Golf Course

Dear San Francisco Planning Department,

On behalf of the Golf Course Superintendents Association of America (GCSAA) I am writing in support of the "historical resource" designation for the Sharp Park Golf Course.

GCSAA is a leading golf organization and has as its focus golf course management. Since 1926, GCSAA has been the top professional association for the men and women who manage golf courses in the United States and worldwide. From its headquarters in Lawrence, Kan., the association provides education, information and representation to 19,000 members in more than 72 countries.

GCSAA's mission is to serve its members, advance their profession and enhance the enjoyment, growth and vitality of the game of golf. The association's philanthropic organization, The Environmental Institute for Golf, works to strengthen the compatibility of golf with the natural environment through research grants, support for education programs and outreach efforts.

Sharp Park Golf Course is a historical and cultural resource, and is recognized as such by local, state and national entities. Not only was Sharp Park designed by Alister MacKenzie, one of the greatest golf course architects of all time, but it is also unique because it is one of the few municipal courses he designed.

Golf is a game that can be played by people of all ages and abilities, and 80% of the golf rounds played in the United States

Advocacy ~ Professional Development ~ Community
Environmental Stewardship ~ Responsiveness

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GCSAA

are played on public golf courses such as Sharp Park. Preserving this historical resource as a place of recreation and good health for all of the people of the City and County of San Francisco and the City of Pacifica, and all surrounding areas, is imperative.

Thank you for your time and for allowing GCSAA to express support of the San Francisco Planning Department's determination that Sharp Park Golf Course, designed by Alister MacKenzie and opened for play in 1932, is a "historical resource" under the California Environmental Quality Act.

Sincerely,

J. Rhett Evans
Chief Executive Officer

cc: The Honorable Jackie Speier, U.S. House of Representatives
The Honorable Ed Lee, Mayor, City and County of San Francisco
The Honorable Mary Ann Nihart, Mayor, City of Pacifica
Mr. David Chiu, President, San Francisco Board of Supervisors
Ms. Carole Groom, President, San Mateo County Board of Supervisors
Mr. Philip Ginsburg, General Manager, San Francisco Recreation and Park Department
Mr. Charles Edwin Chase, AIA, President, San Francisco Historic Preservation Commission
The San Francisco Public Golf Alliance

GCSAA is dedicated to serving its members, promoting their professional advancement, the environment, growth and quality of the game of golf.

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October 31, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Comments of San Francisco
Public Golf Alliance
Significant Natural Resources, etc.
DEIR No. 2005.1912E

Dear Planning Department and Mr. Wycko,

San Francisco Public Golf Alliance represents public golfers and supporters of public golf in San Francisco and the Bay Area. We are interested in San Francisco's Significant Natural Resource Areas Management Plan to the extent that it relates to and affects the historic Sharp Park Golf Course in Pacifica.

This letter is in addition, and supplementary to, a letter dated September 20, 2011 which we have previously submitted to you on this subject.

01 **1. Potential significant effect on the Sharp Park Golf Course of logging of approximately 15,000 eucalyptus trees at Sharp Park in the canyons to the east of the Coast Highway.** We are concerned with potential significant adverse effects on drainage and downstream flooding, specifically flooding at the Sharp Park Golf Course and its surrounding residential neighborhoods - the Fairway Park and West Sharp Park neighborhoods of Pacifica -- arising out of the removal of significant numbers of mature eucalyptus trees (we understand that the SNRAMP goal is removal of 15,000 trees), and their replacement by native vegetation. The trees are on slopes within the Sanchez Creek watershed, which drains through the Sharp Park Golf Course. The golf course and its ponds and

SFPGA-3

surrounding neighborhoods are already subject to winter flooding. Storm-relief pumping, to move excess storm water from Laguna Salada and Horse Stable Pond and their wetlands, is already constrained by concern for the effects of pumping on winter seasonal egg-laying by the California red-legged frog (CRLF). Therefore, there should be no logging if there is a possibility that erosion or any other effects of logging would result in any additional runoff to the golf course beyond current levels from the areas of Sharp Park to the east of the Coast Highway.

At page 376, the Draft EIR states—unconvincingly--that flooding will be "less than significant":

"In Sharp Park **removing eucalyptus trees** in the upland area **would increase incident rainfall that reaches the ground and could increase the rate of runoff** into Sanchez Creek, the main drainage for this watershed. However, the increase is not expected to be substantial in comparison to the size of the drainage area and considering the normal range of runoff volume; additionally, **the area would be revegetated following tree removal. Over time,** the proposed project **would reduce surface runoff by dispersing water more widely** over the ground surface and slowing runoff velocities, thereby increasing infiltration. **Therefore,** the **flooding impacts** of the programmatic [tree removal] projects would be **less than significant.**" (Emphasis added)

01 (Cont.)

But this is a non-answer. And it is not comforting. The assertion that "the increase [in rate of runoff into Sanchez Creek] is not expected to be substantial" is not supported by any analysis. What does "over time" mean? **When** will the revegetation take place? And **what** will be the relative water absorption/transpiration ability of the replacement vegetation, as compared to the existing eucalyptus (which are known to have high water absorption capacity)? These questions are not answered. Since it takes only one heavy rainfall year--or week, for that matter--for the seriously damaging effects of flooding to occur, it is inappropriate to call the flooding effects "insubstantial," when the duration and the extent of the acknowledged increased runoff vulnerability is unknown and unanalyzed by the DEIR.

In addition, the logging project will likely result in a substantial increase in erosion of surface soils, which will then be transported by Sanchez Creek downstream where they will settle in Laguna Salada, Horse

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Stable Pond, and the channel which connects the two. The ecological values and water capacity of these features is already seriously compromised due to siltation, which in fact is a principal reason for the ecological restoration proposed within the golf course. Without a detailed analysis of the erosion and siltation effects of the logging project, and detailed mitigation measures to prevent additional erosion and siltation, the logging project will both compromise the proposed ecological restoration project centered around Laguna Salada, and will increase flooding risk to the golf course and adjacent residential neighborhoods.

01 (Cont.)

Therefore, rather than "insubstantial," it would be more accurate to characterize the erosion, siltation and flooding risks as "substantial," and then to analyze measures that might mitigate or eliminate these risks, such as: (1) helicopter logging to reduce the risk of erosion; (2) erosion-prevention measures; (3) timing of the logging and the native plant replanting so as to minimize the amount of time in which the ground is unprotected; and (4) interim measures to absorb water from the logging site, pending grow-in of the replacement native plants. Without these and other analyses, it is better to leave the existing eucalyptus groves in place than it would be to log the land and risk uncertain flooding risk to the historic golf course and its surrounding neighborhoods.

2. Implication of Pacifica, San Mateo County, and Local Coastal plans on the logging questions. For the reasons described in paragraph 1, it is incorrect to say that the Pacifica Logging Ordinance and the San Mateo County Significant Tree Ordinance are not applicable. Likely one or both plans are made applicable to that part of Sharp Park lying east of the Coast Highway by the Local Coastal Plan. But rather than cavil over the applicability of the local governmental ordinances, the issue is a substantive one of preventing activity (logging) on land outside the Coastal Zone from having potentially damaging results (flooding) on properties (historic golf course and residential neighborhoods) and natural resources (habitat of frogs and snakes) lying within the Coastal Zone. The DEIR acknowledges that logging presents the risk of additional runoff into Sanchez Creek (and hence to Sharp Park Golf Course). Even if this were only a one-time event, this would have potentially significant consequences for the historic golf course, the neighborhoods, and the endangered species habitat. Accordingly, this must be

02

03

02 (Cont.)

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02 (Cont.) analyzed as a significant risk, and mitigation and avoidance options must be discussed and analyzed.

3. Closure of Hole 12 would constitute "significant impact" upon the historical resource of the Sharp Park Golf Course. Public Golf Alliance understands that the city's biological consultants want to close this hole entirely, and convert the area to the west of the

04 connective channel to a native plantings area that would serve as upland habitat for the California red-legged frog (CRLF) and San Francisco garter snake (SFGS). Although the existing hole is not a 100 percent original hole, it does have its original tee and most of the original fairway, so it is significant to the original MacKenzie golf course.

(a) Our first preference is that Hole 12 be kept in play; move the green 20-30 yards to the northwest of the current green, at the foot of the sea wall, and replace the first 75 yards west of the connective channel (nearly to the current green location) with native plantings, and convert the newly native-planted area to upland habitat for the frog and snake; the new natural area would be completely off-limits to golfers; the current cart path would be replaced by a wooden bridge similar to the newly-constructed wooden walkways at Mori Point. The bridge

05 would access the green area and the current 13th tee, which in turn would be connected to the 13th fairway by another long wooden bridge over the expanded connective channel. This plan has the environmental advantage of maintaining a golf presence at the southwestern corner of the golf course – a constant presence of golfers and occasional presence of maintenance workers, that would discourage trespassers from coming down onto the natural area with their pets, to harass the native species. Both Karen Swaim and Mark Jennings say that the golfers have a beneficial effect of patrolling the property to keep trespassers and their domestic animals away from the endangered species.

(b) If the determination is made to close Hole 12, this would constitute a significant negative impact on the historical golf course. To best mitigate this effect, we believe the hole should be replaced by resurrecting and restoring an original MacKenzie-designed hole on the west side of Laguna Salada. There are two candidates for this:

06 (i) Original Hole No. 4, a south-to-north 3-par hole of about 150 yards, whose green was located where the back tee on current Hole 17 is today located; and (ii) original Hole No. 6, an east-to-west 3-par hole of about 170 yards located at the northern end of the golf course, whose tee

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06 (Cont.)

was located to the north of the current 17th green, and whose green was located to the southwest of the current 16th tee. Original holes ## 4 and 6 were abandoned in or about 1941, when the Coast Highway was built through the golf course and four new "canyon holes" were built in a canyon to the east of the then-new highway. Both Original Holes ## 4 and 6 appear on the as-built routing map of Sharp Park Golf Course, published in the San Francisco Chronicle in or about April, 1932. (A copy is attached as Exhibit "A"; Original Holes ## 4 and 6 are marked in yellow.) Because restoration of Hole 6 would be problematic due to crowding problems with the current 17th green and 16th tee (which crowding can be plainly seen by comparing the as-built routing map, Exhibit "A", with an aerial photo of the current golf course (see Exhibit "B" hereto), it is our belief that restoration of original Hole No. 4 would be the preferred mitigation for the loss of Hole 12.

4. Hole 13 Should be Retained as a 5-par hole, with its tee to the west of the connecting channel.

07

(a) Regardless the decision as to whether or not to retain Hole 12, it is our position that the existing Hole 13 tee should be retained on the western side of the connecting channel, so that the hole will continue to play as a 5-par hole. This can be accomplished by means of a wooden footbridge from the vicinity of the current 11th green/12th tee across the connecting channel to the location of the existing 13th tee. Hole 13 is one of the original MacKenzie-designed holes; it appears on MacKenzie's 1930 routing map as the 9th hole of the original course, a 580-yard 5-par hole; on the 1932 as-built map, the hole is described as a 538-yard 5-par hole. To shorten this hole to a 4-par hole would constitute significant alteration of the original historic design of both this particular hole, and the golf course as a whole.

(b) An additional reason to maintain the 13th tee in its existing location is that this tee constitutes a continuing presence of golfers and golf maintenance personnel at the southwestern corner of the golf course. The golfers and golf maintenance personnel serve a policing function to defend the wetlands and sensitive habitats from trespassers, vagrants, and dogs.

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(5) Raising Holes 9, 14, 15, and 16 poses the threat of significant adverse change to the historical resource of the Sharp Park Golf Course.

(a) We disagree with the DEIR's characterization of Impact CP-6 (at page 13 of the DEIR Summary), which says that "raising holes 10, 14, 15, and 18 would not result in a substantial adverse change" to the historic Sharp Park Golf Course.

(b) As a preliminary matter, we believe that the DEIR's reference to "Hole 10" is a mistaken reference. We believe that the Department intends to refer to existing Hole #9, which is the 5-par hole that extends for approximately 480 yards along the golf course's southern fence line; this hole's tee is just south of the green of Hole #1; its green is just to the south of the Hole #12 tee. The Department's confusion, we believe, arises from Figure 14 (following page 39) of the Recreation and Park Department's Sharp Park Conceptual Restoration Plan (http://www.sf-recpark.org/ftp/uploadedfiles/wcm_recpark/SharpParkGC/TetratechfinalRpt110609.pdf), which identifies this 5-par hole as number 10 on the city's plan to restore the golf course. However, it is Hole 10 on the Figure 14 map (copy attached as Exhibit "B") because the city's golf consultant inserted between current holes ## 6 and 7 on his conceptual map of the remodeled course a new-to-be-constructed hole to the east of the Coast Highway; the insertion of the new, not-yet-constructed hole would result in renumbering of all holes thereafter. Because that proposed new hole between current ##6 and 7 is not yet part of the golf course, and in fact may never be built, we believe it makes sense to refer to the golf holes by their current number, as they are being played as of October, 2011. Therefore, we prefer to refer to the southern boundary 5-par hole by its current hole number, which is Hole 9.

08

(c) Because it is an historic golf course, designed by a great master architect, Alister MacKenzie, any remodeling of Sharp Park must be handled extremely carefully. This property is a master's work. Restoration work must be done by contemporary master architects and craftsmen who can give appropriate respect to the master's work. If Holes 9, 13, 14, 15, and 18 are to be raised, then this work must be done very carefully, by a master can do this work in a manner that will properly respect MacKenzie's original work. If done in this careful way, using a contemporary master architect, San Francisco Public Golf Alliance believes that the holes can be raised in such

SFPGA-3

08 (Cont.)

a way that the impact on the historic quality of the golf course would be less-than-significant. However, without this high degree of care, it is equally possible that significant damage could be done to the historical resource. Hole 15, a one-shot 3-par hole is particularly vulnerable to being damaged by less-than-highest-quality architectural restoration in the event the ground level is raised, precisely because it is a one-shot hole.

(6) Installation of permanent fencing along the seawall and along the wetland border on the golf course has potential to cause significant adverse change to the historic Sharp Park Golf Course.

(a) We disagree with the DEIR comment Impact CP-8 (DEIR, Chapter 1, at page 14) that construction of a fence alongside the seawall would not cause significant change to the historic golf course.

09

(b) This is a matter similar to the issue of raising the height of certain fairways, discussed in Paragraph (5), above. To begin with, it is clear from maps of the proposed restoration project that fencing is proposed not only for the seawall, but also along the boundary between the golf playing area and the wildlife habitat area. The locations of both fences has the potential to interfere with the design of the reconfigured golf course at Current Holes Nos. 9, 11, 13, 14, 15, 16, and 17, and at the site of original Hole #4 (which is a potential site for reconstruction of an original MacKenzie-designed hole to replace Current hole #12, as discussed above in Paragraph 4 of this letter).

(c) Accordingly, the location and design of the fencing must be done in conjunction with, and as a function of, the golf architect's work in designing the restored golf course. As discussed above in Paragraph 4, we strongly recommend that this work be done by a preeminent golf architect, credentialed to work on restoration of an historic golf course designed by master architect Alister MacKenzie.

(d) Yet an additional consideration in the location of the fence is the issue of the California Coastal Trail, which currently occupies the top of the sea wall which forms the western boundary of the Sharp Park Golf Course. We want to eliminate potential conflict between the recreational use of the California Coastal Trail and the historical resource of the Sharp Park Golf

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09 (Cont.)

Course. The location of the fence alongside the sea wall will need to take these two uses into consideration. This needs to be under the supervision of the restoration golf architect. Issues of public trails along the tops of seawalls adjacent to golf courses is a commonly-occurring issue at the seaside links golf courses of Scotland, such as North Berwick, Lundin Links, and others. These public uses can be reconciled.

(7) Modifications to Holes Nos. 9, 11, 13, 14, 15, 17, and 18, including but not limited to raising the ground level, and shortening, narrowing, or expanding the sizes of the golf playing areas, has potential to adversely affect the historic golf course. Accordingly, this restoration and remodeling work must be done only by the most highly qualified and experienced golf restoration architects.

(a) For the reasons discussed above in Paragraphs 5 and 6, a top restoration architect, familiar with and experienced in historic golf architectural restoration work, must be involved in the renovation work. The work must be done under his/her direction and supervision.

10

(b) Specifically in the areas where the Sharp Park Restoration Plan will have habitat areas suitable for the frog and snake adjacent to golf playing areas (including but not limited to current Holes 9, 11, 13, 14, 15, and 17) there will be a need to have a neutral or sterile buffer area between the habitat and golf areas, so as to physically separate the golf playing areas from the habitat areas. Wide expanses of open sand would constitute such a neutral/sterile area. We recommend that strong consideration be given to a ribbon of sand stretching the entire length of the golf/habitat border. In fact, this fits the exact description of Current Hole 13 - original Hole No. 9 - as provided by MacKenzie's assistant Jack Fleming, published in the San Francisco Call-Bulletin shortly before the golf course opened on April 1, 1932. Hole 9 was described by Fleming as follows: "A lakeside hole with wide, sandy beach on water side." (Copy attached as Exhibit "C".)

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(8) The EIR should contain a detailed description of the process which led to the design and selection of the proposed Sharp Park Restoration project.

(a) Over the last several years, the City has performed extensive analyses (including the Sharp Park Conceptual Restoration Alternatives Report included as Appendix I) of the endangered species and associated issues at Sharp Park, and engaged in a comprehensive and public effort to analyze numerous alternatives to address those issues. That process resulted in the decision by the City to implement the Restoration project which is now addressed in the Draft EIR. However, the Draft EIR is largely silent regarding how the Restoration project came to be. The Final EIR should rectify this oversight by incorporating into the Project Description section a detailed description of the City studies and decision-making processes that resulted in the City's decision to implement the Restoration project now being analyzed.

11

(9) Description of restoration project pre-construction mitigation measures is incomplete.

(a) On page 102, first complete paragraph, the DEIR states that water levels in Laguna Salada, Horse Stable Pond, and the connecting channel between them, would be temporarily lowered to allow equipment to access the shoreline, and surveys would then be performed and any observed CRLF or SFGS would be relocated. This discussion should be expanded to (1) note that the capture and relocation of CRLF or SFGS may only be performed by a qualified biologist who possesses appropriate permits from the U.S. Fish and Wildlife Service and the California Department of Fish and Game, and (2) require that as part of this pre-construction process a silt fence will be installed and maintained in a manner that would prevent CRLF or SFGS from re-entering the construction zones.

12

(10) A description of project timing and phasing must be added.

(a) Page 103 infers that the Restoration project would be implemented over multiple seasons (which would run from May 1 to October 15). However, the DEIR does not state how many such seasons will be required to complete the project, or what construction activities will occur in each phase, or how such construction will affect golf operations during those phases. May 1 to October 15 is the prime season for golf operations, so the City must develop

13

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13 (Cont.) and include in the DEIR a detailed plan for how to minimize impacts to golf operations during each phase of the Restoration project implementation.

(11) The description of the permitting process for implementation of the Sharp Park Restoration project needs to be corrected.

(a) Page 293 seeks to describe the state and federal permitting processes which would have to be completed prior to implementing the Restoration project. That description is inaccurate, and needs to be corrected as follows: (1) the City would not itself "consult" with the USFWS to obtain a Biological Opinion and associated Incidental Take Statement, rather such formal consultation under Section 7 of the Endangered Species Act would be performed by another federal agency, in this case the U.S. Army Corps of Engineers (although the City, as the applicant for the Corps permit, may participate in that consultation between the two federal agencies); (2) a "consistency determination" under the Fish and Game Code would not be required by the CRLF since that species is not listed as threatened or endangered under the California Endangered Species Act, and hence no take authorization from DFG is required; (3) a consistency determination for the SFGS is not available, as the SFGS is a "fully protected" species under the Fish and Game Code and DFG does not have the authority to authorize the incidental take of fully protected species; and (4) a state take permit for the western pond turtle is not required because this species is not listed as threatened or endangered under CESA.

14

(12) The DEIR should note that the Restoration project "recovery action" is a voluntary and discretionary action.

15

The DEIR correctly notes on pages 98, 293, 326, and elsewhere that the Sharp Park Restoration plan is a "recovery action", the purpose of which is to provide higher quality habitat for the SFGS and the CRLF. The FEIR should supplement this description by noting that the Restoration project is a completely voluntary and discretionary action by the City, and one that is consistent with the species recovery objectives of both the federal Endangered Species Act and the California Endangered Species Act but is not required by either the FESA or CESA.

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We look forward to continuing a cooperative and laborative relationship with the Planning Department and Recreation & Park Department as this project moves ward.

Very truly yours,

Richard Harris
San Francisco Public Golf Alliance

ls.

City of Pacifica, Mary Ann Nihart, Mayor
San Mateo County Board of Supervisors,
Carole Groom, President
David Holland, Assistant County Manager,
San Mateo County
Stephen Rhodes, Pacifica City Manager
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San Francisco Recreation & Park Department
Mark Buell, President, Recreation & Park Commission
Dawn Kamalanathan
Lisa Wayne

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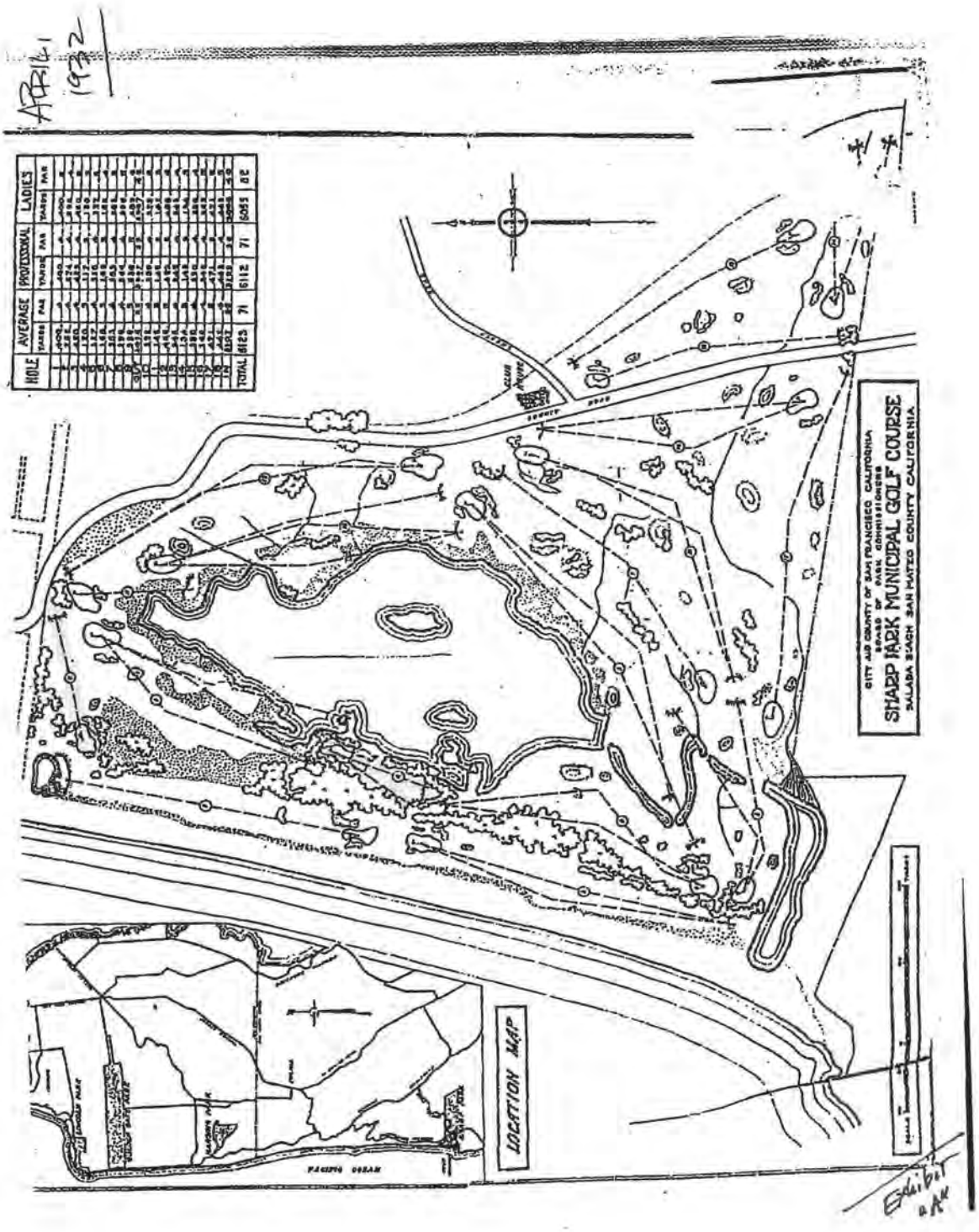
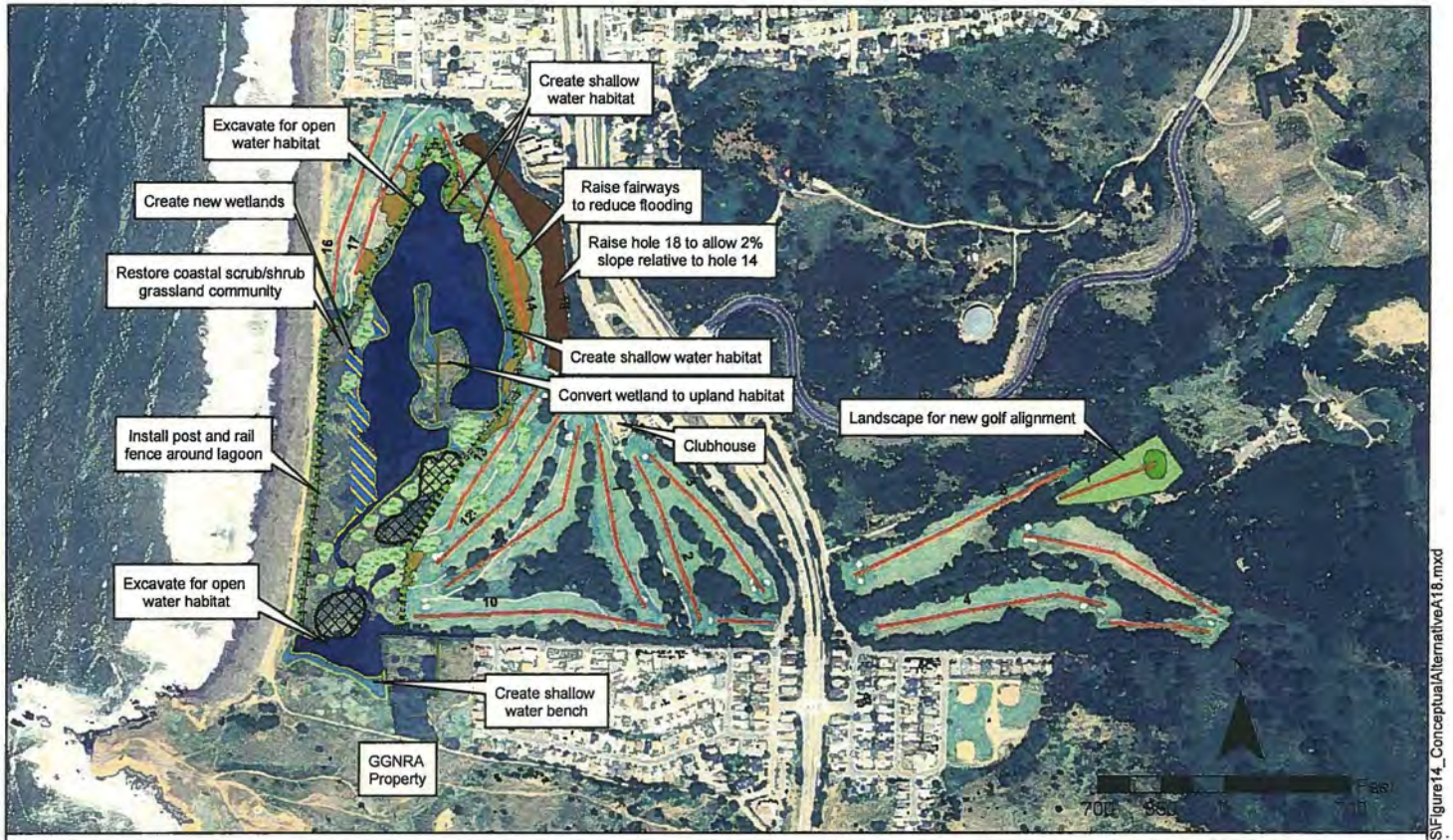

APRIL 1932
HOLE
AVERAGE
PROVISIONAL
LADIES
TOTAL
CITY AND COUNTY OF SAN FRANCISCO CALIFORNIA
BOARD OF PARK COMMISSIONERS
SHARP PARK MUNICIPAL GOLF COURSE
BALBOA BEACH SAN MATEO COUNTY CALIFORNIA
LOCATION MAP
PACIFIC OCEAN
Exhibit "A"

SFPGA-3


Create shallow water habitat
Excavate for open water habitat
Raise fairways to reduce flooding
Create new wetlands
Raise hole 18 to allow 2% slope relative to hole 14
Restore coastal scrub/shrub grassland community
Create shallow water habitat
Convert wetland to upland habitat
Landscape for new golf alignment
Clubhouse
Install post and rail fence around lagoon
Excavate for open water habitat
Create shallow water bench
GGNRA Property
Conceptual Alternative A18
Figure 14
Sharp Park Conceptual Restoration Plan
Pacifica, CA
TETRA TECH
Fairways
Fence
Habitat Boundary
Raise to 10' Contour
Upland Mounds for SFGS Habitat
Remove Non-Native Trees
Coastal Shrub/Grassland
New Wetlands
Shallow Water Habitat
Open Water
Convert to Golf Holes
Q:\Projects\LagunaSalada\GIS\Figure14_ConceptualAlternativeA18.mxd

San Francisco Call-Bulletin, March (?), 1932

TEE TOPICS

By FRANK P. NOON

Here's What You'll Find at Sharps Park

Fleming Describes City's Newest Layout

With the opening of the Sharps Park course set for April 1, a lot of fairway folks want to know what the "going" is like between the first tee and the eighteenth green.

Playing the layout the other afternoon with Dr. Alister Mackenzie, its designer; Bob Hunter Jr., who played a prominent part in the construction of the course, and Jimmy McGee, the writer agrees with Jack Fleming, the superintendent of the course, that he has had one whale of a time trying to grow grass on the acreage circling Laguna Salada.

The soil itself is not good, and innumerable top dressings have not benefited it much. There is sufficient water available, but until a reservoir is constructed in the canyon east of the course to guarantee an adequate supply of fresh water, I am inclined to the belief that growing grass will remain a problem to Fleming.

Water now used on the course is pumped from a reservoir near the beach, and, naturally, contains salt. The result is that the grass isn't growing as it should, and the course at present presents a "splotchy" appearance. The greens are excellent.

* * *

You want to know about the course, don't you? Well, here is a description of the layout as written by Jack Fleming. You will be interested, I know, in knowing that Fleming is rated by none other than Dr. Mackenzie as one of the most expert greenkeepers in the country.

* * *

Here is Fleming's hole by hole description of the course:

FIRST NINE

No. 1—400 yards, par 4. A fairly long two shot hole, slightly dog legged. No particular difficulties to a straight hitter.

* * *

No. 2—262 yards, par 4. A short two shotter. Drive must clear an arm of lake at about 100 yards, but a wide fairway available at 170 yards out. Greens set back against trees and trapped in front right.

* * *

No. 3—420 yards, par 4. One of the ocean holes constructed on the beach—in a slight depression bounded by sand and sand grass embankment on left, trees on right. Entrance to green slightly advantageous from left on account of trap.

* * *

No. 4—120 yards, par 3. A one shotter. Green very large, but well trapped in front and right, trees on left and rear.

* * *

No. 5—327 yards, par 4. A lake-side hole and one of the most interesting holes on the course, similar to Dr. Mackenzie's "ideal golf hole." Three trees, four routes. Easy route probably will cost at least one extra stroke to get on, while the other combinations of tees and routes give rewards proportionate to their respective risks.

* * *

No. 6—168 yards, par 3. A difficult par. Green well trapped.

* * *

No. 7—383 yards, par 4. Similar to No. 3, but in opposite direction. A trap endangers the short player on his second, but properly played as a two shot hole a par is possible.

* * *

No. 8—338 yards, par 4. A dogleg, quite difficult for two shots. Drive is blind and over trees if played close to get in opening for a good second. Plenty of fairway, however, for those who play short and do not care to risk trees on right for possible par. The wide play practically requires three strokes to get on.

* * *

No. 9—518 yards, par 5. A lake-side hole with wide, sandy beach on water side. Back tee should be used by all, as water carry is very short and close to tee. Requires three good shots to get on if dogleg is played, but possibly a very long sure apron and get in under par.

SECOND NINE

No. 10—382 yards, par 4. One of the best holes, two tees, four possible routes, sand and water carries optional. The ideal shot is an accurately placed ball on an island with a water carry on both first and second shots. If well placed on first, the green opens well for a pitch and run second. All other approaches to the green are guarded.

* * *

No. 11—142 yards, par 3. A fairwayless short hole. Water and sand carry, trap green. Green, however, is long and should receive an average straight ball easily.

* * *

No. 12—488 yards, par 5. Fairway flat, double dogleg. Not difficult except to get two good, straight drives in succession.

* * *

No. 13—345 yards, par 4. Passing the clubhouse from No. 12 green to No. 13 tee. The thirteenth, fourteenth and fifteenth are all holes of a different type than the lakeside and ocean side holes. No. 13 is an upland type of hole of average difficulty. The green is well trapped.

* * *

No. 14—134 yards, par 3. This short hole has two tees. The tee with the carry across the creek opens into green easily, while on crossing creek to the other tee a more difficult shot over a trap at the green is encountered. Directly into prevailing winds.

* * *

No. 15—320 yards, par 4. Similar to No. 12. At present along the edge of the county road, which it is planned to re-locate. No. 15 green is near clubhouse.

* * *

No. 16—363 yards, par 4. A nice hole with two optional routes and a creek to cross.

* * *

No. 17—471 yards, par 5. A long hole down the south property line. The green is on a 15 foot fill.

* * *

No. 18—443 yards, par 4. The finishing hole is long and hazardous if not successfully played on both long shots, but the green is wide, open and nicely rolling in order to lend interest to the many thrilling final decisions which will no doubt be made on it. A clump of trees guards the green on the left.

SFSPCA-1

SAN FRANCISCO
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October 24, 2011

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear Mr. Wycko:

I am writing on behalf of the San Francisco SPCA, in response to the San Francisco Planning Department's intent to decrease and possibly eliminate off-leash dog areas in San Francisco. The SF SPCA strongly supports sharing park lands for off-leash play areas throughout the city, including those in city parks.

There are over 150,000 dogs in San Francisco, and many of them utilize the off-leash play areas in city parks to get both the socialization and exercise they need to be happy and healthy. Providing areas for San Francisco dogs to socialize makes the city safer for both canines and humans alike. The confidence and social experience dogs gain from off-leash play allows them to be more comfortable interacting with unknown people and animals-important qualities for living in a crowded urban environment.

There are more dogs than children in San Francisco but this isn't about animals versus people. Many residents consider their dogs to be a part of their family-this is about recognizing the importance of dogs in our well being. City parks are intended for the entire community to enjoy, and as such it is vital that we share these public spaces. While we respect the need to balance the maintenance and ecological needs of the parks, decreasing or eliminating off-leash play areas is not fair to the responsible residents who choose to bring their dogs with them to public parks, and doing so would greatly decrease their quality of life.

01

Other park visitors also benefit from the presence of dogs and their guardians. Increasing the number of visitors makes parks safer in general by discouraging the illegal and seedy behavior that sometimes occurs in desolate areas. Dog owners are typically the first to visit the parks in the morning and often report health hazards or problems to local authorities, which results in safer parks for those who visit later in the day.

2500 - 16th St., San Francisco, CA 94103-4213 . (415) 554-3000 . Fax: (415) 552-7041 . www.sfspca.org . e-mail: publicinfo@sfspca.org

SFSPCA-1

Off-leash play areas also benefit the health of San Franciscans by encouraging them to spend their free time in parks, being physically active and socializing with other dog guardians. This, in turn, promotes public health and increases the quality of life in our city, in addition to strengthening communities by providing a space where neighbors can meet and interact.

San Francisco prides itself on being one of the most humane cities in the nation. The significant negative impact that eliminating off-leash play areas would have on the wellbeing of dogs is in direct contrast to the animal-friendly reputation that San Francisco has built. These actions would also fail to acknowledge the value of animal companionship, which has been proven to decrease anxiety, stress, and provide numerous physical and psychological health benefits. We need to sustain a community that attends to the wellbeing of its animals and insists on humane conditions.

Dogs are not the enemy, nor are their guardians. Dog owners and their 150,000 companions are a part of our diverse city, and as such we need to respect and acknowledge their interests. Maintaining the current off-leash areas in city parks not only benefits San Francisco's dogs and their guardians, but also promotes community, public health, safety, the human-animal bond, and San Francisco's reputation for being an open, welcoming, animal-friendly city.

Sincerely,

Jennifer Scarlett, DVM
Co-President
San Francisco SPCA

SFT-1



San Francisco Tomorrow

Since 1970, Working to Protect the Urban Environment

October 31, 2011

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
Sent via electronic mail

RE: SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN (SNRAMP) DEIR

Dear Mr. Wycko:

On behalf of San Francisco Tomorrow, we appreciate the opportunity to comment on the above-referenced and long-delayed document. In general, we find the goals and objectives to be appropriate and the analysis of the environmental impact adequate, with one grave exception.

The document could be improved as noted:

01 ➢ The Preferred Project should fully address the long-term sustainable management and control of invasive plants due to the retention of weed-nurturing eucalyptus groves in the MA-3 areas.

02 ➢ Community Stewardship should be included as a recreational use. The hundreds of volunteers who regularly tend the City's significant natural areas not only provide a significant resource to the Recreation and Parks Department, they are receiving a recreational benefit that should be recognized and quantified in this document, which designation perpetuates a fragmented approach to natural resources management.

03 ➢ The identification of the recreation and maintenance alternatives as the "environmentally superior alternatives" rather than either the proposed project or the recreation project, is inappropriate, as it discounts the value of biodiversity as an environmental benefit.

04 ➢ The maximum restoration alternative is inadequately described, and so cannot be properly evaluated as a potential environmentally superior alternative.

05 We have a real concern that the inclusion of Sharp Park, which is located in San Mateo

SFT-1



San Francisco Tomorrow

Since 1970, Working to Protect the Urban Environment

County is inappropriate and should be excluded from the project description and analysis. It is not one of *San Francisco's* Significant Natural Resource Areas. Further, it is embroiled in a number of issues that could delay the certification of this document and the implementation of the program

05

I urge you to sever Sharp Park from the DEIR document so that the program may move forward in a timely and appropriate fashion.

Thank you for considering our comments.

Sincerely,

Jennifer Clary
President

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San Francisco Tree Council

October 3, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission St., Suite 400
San Francisco, CA 94103

RE: Public Comment on Draft Environmental Impact Report for Natural Areas Program

Dear Mr. Wycko:

As the former Executive Director of the San Francisco Tree Council and founding member of the San Francisco Urban Forest Council, I learned a great deal about the trees of San Francisco. Based on that direct observation and experience with the urban forest, I am writing to make the following observations about the Draft Environmental Impact Report (DEIR) for the Natural Areas Program.

01

1. The DEIR claims that every non-native tree that will be destroyed by the Natural Areas Program will be replaced "one-for-one" by a native tree somewhere within the natural areas. This is quite simply not true because:
   - There were few native trees in San Francisco prior to its settlement because native trees are not adapted to San Francisco's climate and soil conditions.
   - Native trees will not grow in most of the natural areas because of the microclimate in those locations.
   - The Natural Areas Program has already destroyed hundreds of trees few of which were replaced by native trees. In the few instances in which native trees were planted by the Natural Areas Program, they rarely survived.
   - The stated goal of the Natural Areas Program is to return San Francisco to grassland and scrub, which is the native habitat, with the exception of a few small patches of oak woodland in protected areas with sufficient water drainage to keep them alive.

02

2. The DEIR claims that only dead, dying, hazardous trees will be removed. This claim is also not true because:
   - None of the hundreds of trees that have already been destroyed by the Natural Areas Program were dead, dying, hazardous trees.
   - Most of the trees that will be destroyed by the Natural Areas Program are Blue Gum eucalyptus. The Blue Gum eucalypts of San Francisco are young and healthy. Based on their lifespan in Australia, they should continue to be healthy in San Francisco for about 200 more years.

Please revise the Draft Environmental Impact Report to reflect these facts. If thousands of trees will be destroyed in San Francisco, at the very least the people of San Francisco should not be led to believe that it is either necessary or that it will be mitigated by "replacement" trees.

Thank you for your consideration.

Sincerely yours,

Carolyn Blair

Past Founder, San Francisco Tree Council
Founding Member SF Urban Forest Council
2310 Powell Street, #305
San Francisco, CA 94133

415 982 8793

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October 31, 2001

Bill Wycko,
Environmental Review Officer,
SF Planning Department
1650 Mission St. Suite #400
San Francisco, CA 94103
Email Bill.Wycko@sfgov.org

RE: SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN (SNRAMP) DEIR

Dear Mr. Wycko:

Thank you for the opportunity to comment on the SNRAMP DEIR. With respect to the document's treatment of the plan on the programmatic level for the 22 natural areas in San Francisco proper, we find the DEIR to be, in general, adequate, accurate, and complete. Some comments on the report's treatment of alternatives are included in the attached.

01 Our main objection to the DEIR, as it is currently structured, is its treatment of restoration proposals for Laguna Salada in Sharp Park. We are submitting (under separate cover) as part of our comments the report, *CONCEPTUAL ECOSYSTEM RESTORATION PLAN AND FEASIBILITY ASSESSMENT LAGUNA SALADA, PACIFICA, CALIFORNIA*, Prepared by: ESA PWA with Peter Baye, Ph.D. and Dawn Reis Ecological Studies, which contains a substantive critique of the Sharp Park Laguna Salada project as presented in the SNRAMP. We believe the DEIR analysis and alternatives presented for the Laguna Salada project are flawed and inadequate.

02 Our main request at this juncture is procedural: we ask that as the planning and environmental review process moves forward, that the portions of the Significant Natural Resource Areas Management Plan and the environmental review documents that pertain to Sharp Park and Laguna Salada be severed from the rest of SNRAMP planning process and the SNRAMP DEIR. Instead, the Sharp Park and Laguna Salada project should placed on a separate planning and environmental review track. The reasons for this are numerous and are discussed in the following comments.

Thank you for your consideration of this matter,

Sierra Club-1

Arthur Feinstein, Conservation Chair
San Francisco Group, Sierra Club
590 Texas Street
San Francisco, CA 94107
415-680-0643

Cc: (via email)
Recreation & Parks Commission *recpark.commission@sfgov.org*
PROSAC *prosac@sfgov.org, Margaret.McArthur@sfgov.org*
Phil Ginsburg *phil.ginsburg@sfgov.org*
John Rahaim *john.rahaim@sfgov.org*

Sierra Club Comments on the SNRAMP DEIR

A. General Comments Relating to the San Francisco portions of the Report.

1. The San Francisco portion of the report is thorough, accurate, and adequate.

03 In its treatment of the 22 natural areas located in San Francisco, the report does an admirable job analyzing the environmental impacts of the Proposed Project, as well as alternatives. In general, the portions of DEIR analyzing the programmatic portions of the plan and routine maintenance are thorough, accurate, and adequate.

2. Alternative analysis needs to be corrected and refined.

In the analysis of alternatives—as has already been pointed out by RPD staff—there is a discrepancy between the introductory summary and the analysis at the end of the report. While this will need to be corrected, the instrumental matrix used to analyze and quantify environmental impacts is methodologically flawed because it accords all impacts to be equal. Thus recreational resources and historical resources are treated the same as biological resources in terms of impacts and mitigations. This is contrary to the legislative intent of CEQA, which places emphasis not so much on incidental impacts but
04 on the preservation of a healthy environment. Especially as the DEIR has already generated much confusion in its analysis of alternatives, it would be useful to include some language explicating the methodology used to determine what constitutes an "environmentally superior" alternative. In addition, some analysis of the alternatives according to which would better accomplish the project's goals and objectives, in this case biological resource protection, would give decision-makers a more accurate assessment of which alternative is preferable from a certification standpoint. In

Sierra Club-1

particular, it is clear from the analysis that the maximum restoration alternative is, with respect to the project's major goals and purpose, at least the "ecologically superior" alternative. It is also clear that, with the exception of Sharp Park, the over-all impacts of the maximum restoration alternative are only slightly greater than those of the proposed project, while in many instances significantly furthering the plan's overall objectives. However, this is not all clear in the accompanying analysis, which presents a rather confusing quantification of impacts and mitigations across a broad spectrum of categories. We ask therefore that the final EIR contain language clarifying the purpose and methodology of the alternatives analysis, lest the conclusions be misunderstood, as well as straight-forward language assessing which alternative is superior in terms of natural resource protection.

04 (Cont.)

3. Adaptive Management

We applaud the Report's endorsement of Adaptive Management as representing current best practice in natural resource management.

05

4. Specific Recommendations

In general, with the exception of Sharp Park, we find the specific recommendations offered for each of the 22 Natural Areas in San Francisco to be very sound and consistent with best management practices and science, and recommend that they be adopted as part of the plan.

06

5. Monitoring

We endorse the Report's recommendations to establish a robust monitoring program for each of the City's natural areas.

07

B. Comments on the project-level analysis for Sharp Park

1. Insufficient Scope of proposed Project

A major flaw of the Report's project-level analysis for the proposed Laguna Salada restoration is the insufficient scope of the project, which renders the project incapable of achieving its stated objectives, particularly with regard to provision of adequate habitat for the San Francisco Garter Snake (SFGS). In scoping comments and in the *ad hoc* alternative analysis performed by consultants earlier, the Sierra Club and other environmental organizations have consistently argued that a full range of alternatives, including a maximum restoration alternative (no golf), needs to be considered to give decision-makers the information necessary to determine which alternative best meets the

01 (Cont.)

Sierra Club-1

01 (Cont.) project's objectives. By restricting the scope of the project exclusively to options which include an 18-link golf course, the analysis greatly compromises the project's ability to meet its goals. Indeed, the Report tacitly admits as much, as the proposed maximum restoration alternative goes beyond the original plan by including more acreage for upland habitat, in addition to re-constructed golf links.

2. Confusion of Project goals and objectives.

08 The primary objective of the Management Plan, for the Sharp Park natural area, as for the other areas, is the protection of biological resources. However, in its analysis, the DEIR defines the project as that of protecting biological resources *while maintaining an 18 link golf course*. The Report goes beyond its purview when it proposes to reconstruct the golf course outside of the designated natural area as the appropriate mitigation for impacts on existing course. There is considerable confusion within the document as to whether the plan is really a plan for the restoration of the Laguna Salada or a plan to reconstruct the 18 link golf course. Moreover, while the Plan envisions reconstructing the affected link elsewhere, there are no details as to exact location or environmental analysis of the impacts of such reconstruction in the Report. Our concern is that what started off as a project related to natural resource protection in the midst of a golf course has morphed into a plan to reconstruct the golf course in the midst of sensitive habitat. The goals and objectives of the project need to be clarified, and the portions of the project related to reconstructing the golf course should either be removed from the DEIR, or the scope of the project needs to be broadened to include both elements.

3. Inappropriate designation of golf course as a Significant Historical Resource.

09 We recognize that while the Sharp Park golf course is not represented in either the Federal Register or the State Historic Resources Inventory, CEQA gives discretionary authority to the Lead Agency to treat locally significant historical structures or landscapes as an historical resource for CEQA purposes. However, the key term here is "discretion." In general, only those resources which are eligible for listing under the State Historic Register are permitted to be treated as such for CEQA purposes (California Public Resources Code; Sections 5020 - 5029.5). Here is the relevant section of the Code pertaining to eligibility requirements for listing on the State Inventory:

> **Chapter 11.5. California Register of Historical Resources**
> **Section 4852. Types of Historical Resources and Criteria for Listing**
>
> The criteria for listing historical resources in the California Register are consistent with those developed by the National Park Service for listing historical resources in the National Register, but have been modified for state use in order to include a range of historical resources which better reflect the history of California. Only resources which meet the criteria as set out below may be listed in or formally determined eligible for listing in the California Register.

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Among the criteria which are used to determine whether a resource can be deemed historically significant is "integrity," defined in subsection (c):

> (c) Integrity. Integrity is the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the California Register must meet one of the criteria of significance described in Section 4852(b) of this chapter and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Historical resources that have been rehabilitated or restored may be evaluated for listing. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

09 (Cont.)

Extrapolating from these criteria and general CEQA practice regarding historical resources, it is hard to see how the golf course can be considered an historical resource because it lacks integrity, having been altered many times in the past through both natural and human interventions. Indeed, the proposed project will alter the course even more by relocating and shortening additional holes. What the report is saying, in effect, is that the general concept of an 18 link golf course is a significant historical resource, a designation which in our view is improper.

4. "Piecemeal" Planning Process for Sharp Park.

10

It can reasonably be inferred from the DEIR that the project, as currently envisioned, involves, in addition to the Laguna Salada restoration, both the reconstruction of the golf course and reconstruction/fortification of the seawall. However, these elements of the project, as well as the analysis of the recycled water component to provide irrigation for the golf course, are all treated as independent "projects" for CEQA purposes. Especially as the proposed project in this DEIR will result in the radical transformation of the hydrology of Laguna Salada into a below sea-level frog pond, it is improper to treat these items separately, as is currently the case.

5. Further analysis is necessary to ensure that the Laguna Salada restoration proposals are aligned with the ongoing efforts of the San Francisco Garter Snake Recovery Plan.

11

A major objective of the project is to provide habitat for the San Francisco Garter Snake, a federally listed species. In addition to ESA concerns, protection of endangered species is a priority per CEQA law as well. For instance, CEQA § 21001 (c), Additional Legislative Intent, states: "The Legislature further finds and declares that it is the policy of the state to: (…) Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities (…)." Thus a key element in any analysis is showing how these proposals

Sierra Club-1

tie in with the larger goals of the SFGS Recovery Plan. We also note that the Recovery Plan is currently undergoing revision. As stated in a recent report, there has been significant evolution in biological opinion since the Recovery Plan was first issued:

> Since the initial recovery plan was published, wildlife managers have learned that the snake's upland habitat may be essential to its survival. On-going urbanization, combined with an increase in intensive agricultural operations, has contributed to the rapid loss and fragmentation of the snake's habitat and their primary prey species. The acquisition, restoration, and preservation of suitable habitat will be essential to this species' survival. (Source: National Park Service San Francisco Bay Area Network Resource Briefing, July 2010; Paul Johnson, biologist.)

11 (Cont.)

Efforts should be made to analyze how the plan aligns with the most up-to-date recovery efforts, including recent research on population trends, demography, and genetics. Given the latest science on the importance of gene flow, and given the extremely vulnerable status of the species (some estimates place the total population at less than 2000 individuals), it is not enough to show that the plan provides the conditions of possibility for the survival of a subpopulation of 200 snakes. Rather, recent science shows that what is necessary is not only the provision of habitat but "ecological corridors" allowing connectivity between the isolated subpopulations. While the proposal to create an island of snake habitat in the middle of Laguna Salada may have merit, the approach may not be sufficient to satisfy the overall ecological requirements for a viable and self-sustaining snake population.

6. Dredging proposals need further study.

12

A major component of the proposed project is to dredge Laguna Salada and Horse Stable Pond to create open water habitat for the red-legged frogs (RLF's). We are concerned that dredging the may actually harm existing frog and snake habitat. We are also concerned about possible contamination in the sediments, especially given the presence of the Rifle Range upstream. Further analysis, as well as characterization of core samples, is needed to determine whether the proposed approach is the right one.

7. Climate Change and Sea-Level Rise need to be taken into consideration.

13

Especially as the project is proposing major alternations to the hydrology of Laguna Salada, we believe more analysis is required to take into account the cumulative effects of global warming and sea-level rise. The proposed project seems to presume indefinite perpetuation of existing and past conditions. More precisely, the project seeks to maintain, through stabilization of the pumping regime, an artificial and below sea-level elevation of the Laguna Salada, corresponding approximately to what was the sea-level at the time of the original golf course construction in 1932. Further analysis of such an approach is needed in light of recent data on climate change and projected sea-level rise. At the very least, the Report should study the probable effects of overtopping in 10, 20,

Sierra Club-1

and 50 year storm events. Our main concern, in light of the reality of climate change, is that the current restoration plan will lack any resiliency in the face of increased climate stress and inevitable sea-level rise. As indicated in the ESA report, a restoration plan which would allow the Laguna Salada wetland complex a buffer zone to retreat upland in the face of sea level rise has a better chance of succeeding in the long term than the current proposal, which will render the site extremely vulnerable to salt-water intrusion and overtopping, with potentially catastrophic consequences for the species.

13 (Cont.)

C. Planning Rationale for Severing Sharp Park from the rest of the DEIR.

I. CEQA Process

As the portions of the Report relating to the programmatic analysis of the Plan and routine maintenance are thorough and complete, and unrelated in any underlying environmental way to the flawed project-level analysis for Sharp Park, we request that the SNRAMP DEIR be recirculated with the Sharp Park component of the DEIR deleted from that document for the reasons listed above. The San Francisco portion of the recirculated SNRAMP could then move expeditiously to the certification of a final EIR.

We do not believe this would constitute "piecemealing" as it can be reasonably demonstrated that these are already two separate projects. Indeed, a major reason for separating these projects, approving the programmatic elements, and enlarging the scope of the Sharp Park project to include the whole park rather than the designated 5- acre natural area is precisely to avoid "piecemealing" with respect to the various elements proposed for the Sharp Park golf course reconstruction.

02 (Cont.)

2. Background

It is understood that the planning work for restoration of Laguna Salada began as an integral part of the City's Significant Natural Resource Areas Management Plan, and has thus far been treated as part of that plan for environmental review purposes. However, now that an initial phase of analysis has been done, we believe they reveal compelling planning reasons to separate the Sharp Park/Laguna Salada restoration proposals from the rest of the SNRAMP DEIR. Reasons for severing these two tracks includes the fact that Sharp Park is only included in the SF SNRAMP EIR due to historical contingencies, that there is little intrinsic relation between the portions of the SNRAMP dealing with Sharp and the rest of the plan, that Sharp Park is located in a separate geographical area and political jurisdiction, and that these two parts of the overall "project" are already separated within the existing DEIR as a division between programmatic and project levels of analysis.

Tank Hill Neighbors-1

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October 18, 2011

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission St, Suite 400
San Francisco, CA 94103

RE: Draft Environmental Impact Report for the Natural Areas Resource Management Plan

Dear Mr. Wycko:

We are neighbors of two "natural areas" at either end of our street (Belgrave): Tank Hill and the Interior Greenbelt. Our opinion of the Natural Areas Program and the associated Environmental Impact Report is based on our personal experience and direct observation of those two natural areas.

About 25 trees on Tank Hill were destroyed over a period of 6 to 10 years by staff of the Natural Areas Program (NAP) and/or volunteer supporters of NAP. Those trees were young and healthy, with trunks varying in diameter of 6" to 24".

We weren't happy about the destruction of those trees and we appealed to the Recreation and Park Department to stop cutting the trees down. In a meeting with the General Manager at that time, Elizabeth Goldstein, an agreement was reached that would save the roughly 30 to 40 trees that remain until an equal number of native trees reached maturity to replace them.

The Recreation and Park Department supplied about two dozen oak trees that were approximately 12" to 30" tall with trunks of about 1" in diameter. The neighbors planted those trees. Five of those trees have survived so far. Only one seems to have achieved any real security and growth since it was planted.

The trees that remain have been severely pruned to reduce the shade they cast on the ground. Occasionally they are further mutilated. We have complained to the Executive Director of the Natural Areas Program about the damage being done to the trees that remain. She has assured us that the staff of the Natural Areas Program no longer works on Tank Hill. Therefore, we assume that this damage is inflicted by a volunteer who continues to work on Tank Hill, apparently unsupervised.

We have also recently (2010) witnessed the destruction of many healthy, young trees in the Interior Greenbelt when a trail was developed there under the auspices of the Natural Areas Program.

Based on these experiences, we are submitting the following comments on the Draft Environmental Impact Report (DEIR):

01 1. The DEIR claims that only dead, dying, diseased, trees will be destroyed by the implementation of the management plan (SNRAMP). This claim is not consistent with our experience with the actions of NAP or with the written management plan.

02 2. The DEIR claims that every tree that is destroyed will be replaced with a native tree. We do not believe, based on our experience, that it will be physically possible to replace every tree with a native tree because native trees will not grow in most places in San Francisco. Our experience with "replacement trees," makes us question that NAP has the resources to implement such a commitment, even if the native trees would grow.

Tank Hill Neighbors-1

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03 3. We are opposed to the Maximum Restoration Alternative. The Natural Areas Program does not seem to have sufficient staff to take care of the existing natural areas. Furthermore, they are not supervising the volunteers who are sometimes engaging in what amounts to vandalism in the natural areas. It is not realistic to expect the Natural Areas Program to expand their active restoration efforts into the MA-3 areas. Given the severe economic constraints on public funding, it is not feasible, nor would it be beneficial, to expand the staff of the Natural Areas Program.

04 4. We support the Maintenance Alternative because it will do the least damage to the environment. Fewer trees will be destroyed and less pesticide will be needed to destroy more non-native plants and trees. The native wild flowers on Tank Hill are thriving in the company of non-native trees. We would be happy to have more native plants on Tank Hill, but we do not believe that it is necessary to destroy trees for that purpose.

Thank you for your consideration.

The neighbors of Tank Hill, San Francisco

Names: Paul R. Rotter 190 BELGRAVE AVE.
Elizabeth W. Rotter 190 Belgrave Ave. SF
Alicia Snow 1586 Shrader St. S.F.
Donna Goodman 442 Mangels Ave, SF 94127
Terry Craig 442 Mangels Ave. SF 94127
Lucy Herrera 169 Beulah SF 94117
Lisa Gautier 99 St Germain SF 94114
Patrice GAUTIER 99 St Germain SF 94114

Betty Singer 177 Belgrave Ave. SF 94117
Morley Singer 177 Belgrave Ave 94117
Paul Cantterman 2 Belgrave Ave 94117
[illegible] " " " "
[illegible] 1585 Shrader St., SF 94117
[illegible] " " "

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WILD Equity
INSTITUTE
Building a healthy and sustainable global community for people and the plants and animals that accompany us on Earth

October 31, 2011

Bill Wycko
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SENT VIA ELECTRONIC MAIL

RE: COMMENTS ON THE SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN DRAFT ENVIRONMENTAL IMPACT REPORT (Case Number 2005.1912E)

Dear Mr. Wycko & Ms. Range:

On behalf of the Wild Equity Institute, its members, Board of Directors, and staff, I submit these comments on the Significant Natural Resources Areas Management Plan Draft Environmental Impact Report, Case Number 2005.1912E. These comments focus on the DEIR's treatment of Sharp Park natural areas and Sharp Park Golf Course.

The preferred alternative for Sharp Park proposed in the DEIR is substantially different from the proposal approved by the Recreation and Parks Commission for environmental review and the version announced during scoping of this project. These differences have affected the proposed alternative's ability to meet the project's stated goals and purposes; they impact the proper definition of the project setting; they affect the range of alternatives that the City must assess; and they affect the scope of environmental analysis that the City must complete before finalizing the EIR.

Because of these changes, the DEIR provisions addressing Sharp Park are deficient in many respects, and if finalized will be challenged in court—and make it highly probable that the challenge will succeed, resulting in an unnecessary delay in implementing the many other elements of the SNRAMP. These changes cannot be remedied at this time without at least recirculating the DEIR for further environmental review after additional analysis, and likely require a new DEIR for Sharp Park altogether. Therefore, as drafted by the City, the DEIR puts the original elements of the Natural Resource Areas Management Plan in the City's other natural areas in needless jeopardy.

Brent Plater, Executive Director ❧ P.O. Box 191695 ❧ San Francisco, CA ❧ 94119
O: 415-349-5787 ❧ C: 415-572-6989 ❧ bplater@wildequity.org ❧ http://wildequity.org

WEI-1

Therefore, the Wild Equity Institute recommends that the City segregate out all Sharp Park elements in the DEIR, conduct additional, legally required environmental review, on these Sharp Park elements, and finalize the remaining portions of the DEIR which have had adequate environmental review. Because of the peculiar mix of program and project elements in the remaining elements of the DEIR—and the project-specific nature of the Sharp Park component of the analysis—this can and should be done by the City without requiring additional processing on the non-Sharp Park portions of the DEIR. If the City proceeds in this manner the remaining elements of the DEIR can move forward while the requisite environmental review is conducted at Sharp Park, all without running afoul of CEQA, ensuring that the remaining elements of the plan can be adopted and implemented by the City as quickly as possible.

These comments rely upon comments previously submitted by my as individual during the scoping period, including all attachments to those comments, and all previous comments are incorporated into these comments by reference.

I. LARGE-SCALE CHANGES IN THE PROPOSED PROJECT FOR SHARP PARK REQUIRE FURTHER CEQA ANALYSIS.

The proposal for Sharp Park has been radically changed as identified in Appendix J. These changes are not consistent with the project goals and purposes of the Natural Areas Program, nor are they blur the essential distinction in the CEQA process between the defined project areas and the environmental/background setting. For both of these reasons, the Sharp Park section should be segregated out from the EIR process and undergo further environmental review.

As stated in the DEIR, The SNRAMP is intended to "guide activities on properties owned or maintained by the SFRPD through its Natural Areas Program. Figure 1 is an overview map of the Natural Areas." DEIR p. 82. At Sharp Park, the Natural Areas Program "owns or operates" only certain portions of Sharp Park: Laguna Salada, Horse Stable Pond, the connecting channel between these two aquatic features, portions of Sanchez Creek, and the eastern hillside forests. These areas are clearly labeled in Figure 1 of the DEIR, and exclude all areas that are "owned or operated" by SFRPD through its Golf Program. Indeed, as explained in several communications by the SFRPD since 2006, this distinction between Golf Program and Natural Areas Program lands has been an essential element of how the environmental assessment would be conducted—and has been repeatedly used by the Department to oppose considering alternatives for the Sharp Park Natural Area that would provide additional environmental, recreation, and other SNRAMP Project benefits on the site.

01

Yet every alternative proposed by SFRPD for Sharp Park beside the no-action and maintenance alternatives incorporate golf lands into the project proposal. This is particularly true in the preferred alternative, which defines the "restoration footprint" of the SNRAMP for Sharp Park to include about 1/3 of the golf course links. This creates an inherent, confusing flaw in the DEIR, because it is no longer possible to distinguish between the project proposal and the environmental setting within which the project is proposed to be conducted. SFRPD cannot create a cohesive environmental review document if it is changing the environmental setting and baseline project area along with the project itself. This alone requires further explication and environmental review before the Sharp Park portion of the DEIR is approved.

WEI-1

The importance of this distinction is highlighted by the purpose and goals of the project, as stated in the DEIR. The DEIR states that the SNRAMP will "provide the framework for the long-term management of the Natural Areas." DEIR p. 84. Section III.E.2 of the DEIR further describes the specific management categories within the Natural Areas Program jurisdictional areas, defining categories of natural areas that will have different management regimes (MA-1, MA-2, and MA-3). *Id.* But at Sharp Park, the golf course lands that are included within the "restoration footprint" are not considered to be any of these three categories of management units. This is consistent with the original project proposal for Sharp Park, as well as the maps produced during the scoping period, which clearly indicated that no golf links would be part of any management area within the plan.

01 (Cont.)

These flaws create an incoherent DEIR at the critical first steps at Sharp Park. Without a clearly defined project proposal and environmental setting, none of the procedural elements of a CEQA assessment can be properly conducted. As a consequence, flawed environmental decisionmaking is likely to occur—the opposite of what CEQA is designed to do.

This is apparent in the DEIR's complete failure to consider full environmental restoration alternatives at Sharp Park for the area's aquatic lands and features. While on the one hand the DEIR selects as the preferred alternative for Sharp Park a plan that would redesign Sharp Park's golf links to reduce flooding on the course, the DEIR refused to consider full environmental restoration alternatives at Sharp Park. The problem with the alternatives assessment will be discussed more fully below, but these problems have at their root the City's failure to create a consistent project area and environmental baseline condition. Therefore, this portion of the EIR cannot simply be remedied by reviewing and adopting or rejecting another alternative during the period between the draft and final EIR: the City must also redefine its project and environmental setting to remedy this problem.

II. NEITHER THE PREFERRED ALTERNATIVE FOR SHARP PARK, NOR ANY OF THE ALTERNATIVES ASSESSED IN THE DEIR, MEET THE GOALS AND OBJECTIVES OF THE PROPOSED PROJECT.

The SNRAMP has precise goals and objectives. These include recreation goals such as providing "opportunities for passive recreation, such as hiking and nature observation, that are compatible with conservation and restoration goals; and [t]o improve and develop a recreation trail system that provides the greatest amount of accessibility while protecting natural resources." Moreover, the SNRAMP conservation and restoration goals include:

02

- To maintain and enhance native plant and animal communities;
- To maintain and enhance local biodiversity;
- To reestablish native community diversity, structure, and ecosystem function where degraded;
- To improve Natural Area connectivity; and
- To decrease the extent of invasive exotic species.

Yet the preferred alternative for Sharp Park fails to meet these goals and objectives, nor does it squarely fit in any other project goal or purpose. Instead, as defined it will maximize *active* recreation that threatens the natural areas at the expensive of feasible alternatives that would meet the conservation and recovery goals. This is not consistent with the requirements of CEQA,

WEI-1

and therefore the preferred alternative is not feasible—because it cannot meet the goals and objectives of the project.

On the other hand, a full restoration alternative as proposed in the ESA/PWA report attached to this comment *would* meet all of these project goals and objectives—and yet it was rejected as infeasible by the Department because it may have impacts on an historic resource. But the City has failed to apply the proper standard to this question (and as described below, its assertion of historical significance at Sharp Park is absolutely in error). Financially feasible alternatives that meet the goals and objectives of the project cannot be eliminated from environmental review and consideration—i.e., excluded from the alternatives assessment process—simply because they may have some unavoidable significant impacts. This is particularly true when those impacts can be mitigated.

02 (Cont.)

Here, it is abundantly clear that the full restoration alternative proposed in the ESA/PWA report and provided to the City many months ago meets the criteria for consideration as an alternative in the DEIR. Moreover, the preferred alternative, also has unmitigatable impacts—and yet these very impacts were used to exclude the full restoration alternative for review. This is inconsistent and not supportable by any standard or substantial evidence. For this reason, the CEQA document is flawed.

III. THE HISTORIC RESOURCE ASSESSMENT FOR SHARP PARK GOLF COURSE IS ERRONEOUS.

As explained in the attachment, the Sharp Park historic resource assessment is fundamentally flawed. The golf course clearly no longer retains integrity—review of the comments submitted by PGA Design (also attached here), by the comments of the Historic Preservation Commission, and by independent analysis, the golf course lacks historic integrity today. Se the attached Wild Equity Institute assessment for a link-by-link assessment of the course's integrity.

The assessment relies almost entirely for its argument on the position of uncredentialed individuals associated with the San Francisco Public Golf Alliance to support its view. But this view has never been adopted by any public body—including the City of Pacifica, despite the DEIR's assertion to the contrary. In particular, the City of Pacifica has never moved Sharp Park Golf Course onto a list of protected historic sites—only the golf course Club House has been so protected. Indeed, the golf course receives the same protection under Pacifica's general plan historic element as Laguna Salada itself and the surrounding habitat areas. Yet these areas are excluded entirely from the historic resource assessment.

03

Moreover, the City's assertion that the era in which the golf course was created was somehow significant is unsubstantiated and not adequately documented. There is simply no evidence that there was a "golden era of golf" in San Francisco when the golf course was constructed—indeed, the evidence indicates that golf course demand was on the wane when Sharp Park was constructed. Without additional documentation that the era was significant, there is simply no basis under any criterion to declare Sharp Park Golf Course an historic resource under CEQA, as explained in the attached comments by PGA Design. Absent more information about this era and its relationship to the time period around this period of significance, the City has no basis for declaring Sharp Park Golf Course historic.

WEI-1

Indeed, the scoping document makes this readily apparent. The scoping document states expressly that "Sharp Park has had nine overviews and surveys within and adjacent to it" to discover historic and archeological resources. None of these surveys have ever considered Sharp Park Golf Course an historic resource. In addition the scoping document states that "[n]o historical architectural resources listed in Article 10 or Article 11 of the San Francisco Planning Code are within the architectural [CEQA Area of Potential Effects]." This includes the area at Sharp Park that has a C-APE.

At the same time, the golf course as currently laid out impedes telling the story of truly historic events on the land. Native Americans historic use of the land goes uninterpreted and is made inaccessible by the golf course, and the story of an internment camp at Sharp Park during WWII is completely untold, obscured by the existing land use at Sharp Park. These stories can be told with vibrancy if full restoration is selected by the City—but because of its unlawfully constrained alternatives assessment, this option is not even placed before decision makers for review.

V. THE DEIR PIECEMEALS THE ENVIRONMENTAL ASSESSMENT OF SHARP PARK BY DELAYING ASSESSMENT OF THE FUTURE OF SHARP PARK'S SEA WALL AND IGNORING THE EXISTING ALTERNATIVES' RELATIONSHIP TO A LONG-TERM GOLF COURSE REDESIGN.

The DEIR recognizes that the future Sharp Park's sea wall is subject to considerable uncertainty. As explained in the ESA/PWA report, sea level rise induced by climate change, along with storm surges and erosion, all make it infeasible to retain a sea wall at Sharp Park as it is currently designed. Only two options are available to the City: armoring the sea wall at Sharp Park, or allowing the sea wall to revert over time to a naturally managed coastal system.

Yet while these alternatives are acknowledged in the DEIR, the DEIR expressly delays consideration of these impacts to some unknown point in the future. Specifically, the DEIR states that while these alternatives have been considered by SFRPD, "those options are not proposed as part of the SNRAMP. Thus, they are not addressed in this EIR." DEIR p. 103. But the DEIR is intended to guide management at Sharp Park for the next 20 years—a timeframe in which meaningful impacts to the sea wall may occur according to the ESA/PWA report, and which if the City fails to address could irreversibly harm the endangered species at Sharp Park, the existing infrastructure at Sharp Park Golf Course, and the surrounding communities. By failing to consider this impact presently, the City is piecemealing the environmental review for its plan at Sharp Park to retain an 18-hole golf course at Sharp Park on a permanent (relevant to the SNRAMP timeline) basis.

04

The DEIR makes this problem express on p. 527, where it states that full natural restoration alternatives at Sharp Park "have been rejected because they are not compatible with the existing and *planned* 18-hole layout of the historic golf course." (emphasis added) Yet the planned golf course is not part of the DEIR environmental assessment—this is classic piecemealing of project to avoid cumulative, long-term, or complete environmental analysis of a project proposal. This can only be remedied by segregating out the Sharp Park section of the DEIR and subjecting it to a full and thorough environmental review as required by CEQA.

WEI-1

VI. THE PREFERRED ALTERNATIVE AT SHARP PARK IS INFEASIBLE BECAUSE PERMITS CANNOT BE OBTAINED TO IMPLEMENT IT WITHOUT JEOPARDIZING THE FINANCIAL FEASIBILITY OF THE PROJECT.

As explained in the attached meeting notes and proposed letter from SFRPD staff, the Fish and Wildlife Service has already reviewed substantially the same plan that is proposed in the preferred alternative for Sharp Park Golf Course. And they have informed San Francisco that in order to implement this plan, it cannot de deemed a "recovery" effort, and so stringent permitting requirements will apply. These will include, among other things, the creation of a capital endowment that will fund the long-term management of Sharp Park's natural areas. Such an endowment or trust would likely require investments of millions of dollars—making the entire proposal infeasible, or certainly less financially feasible than other alternatives available to the City.

05

The reason this is so is because the proposed project, particularly in light of reasonable alternatives that were nonetheless rejected by the City, has little to do with the long term restoration of Sharp Park's special status species or the underlying environmental conditions that were destroyed by Sharp Park Golf Course. Rather, the preferred alternative reduces the probability that those objectives of the SNRAMP will be achieved, sacrificing these goals and objectives for golf course water management objectives. The proposed plan is designed to reduce flooding of Sharp Park Golf Course by dredging areas of Laguna Salada and dumping the spoils on the holes which most regularly are flooded during normal winter rains. Given the overwhelming concerns raised about this proposal by the only peer-reviewed assessment of the dredging plan (i.e., the ESA/PWA report),[1] and its incompatibility with the goals and objectives of the SNRAMP, it is simply a violation of CEQA for the city to continue implementing a proposed project that ultimately meets objectives of other projects not within the environmental assessment presented in the DEIR.

For all of these reasons, the City should segregate out Sharp Park from the DEIR, send it back for further CEQA review, and allow the rest of the SNRAMP DEIR move forward without delay.

Sincerely,

Brent Plater

Brent Plater

[1] The SNRAMP DEIR relies on a report from 1992 by PWA to support its dredging plan, and even this 1992 report is based on earlier documents which made assumptions about the historic condition of Sharp Park. But the same firm that wrote the 1992—PWA—re-evaluated the 1992 report in 2011 and released its concerns about that plan in the ESA/PWA report in February of 2011. As explained in the report, nearly two decades of additional information about Sharp Park has led to a reassessment of the historic condition of Sharp Park, and the appropriate mechanism to restore the land while providing for the recovery of the special status species. But the DEIR completely ignores this additional data—despite having it available since February of 2011. Moreover, this information was provided by the report authors to the Sharp Park Working Group even earlier than that. There is simply no excuse for the City to ignore this information.

WEI-2

WILD Equity INSTITUTE

Building a healthy and sustainable global community for people and the plants and animals that accompany us on Earth

RECEIVED
JUL 25 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

July 23, 2012

Jessica Range
City and County of San Francisco, Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: California Environmental Quality Act Proceedings for the Significant Natural Resource Areas Management Plan, Case Number 2005.0912E; Request for CEQA Notices (Public Resources Code, §21092.2)

Dear Ms. Range,

01 The Wild Equity Institute and the undersigned San Francisco-based organizations (collectively "Conservation Organizations") request that the San Francisco Planning Department reopen the public comment period for the Draft Environmental Impact Report ("DEIR") of the Significant Natural Resource Areas Management Plan ("SNRAMP"), Case Number 2005.0912E.

As you know, the Conservation Organizations have a substantial interest in San Francisco's natural areas, and have regularly used public comment periods in the past as a means of improving the CEQA process and protecting San Francisco's environment. Most have previously requested that they be notified of all CEQA proceedings pertaining to the City's Natural Areas Program. And most of these organizations had specifically requested an extension of the public comment period on the SNRAMP DEIR—which the Planning Department largely denied.

Yet we recently discovered that the City re-opened the public comment period for the SNRAMP DEIR on or about April 30, 2012, and through June 11, 2012. *Astonishingly, none of the Conservation Organizations were notified of San Francisco's decision to reopen the public comment period.*

01 (Cont.) "Public participation is an essential part of the CEQA process" Cal. Code Regs. tit. 14, § 15201. The City of San Francisco has recognized this, stating that Public participation, both formal and informal, shall be encouraged at all stages of review, and written comments shall be accepted at any time up to the conclusion of the public comment period. The undersigned believe public notice of the reopened comment period was insufficient to properly inform all stakeholders. Perhaps the City's intent was to only give specific interest groups notice that had not commented during the previous comment period, and therefore the Conservation Organizations were not notified. But any opening of a CEQA comment period should be broadly publicized, and at bare minimum, should be publicized to those organizations and individuals who previously commented and requested notice pursuant to § 21092(b)(3) of the California Public Resources Code.

Brent Plater, Executive Director ❧ P.O. Box 191695 ❧ San Francisco, CA ❧ 94119
O: 415-349-5787 ❧ C: 415-572-6989 ❧ bplater@wildequity.org ❧ http://wildequity.org

WEI-2

01 (Cont.)

Therefore we respectfully request the Planning Department reopen the comment period for the Draft EIR for another 4-6 weeks. Please inform us of the dates during which the comment period will be reopened as soon as possible.

§ 21092(b)(3) of the California Public Resources Code requires that "notice [of the public comment period] . . . shall be given to the last known name and address of all organizations and individuals who have previously requested notice." We reiterate our request that the Planning Department provide the Conservation Organizations with notice of all future CEQA proceedings involving Sharp Park and/or Sharp Park Golf Course, and all future CEQA proceedings involving the SNRAMP, the City's Natural Areas, and/or the Natural Areas Program. The requested notices should be mailed to the following address:

Brent Plater
Executive Director
Wild Equity Institute
P.O. Box 191695
San Francisco, CA 94119

Arthur Feinstein
Chair
San Francisco Bay Chapter, Sierra Club
2530 San Pablo Ave. Suite I
Berkeley, CA 94702-2000

Neal Desai
Associate Director
Pacific Region, NPCA
150 Post Street, Suite 310
San Francisco, CA 94108

Sincereiy,

Brent Plater
Executive Director
Wild Equity Institute

Arthur Feinstein
Chair
San Francisco Bay Chapter, Sierra Club

Neal Desai
Associate Director, Pacific Region
National Parks Conservation Association

WGF-1

WORLD GOLF FOUNDATION

RECEIVED
OCT 03 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

September 29, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department,

01 I am writing to you in support of the preservation of Sharp Park Golf Course as we know it today. Sharp Park Golf Course, designed by Master Architect, Dr. Alister MacKenzie, is an historical property, an important part of San Francisco's history, and should be safeguarded from any significant modifications that will change its architectural integrity.

The San Francisco Public Golf Alliance, in a letter to you dated September 20, 2011, comprehensively outlined all of the reasons it supports the determination of the San Francisco Planning Department that the Sharp Park Golf Course is an "historical resource" under the California Environmental Quality Act.

The World Golf Foundation agrees with and supports the contention and conclusion of the San Francisco Public Golf Alliance.

01 (Cont.) Please do not allow the proposed alteration projects to occur. To do so would effectively cause one of America's greatest golf treasures to be irrevocably negatively impacted.

Sincerely,

Stephen F. Mona
Chief Executive Officer

SFM:dlk

One World Golf Place • St. Augustine, FL 32092 • www.worldgolffoundation.org • 904-940-4000 | Shell Oil Company • Founding Partner

The First Tee | World Golf Hall of Fame | GOLF 20/20

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cc: Congresswoman Jackie Speier
Hon. Ed Lee, Mayor, City and County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
David Chiu, President, San Francisco Board of Supervisors
Carole Groom, President, San Mateo County Board of Supervisors
Philip Ginsburg, General Manager, San Francisco Recreation and Park Dept.
Charles Edwin Chase, AIA, President, San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

WTPCC-1

RECEIVED
JUN 12 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

To: Bill Wycko
Environmental Review Officer
SF Planning Dept

From: West of Twin Peaks Central Council

June 11, 2012

Mr. Wycko,

We submitted a public comment on the Draft Environmental Impact Report for the Natural Areas Management Plan (Planning Dept Case No. 2005.1912E) on Friday, June 8, 2012. We would like to replace that public comment with the one attached to this letter, which includes the previous submission plus an addendum written by a WTPCC Board Member. The attached comment, addressed to the Recreation and Park Commission, including the addendum, constitutes the WTPCC Public Comment on the Draft Environmental Impact Review for the Natural Areas Management Plan.

Thank you.

WTPCC-1

West of Twin Peaks Central Council
A Resource for Neighborhood Organizations West of Twin Peaks in San Francisco since 1936

WTPCC PO Box 27112
San Francisco, CA 94127
http://www.westoftwinpeaks.org/

June 4, 2012

West of Twin Peaks Central Council
PO Box 27112
San Francisco, CA 94127

To: San Francisco Recreation and Park Commission

McLaren Lodge
501 Stanyan St
San Francisco, CA 94117

Dear Commissioners,

At its May 21, 2012 meeting, The West of Twin Peaks Central Council (WTPCC) voted to write a letter opposing RPD's Natural Areas Program (NAP) and to submit a comment opposing NAP as part of the NAP DEIR public comment process. WTPCC, formed in 1937, is an umbrella group of 20 neighborhood associations that share the common geographic designation "west of twin peaks." WTPCC member associations share common demographics as well– primarily owner-occupied, single-family homes. Our members choose to live here because it is a medium-density area that provides space for yards and children, as well as local commercial shopping districts, recreation options, and parks. Cumulatively, we have a shared history of protecting and improving the common characteristics and character of our neighborhoods.

WTPCC member organizations had expressed concerns about NAP at previous meetings, especially concerns about NAP's plans to cut 1,600 trees on Mt. Davidson. Prior to its May 2012 meeting, WTPCC member delegates were given "homework," links to the NAP General Management Plan (SNRAMP) section on Mt. Davidson along with the SNRAMP Executive Summary, information on NAP from the NAP website, and information from critics of NAP. At the May meeting, WTPCC heard a presentation in support of NAP from RPD Chief of Operations Dennis Kern and NAP Director Lisa Wayne, and a presentation in opposition to NAP by Eric Miller and Jacquie Procter from the SF Forest Alliance. Judging by the quality of the questions, our delegates had indeed studied the suggested material "assigned" beforehand. After the presentations and questions, WTPCC voted immediately to send this letter and comment.

WTPCC concerns with the Natural Areas Program (NAP) are as follows:

01

- NAP's plans to cut 18,500 trees in parks controlled by SF RPD, including plans to cut 1,600 trees on Mt. Davidson

WTPCC-1

01 (Cont.)

- NAP's use of herbicides, including repeated applications at the same site, poor signage, improper applications, and concerns about children and pets playing in areas where toxic herbicides have been applied
- NAP's plans to close access to areas under its management, including closing 9.2 miles of trails, and turning the park experience into one full of "Stay on the Trails" and "Keep Out" signs
- NAP's plans to remove existing habitat (especially bushes and trees) and replace it with grassland will destroy habitat needed by wildlife and birds currently living in our parks
- NAP has done an extremely poor job of informing people, including park neighbors, of its plans; those plans were created without seeking input from park neighbors and park users
- NAP has expanded far beyond its original mandate to protect and preserve remnants of San Francisco's natural heritage, into large-scale conversion of existing habitat into something completely different, conversions that will change the character and uses of the park for decades to come

Because of these concerns, WTPCC opposes the proposed NAP Management Plan (SNRAMP) currently undergoing environmental review. We ask the Planning Department to address our issues and concerns with the Draft NAP DEIR (details below). We urge the Recreation and Park Commission to rethink its support of NAP's plans. The parks belong to the citizens of San Francisco, not to Natural Areas Program staff.

TREE REMOVALS

02

WTPCC opposes NAP plans to remove healthy trees simply because they are non-native or simply to allow more sunlight to reach newly planted, sun-loving natives on the forest floor. We fully support the removal of hazardous trees in our parks, but NAP's plans go far beyond that.

We are concerned that the actual number of trees removed will be much higher than the 18,500 listed. NAP does not include any trees or saplings less than 15 feet tall in its count of trees to be removed, yet the SNRAMP makes clear that these "smaller" trees or saplings will be cut down along with the taller ones. A 2007 US Forest Service report noted that just over half (51.4%) of the trees in San Francisco are less than six inches in diameter at breast height. This diameter corresponds to a tree less than 15 feet in height. The removal of these smaller trees will significantly amplify the impact of the removal of the taller trees on aesthetics, erosion, and windthrow in natural areas, yet the Draft NAP DEIR did not consider these additional impacts.

WTPCC is concerned that claims in the Draft DEIR that trees cut down will be replaced on a one-to-one basis by native trees are misleading. The SNRAMP makes no promise to replace trees. In particular, the SNRAMP specifically states that the 15,000+ trees removed at Sharp Park will not be replaced since the natural area will be converted to coastal scrub. In addition, there were few native trees in San Francisco before the Europeans settled the area; the climate was too harsh. Native trees do not grow well in the windy, foggy, sandy or rocky soils present in most natural areas. For example, about a decade ago, NAP planted 25 oak trees at Tank Hill to replace 25 trees cut down by NAP. Only 5 of the replacement oak are still alive, and only one of those has grown.

WTPCC-1

02 (Cont.)

Our concerns about the 1,600 tree removals planned for Mt. Davidson in particular include:

- Increased erosion from the loss of the trees
- Increased water runoff during storms and the potential for damage to park neighbors' property from the water or mudslides
- These concerns were not adequately addressed in the DEIR.

03

WTPCC is also concerned that the DEIR does not adequately address impacts on carbon sequestration and global warming from NAP's plans to cut down 18,500 trees. A 2007 US Forest Service survey of San Francisco's urban forest notes that our trees store 196,000 tons of carbon, adding 5,200 tons of carbon to the storage each year. When a tree is cut down, it releases its stored carbon into the atmosphere (as carbon dioxide) as it decays. California State Law requires the state to reduce greenhouse gas emissions; NAP's plans seem to be at odds with this goal. In addition, grassland does not store as much carbon as forests of trees, and the DEIR does not adequately address the impacts on this of NAP's plans to replace non-native trees with native grasses.

HERBICIDES

04

WTPCC opposes repeated applications of herbicides in natural areas to remove non-native plants. Applications of herbicides in NAP-managed areas have increased by 330% over the last four years (from a total of 26 applications in 2008 to 86 applications in 2011). Applications will continue to rise, since NAP plans to use repeated herbicide applications to kill the roots of the thousands of trees it plans to cut down. The Draft DEIR does not consider impacts from this increase in usage.

05

We are also concerned about inadequate and incorrect signage by NAP when it applies herbicides in natural areas. For example, a recent sign warned that herbicides would be applied "throughout" McLaren Park, with no more specific information on where other than "throughout." People walking in the park had two options – continue to walk in the park and risk exposure to herbicides (since you can't know from the sign exactly where in the park they were applied) or leave the park. This inadequate signage essentially closed access to large areas of McLaren Park for a period of time as people tried to avoid exposure.

06

WTPCC is also concerned that NAP applies herbicides incorrectly, causing needless exposure and risk to people, pets, and wildlife from unnecessary spraying. For example, in December 2011, NAP posted a sign that it planned to spray a mixture of glyphosate and imazapyr to eradicate cape ivy in Glen Canyon. However, the California Invasive Plant Council website says spraying to destroy cape ivy must be done in the late spring, when the plant is "photosynthesizing actively but is past flowering, so the active ingredients [in the herbicide] move down with the sugars that are transported to underground storage organs." The spraying should never have been done in December when it would not be effective. NAP essentially put people, pets, and wildlife at risk of exposure to the herbicide for no reason, and ensured they would have to reapply the same herbicides a second time in the late spring if they want to kill the cape ivy.

WTPCC-1

06 (Cont.) It is not enough to say that NAP herbicide applications are approved as part of the SF Integrated Pest Management Ordinance that governs herbicide use by city agencies and are therefore okay, as the Draft DEIR does. The DEIR should study the application records more closely. There are many cases where NAP usage violated IPM rules. For example, NAP applied imazapyr in 2008 and 2009, two years prior to its approval for use by SF IPM in 2011. NAP "sprayed" Garlon in years prior to 2011, even though SF IPM had approved its use only by "dabbing and injection." NAP sprayed herbicides containing glyphosate near the water at Lake Merced, even though US Fish and Wildlife regulations ban the use of that herbicide (and many others) where there is red-legged frog habitat; Lake Merced is red-legged frog habitat.

PARK ACCESS

07 WTPCC opposes NAP plans to restrict access to parks. NAP plans to close 9.2 miles of trails that thread through its natural areas. At our May meeting, Dennis Kern noted that a citywide survey of what San Franciscans want in their parks identified trails and hiking as the number one need. Yet NAP plans to close nearly a quarter of the total length of trails in natural areas (about 40 miles). This would seem to fly directly in the face of what the public said they want in their parks.

In most natural areas, the only thing you can do is walk on a trail. You cannot leave the trail to explore the area, or follow a butterfly, or try to see the bird you hear tweeting. To control access, NAP builds fences. Indeed, in parks where trails in natural areas have been restored recently, fences have been built on either side of the trail to ensure people cannot leave the trail. Natural areas become places where you can "look but not touch." How can children explore the wonders of nature if they are told repeatedly they must "Stay on the Trail"? This is not what we want for our parks.

When people are restricted to walking only on trails, they lose access to the entire non-trail part of the park. In over half of the parks with a natural area (17 of 31), NAP controls the entire park. That means people have lost access to all but the trails in those parks. In an additional 10 parks, NAP controls over 50% of the land. Put another way, only four of the 31 parks with natural areas have less than 50% of their land controlled by NAP. Access restrictions planned by NAP ("stay on the trail", fences, and closure of trails) mean that entire neighborhoods will lose access to the vast majority of the parkland in their neighborhood parks. The Draft DEIR does not consider the impacts on neighbors and park users of this level of access restriction in the 27 parks where NAP controls more than half the land.

HABITAT AND WILDLIFE

08 WTPCC opposes the destruction of existing habitat needed by the wildlife and birds currently living in the parks. For example, NAP has removed underbrush in Glen Canyon that is used by coyotes to hide from people and dogs, and replaced it with grasslands. Unlike the underbrush, the grasslands provide little "cover" for the coyotes or other wildlife living in the natural area.

09 We are also concerned that some habitat conversion is being done during breeding and nesting season. For example, NAP applied for a "streambed alteration" permit from the California Fish and Game Dept for habitat conversion work to be done near Islais Creek in Glen Canyon. In the application, NAP clearly

WTPCC-1

09 (Cont.)

stated: "It is the policy of RPD's Natural Areas Program that no new projects will begin during the breeding season (December to May)." Similar commitments were made in the SNRAMP. However, NAP contractors used chainsaws and herbicides to destroy underbrush habitat in Glen Canyon in March and April, continuing work done sporadically since November 2011. This work took place throughout the breeding/nesting season, despite NAP's legal commitment to CA Fish and Game and in the SNRAMP to not do habitat work during breeding season. When people informed RPD management about this, during a meeting at McLaren Lodge, Lisa Wayne, the head of NAP, said the work was being done during the breeding/nesting season because the grant for the project was set to expire. In other words, NAP's decision on habitat conversion in Glen Canyon appeared to be motivated by financial considerations, not by any concerns about the wildlife and birds living there.

POOR PUBLIC PROCESS

10

WTPCC opposes NAP in part because of the poor job NAP has done to inform park neighbors and neighborhood associations about its plans. Neighbors who live immediately adjacent to Mt. Davidson, for example, have said they were never given any official notice of NAP's plans for the park, especially its plans to cut down 1,600 trees. Established neighborhood associations, including many WTPCC members, have not been contacted by NAP. Many have said they never heard anything about the DEIR. Indeed, the Planning Department offered a tacit acknowledgement of this lack of public outreach when it re-opened public comment on the Draft DEIR last month.

11

NAP did not contact park neighbors and users or neighborhood associations to find out what they wanted in the natural areas in their neighborhood parks when NAP staff were developing their plans. During the plan development process, citywide NAP advocacy groups were contacted for input on what NAP should do in the parks, yet the people who live adjacent to or who regularly use the parks (that is, those who will be most impacted by any NAP restrictions) were ignored. The only input most people had was whatever they could say during a one-minute public comment at a Recreation and Park Commission meeting after the plans were already developed. The parks belong to the people of San Francisco, not to NAP staff. All park neighbors and users (not just those known to support NAP) must be involved in discussions about what to do in natural areas. Without this level of public outreach and engagement, NAP's plans lose support and credibility.

Even when people have explained their concerns to NAP staff, it seems to fall on deaf ears. At a 2002 meeting of the Golden Gate Heights Neighborhood Association (GGHNA), members complained about NAP's removal of iceplant at the neighborhood's Grandview Park. Grandview is the only remaining sand dune in San Francisco (other than at the beaches), but it is completely surrounded by homes, some of which have backyards that abut the park. Over the years, neighbors and park staff had planted iceplant at Grandview because it was the only plant that seemed able to hold the sand in place. When NAP took control of the park, it began to remove the iceplant because it was non-native. At the GGHNA meeting, several park neighbors complained that the iceplant removal had caused sand to drift into and cover their backyards, damaging their property. Lisa Wayne, the head of NAP who had been invited to respond to the neighbors' concerns, responded that NAP had no responsibility for property damage outside park boundaries caused by its removal of erosion-controlling plants. When the SNRAMP was released several

WTPCC-1

11 (Cont.)

years later, it called for "scattered, open sand" at Grandview Park. Over the years, GGHNA has repeatedly submitted public comments asking NAP to remove the goal of "scattered, open sand" at Grandview, yet it remains in NAP's plans.

NAP'S EXPANDED MANDATE

01 (Cont.)

WTPCC opposes the expansion of NAP's mandate beyond the protection and preservation of existing remnants of San Francisco's natural heritage. The original Management Plan for NAP, written in 1995, was 12 pages long.

Over the years, however, NAP has claimed more and more city parkland, to the point that most of the land under NAP control does not have existing remnant habitat. Rather NAP has claimed land that it wants to change from the existing habitat that currently has few native plants to one that more closely resembles the habitat before Europeans settled in the area. Because of this expansion, the final SNRAMP is 711 pages long.

CONCLUSION

01 (Cont.)

WTPCC supports the idea of preserving existing remnants of the historical habitat. We do not support the idea of wholesale habitat conversion that requires cutting down thousands of healthy trees, extensive and repeated applications of herbicides, closure of access to large areas of our parks, and destruction of existing habitat needed by the animals and birds living there now. As a result, WTPCC opposes NAP and its current plans for our parks.

12

The fundamental goals of NAP are misaligned with what San Franciscans want in their parks. To date, NAP has focused on restoring open space in San Francisco to "native" status. The SNRAMP was written to interpret "Natural" to mean "Native." That's not what San Franciscans want their natural areas to be. We want Natural Areas to be:

- Accessible to the public
- Safe
- Well-Maintained
- Green and filled with growing things (trees and plants)

Nowhere on that list does it say "native only."

People love Golden Gate Park (which is filled with non-native species), but it's not always easy to get to - so they want miniature versions of Golden Gate Park in their neighborhoods. They want a variety of plants that look nice, and space that gives them a chance to escape where they can walk, run & play with their family, friends and pets. Purely native areas do not provide the same visual and recreational opportunities that our non-native areas do. That's why people living in San Francisco more than 100 years ago introduced non-native species in the first place. Lush and green is what we want, and we're not picky about whether it's native or not.

WTPCC-1

12 (Cont.)

The Natural Areas Plan should reflect that desire, and work to accommodate it. NAP can certainly preserve a small portion of the total parks space for native plants (much like the botanical gardens include sections that are native only), but only if these native areas can meet the requirements above (i.e. accessible, walkable, safe, well maintained and green and lush). In a densely populated urban area like San Francisco, native-only should be a "nice to have" that takes a back seat to priorities like accessible, safe and lush.

WTPCC asks the Planning Department to address the issues we identified with the Draft DEIR. We ask the Recreation and Park Commission to rethink its support for NAP.

Thank you for your consideration.

Sincerely,

Matt Chamberlain

Matt Chamberlain, President WTPCC

cc: Mayor Ed Lee
Board of Supervisors
Planning Commission
RPD General Manager Phil Ginsburg
Natural Areas Program Director Lisa Wayne
RPD Chief of Operations Dennis Kern
Bill Wycko, Environmental Review Officer, Planning Dept.

ADDENDUM:
WTPCC Board Member Carolyn Squeri, who has a lot of expertise handling tree issues in St. Francis Wood over the years, wanted to add the following additional comments, specifically about trees:

The two justifications given by Dennis Kern at the May 2012 WTPCC meeting for the removal of the trees were: 1) all trees eventually die anyway; and 2) ivy is already killing the trees. Rather than proactively going in and removing trees, RPD should be removing ivy – cutting it at the base will kill it – or you can pull the ivy down out of the trees.

Another point made regarding the removal of eucalyptus was that oaks were to be planted in their place so that understory plants could grow better. You can ask anyone who knows anything about trees and they will tell you that it is oaks under which nothing else can grow. Just look out in nature. Eucalyptus grow in stands with many other plants. Oaks are the trees whose leaves and acorn droppings form an inhospitable area (usually the size of the entire canopy of the tree) where nothing can grow,

WTPCC-1

13 The removal of trees from Mt Davidson and elsewhere in the city is not what the city needs or wants. Already, San Francisco has far fewer trees than other beautiful major cities. Gavin Newsom realized this when he visited Chicago and came back with ideas to plant trees on many meridians in the city. San Francisco was not planned with beautiful tree-lined streets – street trees for the most part have been an afterthought. Our parks and open areas are the only places where we can enjoy the beauty and atmosphere that trees bring.

14 There are many tree maintenance issues around the City that need attention. The NAP funds would be put to much better use:
1) getting the ivy out of all trees, as it will eventually strangle and kill all growth on the tree.
2) removing the fusarium from our remaining pine trees between November and February so that the pitch pine cankor and the bark beetle do not spread. If the pines are fed with deep root fertilizer and the yellowing needles are removed, the pines will be much healthier and have longer lives.
3) planting many more big beautiful trees that do well in our microclimate.

15 Although oaks are native to California, I would be surprised if they were native to San Francisco. We don't get the kind of sun that oaks need to thrive. It's too moist here, especially west of Twin Peaks. You can literally count all the oaks currently in the city. We have one in St. Francis Wood. I know of one on Russian Hill. The arboretum probably has the most – and that's not many. Eucalyptus, on the other hand, thrive here. We have the kind of microclimate in which they do well with all our other plants.

The natural habitat west of twin peaks was sand dunes. The earliest settlers in the Presidio called it a god-forsaken wasteland wind-swept with sand – it was practically uninhabitable. The soldiers dreaded being there. So trees were planted as windscreens and to hold the sandy soil. Sutro Forest helped the surrounding homes by breaking the wind. Why would anyone want to go back to those sandy wind-swept days?

01 (Cont.) NAP's plan is extremely ill advised. It flies in the face of common sense. At its most benign, it is taking something beloved and beautiful and making it less beautiful. At its worst, it is exposing the residents of San Francisco to herbicides, the ravages of wind, erosion, run-off, and mudslides and it is exposing the city to liability for damaged and down-graded property.

Adam-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: comment on Natural Resource Areas plan
Date: 10/04/2011 05:38 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 05:38 PM -----

Adam <sunshine.rider@gmail.com>
Sent by: abk132@gmail.com

To bill.wycko@sfgov.org
cc
Subject comment on Natural Resource Areas plan

10/04/2011 04:37 PM

01 I am strongly in favor of the implementation of the Maximum Restoration Alternative proposed in the Significant Natural Resource Areas Management Plan.

Adams-L-1

LILE ADAMS

310 Jersey St.
San Francisco, CA. 94114
415 285-5295

RECEIVED
OCT 07 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

October 4, 2011

Bill Wycko
Environmental Review Officer
Planning Department
1650 Mission St, San Francisco CA 94103

To Whom It May Concern:

01 I am completely against the elimination or reduction of city dog parks by San Francisco Department of Parks and Recreation. Dogs and their owners need MORE space for off-leash recreation, not less. Returning parks to their natural, original state should NOT be the goal of a parks and recreation department of a major metropolis. Many needs must be balanced and it is unfair of you to ignore the needs of 150,000 dogs and their owners who reside in San Francisco, especially since a major federal agency (GGNRA) is trying to eliminate off leash recreation from a major part of their land. I urge you to abandon your Natural Areas Program and let people go to nearby natural areas like Big Basin, Yosemite, or Muir Woods, for example, if they are looking for an experience in nature that they can't find in a city. But please, don't try to make San Francisco into Yosemite.

Sincerely,

Lile Adams

Adams-S-1

SUSAN ADAMS
310 Jersey St
San Francisco, CA 94114
415 285-5295
Suca47@sbcglobal.net

RECEIVED
OCT 07 2011
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

October 4. 2011

Bill Wycko, Environmental Review Officer
Planning Department
1650 Mission St.
San Francisco, CA. 94103

To Whom It May Concern:

01 This is regarding San Francisco's Park and Recreation Department's plan to reduce dog parks throughout the city in favor of implementing a Natural Area Program. My comment is: What are you thinking? Have you no sense of history or geology? You think you can restore environment of a major metropolis to its original state? Over time, things change. I get that we don't want a non-native species to consume and take over everything in our parks, but to kill perfectly healthy trees, to pull up all that ice plant along the coast simply because it is non-native is simply nuts. First, we can't support this program financially, and second, what about the dogs?

As you know, GGNRA is proposing to drastically cut back the areas in which we can have off leash recreation. All through the comment period with GGNRA, I took great consolation in the fact we still have McLaren Park. That beautiful hill with trails that go up to the lake, where a dog can be a dog, and people can hike and take in the views of the city. And it feels like being miles out in the country, and I'm only 10 minutes from home. And you want to take that away? Not to mention Bernal Hill, Buena Vista, and Golden Gate Park Southeast? I feel there are always going to be irresponsible dog owners who will take their dog off-leash anywhere they please, rules or no rules. But many of us try to stay where we are welcomed, so people who are not dog enthusiasts can safely go to non-dog parks without fear of close encounters. But mark my words, if you reduce the number of dog parks in this city, more people will go off-leash wherever they want, and it will be chaos.

You people may not understand the improvement in quality of life a dog can bring to a citizen who likes dogs. Old people, lonely people, children, childless couples just to name a few are some who treasure their relationship with a dog. When I was diagnosed with breast cancer in 2009, my dog was my main source of comfort. That may be why there are more dogs than children living in San Francisco. It behooves you to honor that.

Sincerely,

Susan Adams

Ahlberg-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Regarding the Draft Dog Management Plan
Date: 10/05/2011 09:06 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:06 AM -----

Todd Ahlberg <toddahlberg@gmail.com>

10/05/2011 07:49 AM

To bill.wycko@sfgov.org
cc
Subject Regarding the Draft Dog Managment Plan

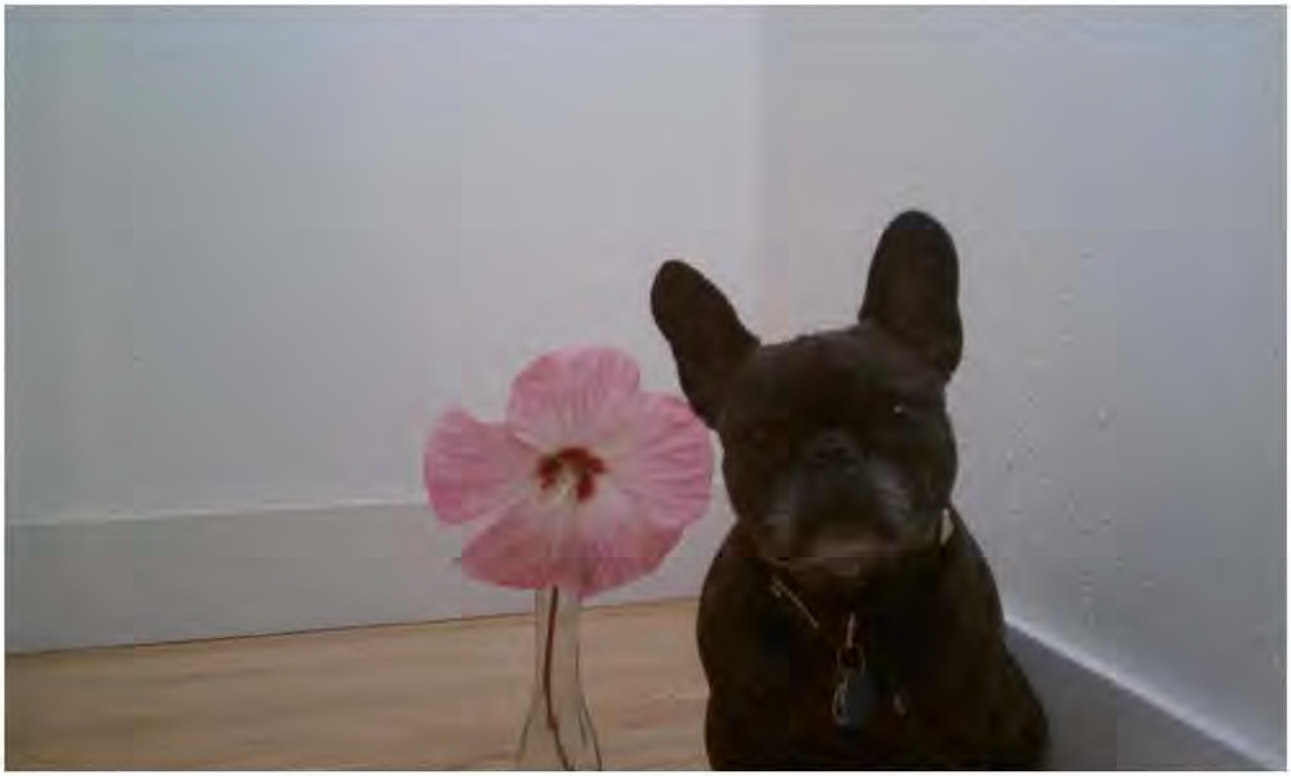
Dear Mr. Wycko,

01 I am writing to express my deep concern over the above-referenced plan, which threatens to reduce and even eliminate many of the city's dog-play areas. As a person who struggles with severe depression and bipolar disorder, being able to spend time with my dog outdoors and seeing her run free contributes to my regime of mental health. This may sound trite, and I realize that it's difficult to understand mental disorders, but finding ANY way to smile is a big challenge for people like us. My dog is my 100% true companion, and she is sensitive to my moods and patterns. By keeping a "smile" on her face, she keeps a smile on mine.

Please consider people like us, as well as all folk who live with dogs and rely on their companionship, as this plan proceeds.

Respectfully,

Todd Ahlberg
415-999-9791



Anonymous-1

HPC meeting on 9-21-11
2005.1912E
(J. RANGE)

Sharp Park today bears no resemblance to Alister MacKenzie's original design. The water features on five MacKenzie holes east of Laguna Salada, original holes 1, 9, 15, 16, & 17, have been culverted, eliminating crucial water hazards essential to his design. Five holes west of Laguna Salada, including original holes 3, 4, 6, 7, & 8 were destroyed completely by massive coastal storm surges and the subsequent construction of the berm, and two others, original holes 2 & 5, were severely damaged and modified to eliminate additional water features and other elements of their design. Now the site of hole 12, the original hole 2 was shortened by 60 yards and a stroke while the strategic features—including its proximity to a much larger Horse Stable Pond than exists currently—are almost completely irrelevant to the hole's play today. Hole number 5, which was considered by Jack Fleming to be "one of the most interesting holes on the course, similar to Dr. MacKenzie's 'ideal golf hole,'" is now the current site of hole 17, but other than occupying the same space the hole bears absolutely no resemblance to the original hole 5: a tee shot over Laguna Salada has been removed, and dual fairways have been combined into one, eliminating strategy alternatives integral to MacKenzie's design. Original holes 10 and 11, now the location of holes 14 and 15, have likewise been modified with changed greens and fairways that bear no resemblance to MacKenzie's layout. Indeed, Daniel Wexler argued that the original hole 10 was perhaps the course's best link, but its essential feature—a double fairway—no longer exists. Original hole 12, now the location of hole 18, has had sand traps removed from the design. In addition, original hole 13 (now 3), and original holes 14 and 15 (now the location of holes 8 and 2) described by Wexler as "not among the layout's finest" to begin with, have likewise had hazards reconfigured, as has the final original hole, 18 (now the location of hole 10). In addition, the theory of the course—the creation of a links-type, seaside course—was entirely upended when the berm was built separating the course from the ocean. In short, every link has been changed at Sharp Park—in many cases radically, and many holes have been lost completely. It is misleading to claim that any historical integrity exists at the course, let alone that 12 of these radically altered holes are "original" MacKenzie links.

01

Anonymous-1

HPC meeting on 9-21-11
2005.1912E
(J. RANGE)

SHARP PARK

Being that the City had come by the lots at Sharp Park so cheaply(free in fact)they decided to bring in one of the world's foremost golf architects, Dr. Alister Mackenzie. The fact that Mackenzie and his assistant at that time, Jack Fleming, were able to design a golf course along the San Mateo County coast line was quite an accomplishment in itself. They managed to accomplish this difficult feat by dredging for fourteen months in order to build up the fairways.

On May 15, 1930 Robert Hunter, Jr. was appointed the superintendent of construction for Sharp Golf Course at a fee of $750 for ten month's work. Four and a half months later on October 2, 1930 Willis Polk and Company was authorized to prepare plans and specfications for the starter's house at the golf course. The original cost of playing golf was $2.00 per month and a card good for all three courses became available in May 1932 for $5.00.

The courses's opening in 1932 was twice delayed due to wet conditions. The golf course officially opened April 1, 1932. Perhaps the fact that even the opening of the course had to be delayed twice due to winter rains should have warned of the drainage problems this site would always face. Normally a golf course will welcome the rest and revitalization the winter rains bring. In Sharp Park's case the winter rains brought about the annual flooding of Laguna Salada out on to playable portions of the golf course. This problem still persists 47 years later even though a 4,000 gallon water pump has been installed. Two factors contribute to the poor drainage problem at the Sharp Park site. First and foremost

Golf course history
—J Faulkner

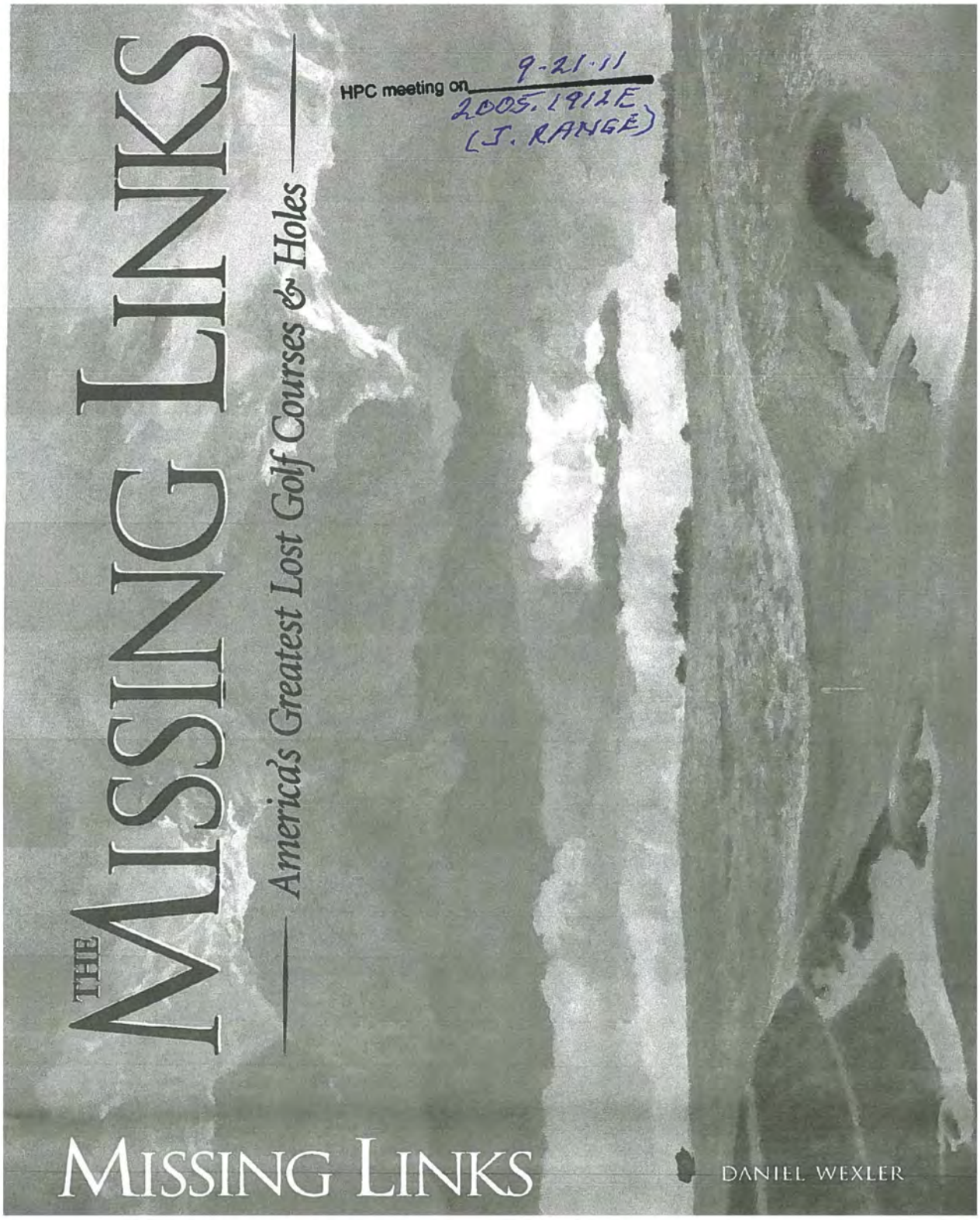
Anonymous-1

is the fact that the course is built at sea level and thus was susceptable to changing tides. The second factor was the annual flooding of Laguna Salada itself.

The golf course that opened on April 1, 1932 was becoming increasingly popular until it was severely damaged by high tides in a storm during the winter of 1938. The holes constructed on or near the beach were unindated by the unchecked tides of the storm. This resulted in severe damage to the beach holes - Numbers 2 through 8. The course, generally considered one of the best tests of golf in Northern California would never be the same. The beach holes had to be abandoned and reconstruction was forced across the Coast Highway up into what is now referred to as "The Canyon Holes". The effect was much the same as taking a house with a beach view and turning it 180 degrees to face a mountain slope. This was the most drastic architectural change the Sharp Park layout would ever face. Even the State Highway construction in the early 1960's that wiped out one par three hole would not have as damaging effect as nature.

Sharp Park remains very busy to this day drawing players both from the City and from down the peninsula. During the winter, however, as the water table rises, the course becomes less playable and suffers a significant drop in play - more so than other municipal courses during the winter. One winter in the early 1970's flooding was so thorough that the unchecked water nearly reached the clubhouse.

Anonymous-1


THE MISSING LINKS
America's Greatest Lost Golf Courses & Holes
HPC meeting on 9-21-11
2005.1912E
(J. RANGE)
MISSING LINKS
DANIEL WEXLER

Anonymous-1



SHARP PARK																			
400	274	423	120	338	168	383	398	538	3042	392	142	483	345	143	330	363	471	443	3112	6154
4	4	4	3	4	3	4	4	5	35	4	3	5	4	3	4	4	5	4	36	71

Anonymous-1

Located just 10 miles south of downtown San Francisco, the site given to MacKenzie was uncommonly fine for a public facility, including a nearly 1,000-yard oceanfront stretch along Salada Beach. For a county whose public course facilities at Harding and Lincoln Parks were among the busiest in the nation, the development of Sharp Park was a godsend. but this wonderful property was not without its drawbacks.

For one thing, a fair amount of the land required shoring up with massive quantities of dredged sand in an expensive, Lido-like operation. Second, the site was partially divided by a small county road, a circumstance dictating that three of MacKenzie's back-nine holes be separated from their 15 brethen. Years later this road would be rerouted, though by that time the storm-driven reconfiguration of the golf course would still leave four newer holes separated, about the only commonality between MacKenzie's work and the course in play today.

The 1931 layout began with a dogleg-right par-4 of 400 yards, a strong but not especially memorable opener. But things changed quickly at the second, a 274-yard par-4 with alternate tees situated on either side of the first green. In what today might be referred to as "risk/reward" style, this nearly-driveable hole featured a large bunker front-right of the putting surface and a lake to the left of the fairway, creating the wonderful question of just how near the water one dared to venture in pursuit of an easier angle for his second.

The third was a long two-shotter of 423 yards, playing directly north along the beachfront. Again the risk/reward question was laid before us: play safely down the middle and deal with a front-right greenside bunker or aggressively skirt the beach in pursuit of an open second? Seaside winds generally affected play at Sharp Park greatly, bringing those most unlinkish of obstacles—trees—into play along the right side as well.

Following the short fourth, a precise pitch played along the lake's westward shoreline, one reached the first of the dual-fairway holes, the 338-yard fifth. Here the player's options were numerous with a "safe" left-side route leaving the most difficult second-shot, a dangerous lakefront fairway opening up a more direct line, or the all-out blast over everything leaving a mere pitch from a wide-open angle. As at the second hole, a second tee positioned left of the previous green served to create additional angles and variety.

The 385-yard seventh was the course's second and last seaside hole, playing directly south to a long, narrow green flanked on either side by sand. The slight angling of the putting surface again tempted one to drive close to the beach (particularly if the pin was cut back-left), but the lesser presence of trees at least made this tee shot a bit more forgiving.

The 398-yard eighth, though built with only one fairway, offered two very distinct lines of play. A drive aimed safely left was simple enough but set up a nearly all-carry approach across two front-left greenside bunkers. For the man capable of controlling a long fade, however, there was the option of skirting the treeline, a shot which, if brought off successfully, again yielded a more favorable approach.

Though one hesitates to name a best hole among so many good ones, the 392-yard 10th did

Anonymous-1

a fine job of nominating itself. Here was the double fairway concept played out to the fullest, the right side providing ample safety but a bunker-obscured second, the left requiring a gutsy tee shot to a water-guarded fairway but yielding a straight-on approach. Yet again, dual tee boxes varied the challenge from day to day, making the 10th a truly great hole—but an intimidating prospect for anyone hoping to slip past the starter and begin play on the back nine.

Following the 142-yard 11th came the long 12th, a 493-yarder distinctly reachable in two, provided one avoided several prominent trees and the out-of-bounds which ran down the entire left side.

Perhaps not surprisingly, the three holes exiled across the county road were not among the layout's finest, the 345-yard 13th being the best of the bunch with out-of-bounds also threatening its more-favored left side.

With the routing having returned to the clubhouse for a third time, one set out again at the 363-yard 16th, a par-4 following much the same path as today's first hole. Here a large mound punctuated the fairway some 175 yards off the tee, offering several different angles of play. The more difficult drive was the one aimed down the right side, close to a clump of trees. Naturally this choice also provided the better approach angle to a deep, narrow putting surface.

MacKenzie closed out Sharp Park with a pair of long finishers beginning with the 471-yard 17th. Though not a particularly difficult hole, this short par-5 often faced a strong sea breeze and featured out-of-bounds left, two bunkers, a meandering brook and a green laid precariously close to a rough, marshy depression. The 18th, by contrast, was a bit of a monster, its 443 yards requiring more brute strength than finesse, though the ability to draw one's tee shot would obviously have come in handy.

It was indeed unfortunate for Sharp Park that so many of its best holes fell along the property's ocean side, for it was this flank which took the brunt of any incoming storms. Following the early 1930s deluge that washed several of these gems out to sea, a massive berm was constructed (largely upon land once occupied by holes three and seven) to prevent history from repeating itself. The subsequent rerouting of the county road and reconfiguring of the lakeside holes has further muddled things so that today only a handful of holes run consistent with MacKenzie's originals, and no appreciable trace of his strategy remains in play.

How Sharp Park Would Measure Up Today

Oceanfront holes, double fairways, MacKenzie bunkering, marvelous scenery...

Any way you look at it, even at only 6,154 yards, Sharp Park would have to stand well out in front as America's finest municipal golf course.

Restoration anyone?

Anonymous-1



1943 aerial survey reveals a number of MacKenzie's original holes still
inland, plus four newer ones built to the east. (National Archives)

Anonymous-1

DR. ALISTER MACKENZIE

SHARP PARK GOLF COURSE

PACIFICA, CA

Opened in 1931 / 6,154 yards Par-71

As today, some 65 years after his death, Dr. Alister MacKenzie remains perhaps the most celebrated golf architect in history, it is truly remarkable that two public courses he laid out in major American metropolises could have been so short-lived and poorly documented. Yet Bayside, as we have seen, labored in (and vanished into) almost complete obscurity—and it cannot even begin to compare with the briefly-lived legacy of San Francisco's Sharp Park.

MacKenzie's Sharp Park layout is surely one of golf architecture's most enduring mysteries. Owing to the fact that it was built in 1931, then washed into oblivion by a coastal storm shortly thereafter, its original design was seen firsthand by very few. Nor was this initial version in any way adequately recorded, with few photographs of any kind known to remain in existence. Further, a visit to today's 6,299-yard facility offers little; this vastly-altered layout serving mostly to make one wonder if a vintage MacKenzie design ever *could* have existed upon this site.

But the Doctor's original, located very much upon this same land, was all that its tantalizing prospects have suggested, a marvelous golf course featuring seaside holes, two double fairways, a large lake, and a cypress-dotted setting fairly reminiscent of Monterey. It was, in short, a municipal masterpiece.

Archer-1

RECEIVED
OCT 1 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

10-5-2011

To Whom It May Concern,

01 Many, many people LOVE Sharp Park Golf Course. We love golf, and we love that we are able to play this excellent public course. We don't think that there must be golf or animals, rather a partnership that makes everyone and every creature happy. It is possible to maintain and care for the wonderful Sharp Park Golf Course without doing away with the animals who also reside there. As I understand it, the animals did not come to live at Sharp Park until there was Sharp Park.

This golf course is one of the most beloved around the area for lovers of golf. It is an artwork from the palette of the great golf course architect, Alistair McKenzie, and one does not destroy great works of art. One uses all resources to appreciate and value and preserve such entities. One must compromise with intelligence, not emotion. There must be developed, among rivals, a common ground, leading to compromise, on ideas about which there is disagreement, but the end must not be destruction about which we would all rue at leisure.

02 Please let's dialogue with a larger vision, with an eye and ear toward to opposing view, and come to understanding that such an historic golf course must remain so that generations of adults and children can play golf, the best of all sports, for a reasonable cost, on this remarkable, historic and beautiful golf course. Your attention to this issue is greatly appreciated.

Sincerely yours,

Donna Archer

Widow of 1969 Masters winner, George Archer

Armanini-1

Bill Wycko, Environmental Review Officer
SF Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103
Phone: (415) 558-6378
Fax: (415) 558-6409
bill.wycko@sfgov.org

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Oct 28 2011

Dear Mr. Wycko:

01 Having lived and worked in the Bay Area my entire life, I am strongly opposed to the recent Environmental Impact Review and Natural Areas Program (NAP) Recommendations released by the SF Planning Department which threatens to confiscate parklands in San Francisco and Pacifica that I have enjoyed with my dogs for so many decades.

The draconian NAP recommendations call for closure of Dog Play Areas at Lake Merced, and substantial reduction in size of these areas in several parklands including McLaren Park, Bernal Hill, and Sharp Park. In addition, recommended "restoration" actions also call for the use of toxic chemicals and the cutting down of thousands of healthy, beautiful trees which would destroy the enjoyment of these parks for everyone.

02 I find the proposed "restoration" actions particularly offensive, as they are founded largely on subjective ideology that arbitrarily values theoretical vegetation and fauna from long ago in favor of current terrain and wildlife that has established itself there. I am in complete agreement with Dr. Arthur Shapiro's statements and am appalled by the fanatical ideology and proposal for current parkland and habitat destruction, especially in these difficult economic times (*http://milliontrees.wordpress.com/2011/10/10/professor-arthur-shapiros-comment-on-the-environmental-impact-report-for-the-natural-areas-program/*).

I am a longtime resident of Pacifica, and find the restrictions on the responsible citizenry and their dog companions in Sharp Park to be oppressive, depriving the local population the use of areas which we had enjoyed all our lives. More distressing is the NAP "restoration" proposals for Sharp Park, which threatens to destroy these areas for everyone.

03 As with the GGNRA Environmental Impact Statement of 2011, rational for the Significant Natural Resource Areas Management Plan (NAP; *http://sfmea.sfplanning.org/2005.1912E_DEIR.pdf*) is based largely on allegations, with no substantive scientific studies or third party peer review provided as evidence. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park or Bernal Hill. Also, the NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts (*http://www.sfdog.org/content/do-dogs-bother-birds*). These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts."

Mr. Wycko, please do not support extreme and unsubstantiated environmental allegations and proposals being made by the NAP at the expense of local communities and citizens. In addition, please prevent the "restoration programs" that threaten to destroy existing parklands altogether.

Sincerely,

Mark Armanini
55 San Jose Ave
Pacifica, CA 94044
marmanini@takedasf.com

Art-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Monday, November 07, 2011 9:29 AM
To: Bock, John
Subject: Fw: Natural Areas Program should be limited

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/07/2011 09:29 AM -----

Bill Wycko/CTYPLN/SFGOV
11/07/2011 09:23 AM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Natural Areas Program should be limited

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/07/2011 09:24 AM -----

Catherine Art <cart1997@yahoo.com>
11/04/2011 06:06 PM
Please respond to Catherine Art <cart1997@yahoo.com>

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: Natural Areas Program should be limited

Art-1

Dear Mr. Wycko,

01 I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

02 The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes.
Before our city was built. Before our lush parks were created.
This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

03 San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.
Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

04 Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

05 I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

06 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You

Sincerely,

2

Asher-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:18 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:18 AM ----



Poe Asher
<vizluv@yahoo.com>
10/30/2011 09:45 PM

To bill.wycko@sfgov.org
cc Poe Asher <vizluv@yahoo.com>
Subject Natural Areas

01 I am opposed to the creation of yet more 'natural' areas in San Francisco. What was appropriate a few hundred years ago is no longer the case. John McLaren would likely be on my side here. Change is a natural process. The environment, climate, populations (and needs of same) are different now. To restore planted areas to that of a historical period of time deemed appropriate isn't practical. If you want to get technical, lets go back to the time when earth was covered by oceans (which may turn out to be the case in due time anyway).

02 To create these 'natural' areas at this time requires the use of pesticides and herbicides as well as man-hours of maintenance. To lose San Francisco's forested areas would be shameful. Much of the city's beauty is due to the great number and diversity of trees that we have.

Think of the maintenance issues if that 'pesky non-native iceplant' were to be removed from Great Highway.

I, as well as many San Francisco residents with garden spaces plant many varieties of plants that foster butterflies, bees and other beneficial insects and birds in the city that would otherwise have a hard time surviving in an urban environment. Many city gardeners are also using organic methods in order to keep herbicides and pesticides out of the food chain. Many of the non-natives, while supporting beneficial insects and birds, are not as efficient in doing so and do require chemicals for their survival in the present day.

San Francisco is so fortunate to have our forested areas that support wildlife as well as (unfortunately) our private gardens. From the beach, to look back at the city and see the neighborhoods broken up by wide swaths of green is indeed beautiful. Dune grasses and sand . . . not so much. I am old enough to remember playing in large areas of the Sunset that was still dunes and grasses.

Pleas don't give more public spaces to the 'nativeists'. Let them continue to plant natives in their own private gardens.

Poe Asher
44 Ord Court

Asher-1

S.F. 94114
(A neighborhood rife with non-natives, composted gardens, no chemicals, and lots of birds, bugs and animals. Egrets and blue herons have caught fish in my yard.)

Bachmanov-1



Bill Wycko/CTYPLN/SFGOV
06/11/2012 01:06 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 01:06 PM ——



Eugene Bachmanov
<bsidecon@yahoo.com>
06/07/2012 08:47 AM
Please respond to
Eugene Bachmanov
<bsidecon@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc "\"John Avalos\"" <John.Avalos@sfgov.org>, "\"Sean Elsbernd\"" <Sean.Elsbernd@sfgov.org>, "\"David Chiu\"" <David.Chiu@sfgov.org>, "\"Carmen Chu\"" <Carmen.Chu@sfgov.org>, "\"Malia Cohen\"" <malia.cohen@sfgov.org>, "\"Eric Mar\"" <Eric.L.Mar@sfgov.org>, "\"Jane Kim\"" <jane.kim@sfgov.org>, "\"Christina Olague\"" <Christina.Olague@sfgov.org>, "\"David Campos\"" <David.Campos@sfgov.org>, "\"Mark Farrell\"" <mark.farrell@sfgov.org>, "\"Ed Lee\" <mayoredwinlee@\"John Avalos\"" <John.Avalos@sfgov.org>, "\"Sean Elsbernd\"" <Sean.Elsbernd@sfgov.org>, "\"David Chiu\"" <David.Chiu@sfgov.org>, "\"Carmen Chu\"" <Carmen.Chu@sfgov.org>, "\"Malia Cohen\"" <malia.cohen@sfgov.org>, "\"Eric Mar\"" <Eric.L.Mar@sfgov.org>, "\"Jane Kim\"" <jane.kim@sfgov.org>, "\"Christina Olague\"" <Christina.Olague@sfgov.org>, "\"David Campos\"" <David.Campos@sfgov.org>, "\"Mark Farrell\"" <mark.farrell@sfgov.org>, "\"Ed Lee\"" <mayoredwinlee@sfgov.org>
Subject

01 The right plan to plant the trees first, wait 15–20 years and after you can cut same amount the trees as you planted

Barnsdale-1

523 Norvell Street
El Cerrito, CA 94530

October 29, 2011

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Dear Mr. Wycko:

I am commenting on San Francisco's Natural Areas Program EIR.

01 San Franciscans should be warned that the movement to create so-called "natural areas" has not been successful in many places. It is based on a rather rigid view of what is "natural" and requires, ironically, intensive weeding, irrigation, and the use of pesticides. At the same time, it typically removes the areas in question from public use. None of this is appropriate for public parks. It will not serve San Franciscans well.

Here in the East Bay we have witnessed similar campaigns. One is the 72-acre Berkeley Meadow. This area was landfill, so "restoring" it back to its natural condition was a leap of imagination. The Berkeley Meadow requires constant weeding, irrigation, the use of pesticides, and the entire area is behind chain link fence save for a short, fenced walk through part of it. It has become a kind of diorama for plant that does not meet the public need for open space and recreation.

By contrast, the City of Berkeley's nearby Cesar Chavez Park, which is of similar size, is in constant use by a multitude of users – including people walking, jogging, flying kites, walking dogs, taking photographs, picnicking, and bird watching. Cesar Chavez even has a thriving burrowing owl colony.

I urge you to resist the most restrictive options proposed in the NAP EIR. They will be expensive and may, ironically, actually cause damage to the environment while not providing much-needed outdoor options for San Franciscans.

Sincerely,

Mary Barnsdale

Bartley-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:16 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SNRAMP Comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:16 AM -----



"Eddie Bartley" <eddie@naturetrip.com>
10/30/2011 10:23 PM

To <bill.wycko@sfgov.org>
cc
Subject SNRAMP Comments

October 31, 2011

E-mail: bill.wycko@sfgov.org
Mr. Bill Wycko
Environmental Review Officer
SNRAMP EIR
City and County of San Francisco
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Re: Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project (2005.1912E)

Dear Mr. Wycko;

01 I am writing in support of the Final Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project 2005.1912E.

Thank you for the opportunity to comment on the Significant Natural Areas Management Plan (SNRAMP) Project.

As a San Francisco natural history educator and wildlife guide I often visit these areas leading groups bird watching and performing scientific research such as nest monitoring. The incredible biologic diversity in San Francisco has inspired me on a career path that has allowed me to witness rare and wonderful creatures practically outside my door. However, as I know you are aware, I also see many significant challenges to these plants and animals living amongst a thriving urban populace despite an exceptional awareness of our citizens.

I applaud the Planning department for understanding that long term planning for the SNRAMP is imperative to get positive results. Indeed, I will only encourage the Department to take an even longer

Bartley-1

view when it comes to planting decisions and maintenance of long lived species such as trees.

Obviously, an incredible amount of energy, debate and discussion as well as public comment has already taken place well before this document was produced. Many of the agencies that have been involved including CNPS, Nature in the City, California Academy of Sciences and Golden Gate Audubon have been performing scientific research, performing and managing ecological restorations for many decades. Add on top of that experience which has come from the local National Parks restorations and we have some significant local and regional results, positive and negative to draw from.

Specific recommendations:

1. I wholeheartedly support the tree removal proposed in this plan, naturally taking into consideration its impact on nesting bird species. I strongly feel that certain tree species, specifically Blue Gum Eucalyptus, are not only hazardous to humans but also a nearly useless plant for native birds. Sure some f our species have managed to adapt but this is primarily due to a lack of choice. These trees monoculture and muscle out our native understory and the associated plant and animal system that our native wildlife has evolved with. A tree plan even longer term than fifty years should consider native and near native trees such as Monterey Cypress and pines, Coast Redwood and Live Oak as gradual but steady replacements for all Blue Gum. San Francisco could and should set the standard for the elimination of this dangerous pest tree. 02
2. With the exception of public safety issues tree removal and maintenance should always occur between nesting seasons. Native birds begin nesting as early as January and extend through July for the many species that breed in San Francisco. A moratorium on significant arborist work should begin by mid-February and extend through mid-July. Through our studies we have found that trained biologist nest monitors will miss bird nests on their surveys. City arborists should work with local avian biologists, many who are already performing nest monitoring, to ensure the highest levels of safety for citizens and wildlife. 03
3. Considering long term costs and the current budget: Today San Francisco, like all U.S. municipalities, is suffering from the effects of a national recession. This will not likely be the case in five or ten years but maximizing the efficiency of available staff should always be a goal of long term planning. One way to maximize that efficiency is through a reduction of long term maintenance burden. Trees in a city require professional arborists for safety reasons and are much more expensive to maintain than grasslands or coastal chaparral in the long term. Most local native plants, once well established, require less or no irrigation and little or at least less maintenance. As has been demonstrated motivated volunteers can make a huge, cost-effective, difference on small scale restorations using simple tools. 04
4. Sharp Park should be considered separately from the rest of the plan. While we have many unique ecosystems in San Francisco Sharp Park is perhaps the most unique of all San Francisco properties. The city is already in violation of the Endangered Species Act and with the acknowledged sea level rise the only reasonable course is to return this property as a wetland. Continuing to wasting resources maintaining this property as a golf course is a grave mistake. Spending millions and perhaps tens of millions of dollars on a park that very few San Franciscan's even know about instead of focusing on improvements of city parks is an egregious waste. If the proposed policy continues we guarantee that it will be looked back on as folly. 05
5. Thank you for including feral cat considerations in several parts of the SNRAMP. Feral cats and their feeding stations should not be permitted in any of the natural areas parks 06

Bartley-1

06 (Cont.) and open spaces. It is a biological fact that the allowance of feral cats has been a primary cause for steep declines in avian diversity in San Francisco including the near extirpation of the California Quail.

6. Dog impacts on the more environmentally sensitive areas such as wetlands and waterways need to be more fully addressed. I am a strong advocate for official dog play areas but these play areas should be situated well away from the most significant natural areas. A clear delineation of all dog play areas needs to be maintained in any case. (07)
7. It is time for the city to enforce existing dog owner laws including the requirement of licenses. These license fees pay for our understaffed and overwhelmed Animal Care and Control Department. Lack of enforcement is seen as a dereliction of duty from this citizen's point of view. (08)
8. Trash containers at all parks need to be wildlife resistant. Population levels of meso-level predators such as Common Raven have grown exponentially in the last twenty years in part due to access to human food waste. These animals in turn have a negative impact on other native species such as raptors who are primary natural pest control agents. Also Norway rat populations have increased due to access to garbage and until rodenticides are outlawed for use by citizens use of them on rats will continue which has a double whammy effect on Owls and Raptors when they catch a poisoned rat that in turn kills them (in an excruciating manner). Increased education and enforcement of wildlife feeding laws will also help in this regard. (09)
9. Dumping green waste along the sides of the lake causes algal blooms due to the increased nitrogen. Same goes for fertilizers on the golf courses – both practices should end. (10)
10. Replacing natural play field areas with artificial turf is neither good for nature or humans. It has been clearly demonstrated that the long term impacts are overwhelmingly negative economically and environmentally. I don't at all understand why the city is still considering this. (11)
11. Thanks to the Freedom of Information Act I have been able to read some of the other comments that have been forwarded to your department about the Plan but one from Professor Arthur Shapiro stuck out. I offer the following comments as a response to Mr. Shapiro's October 6 critique:

Arthur Shapiro's philosophical critique fails to educate the process or the decision makers at the SF Planning Department on any specific aspects of the plan. True, he isn't being paid for consultation work (although that might be a great idea) but he certainly put some energy into his critique of the plan. Maybe he will offer more substantial advice in the future with a little encouragement.

Despite his annoyed tone however a few good points for debate (and perhaps some reasons for his derisive attitude) may be read into his letter:

12 1. Wasting time and money on certain invasives that can't be overcome: A popular trend amongst evolutionary biology scientists and ecologists is that we need to accept that many of the species that have been human introduced are impossible to remove so we might as well get used to it. European grasses and some shrubs (i.e. Broom) are a prime example of that locally. The fertile SF Bay itself may be the most dramatic regional example of introduced species gone wild. Still, some particularly disadvantageous species can be controlled relatively easily or wiped out altogether.

Bartley-1

13

2. Carbon Sequester models - Trees vs. grasslands, etc.: If you completely buy into theories that our current climate change is primarily being driven by human impacts then methods of maximizing carbon sequestering by our planting (or un-planting) choices should be considered. Shapiro mentions trees vs. "artificial" grasslands (presume he means artificial turf) - well, that's a no-brainer but what about comparisons of natural grasslands (both non-native and native) vs. tree forests or even marshlands? There is disagreement amongst researchers on what habitat types sequester the most carbon and trees are not a clear front runner.

As far as the SNRAMP goes Mr. Shapiro is over-thinking the situation. For one, we are only talking about 500 acres out of the 30,000 acres in the city itself. These properties will need to be maintained to some degree regardless of whether they are maintained with the goal of maximizing native diversity or not. After two decades of not-too-aggressive restorations here in SF the results are becoming clear and the folks who have been working on these restorations have seen results mostly positive, some negative, plus a few unintended consequences. This is going to happen and it is the process from which to learn by.

Consider these examples of small restorations increasing bio-diversity:

Heron's Head Park - only four acres of marsh and 10 acres of upland restoration beginning in the early 1990s - Clapper Rails (out of a population of <1500), Black-necked Stilts breed there for the first time in modern history, White-crowned Sparrows and Black Oystercatchers have increased number significantly.

Pier 94 - Thought extinct, California Suaeda is now self propagating at this tiny site.

Lobos Dunes - one year after the restoration of this habitat was complete Western Bluebirds nested in SF for the first time since the 1920's.

Through very modern methods, Franciscan Manzanita is now being re-introduced in earnest from a single surviving plant.

These are but a few of the many examples of restoration successes here in SF that have added greatly to our knowledge and quality of life here.

As for Shapiro's unfortunate "Guilt-driven, self-hatred" comment…uh, that would be no. None of us living today voted for slavery, dropped the A-bomb or wittingly introduced invasive non-native species. Most of us live in high density housing in a city that has been a leader in many things environmentally green. No, we were born into our individual situations, gradually found out about these things as we grew and simply realized we can do better than those that came before us.

"Vast Evolutionary Opportunity"? Nice one coming from a "distinguished" British plant ecologist. Anyone who has visited England or knows the sad tale of British ecological history where their entire forest system was destroyed in order to make glass will shake their heads on that one. Recognizing denial as a legitimate defense mechanism is OK but asking us to give up

Bartley-1

and accept defeat of our own biological heritage is too much.

We should not simply accept the mistakes of poor planting decisions any more than we should be OK with the radiation and toxic pollutions that have been left for us to deal with by our predecessors at places like Hunter's Point or allow poisons to be introduced into our homes, watersheds and parklands by chemical companies. Those folks didn't fully realize what consequences would come from their actions or perhaps even care but now we know and when it can feasibly be fixed or, at least made better, it should be. The SNRAMP project is a very good beginning for addressing some of this neglect.

Budgetary limitations will always be a factor but native animals and plants are real "precious resources" that should be encouraged and never wasted. Money comes and money goes; not necessarily so plant and animal species. We've lost some forever and brought others back from the brink so it is not like we don't know. If we can improve the chances for marginalized local species or help save one from extinction that will be caused by humans the value of that is simply "priceless" and generations to follow will be grateful for these efforts.
Thank you for this opportunity to comment on these plans. Please feel free to contact me to discuss any of these recommendations further.

All the best,

Eddie Bartley
President of Nature Trip
San Francisco, CA
www.naturetrip.com

Bartolotta-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:47 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Rec and Park Dept's Natural Areas Program (NAP).

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:48 AM -----



Victor Bartolotta
<vbartolotta@yahoo.com>
10/31/2011 10:13 AM
Please respond to
Victor Bartolotta
<vbartolotta@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Rec and Park Dept's Natural Areas Program (NAP).

Dear Mr. Wycko,

I am shocked at the overreach of the Natural Areas Program proponents. The enactment of this program would deprive San Franciscans of rare and valuable recreation space. The cultivation and preservation of pleasant parklands within the confines of San Francisco's 49 square miles has a negligible impact on California's 163,000 square mile area.

Furthermore, the EIR includes misstatement of facts, speculation and opinions represented as observations:

01 1) The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

02 2) The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and impacts..

03 3) The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot

Bartolotta-1

03 .continue.. EIRs must be based on observed impacts, not things that .may. happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

04 4) In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these .observations.. Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by .observers. biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is this the case here as well? We do not know, since the NAP EIR provides no information about them. Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal .observations.. If not, their analyses cannot be trusted and are inadequate.

05 5) The NAP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. Do people in the natural areas with dogs cause significantly more impacts than people in the natural areas without dogs? Clearly a 200-pound person will have a much more significant impact on plants than a 20-pound dog. Because this was not evaluated in the EIR, the analyses presented in the NAP EIR are inadequate. If there is little difference in impacts, then the EIR cannot justify banning dogs from the natural areas.

06 6) The NAP EIR considers only the NAP plans to close 15% of the legal off-leash space in SF city parks when considering impacts on the remaining DPAs and on recreation. However, the NAP plan also calls for expanding the most sensitive areas within natural areas, and this potentially could result in the closure of significantly more DPAs (up to 80% of the total off-leash space currently available in city parks, off-leash space that is located either within or adjacent to a natural area). These added closures (up to 80%) will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate.

07 7) The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures can and should be analyzed. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. The busiest weekend days normally find about 60 dogs at the Pine Lake DPA at any one

Bartolotta-1

07

time. Weekday mornings normally have far fewer, closer to 20. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday and more than 3 times the maximum numbers of dogs seen on weekends. This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The analysis presented in the EIR, which does not contain this, is inadequate.

08

8) The number of DPAs in city parks listed in the NAP EIR is wrong. Page 155 says there are 19 DPAs, when the actual number is 29. To get such a basic fact wrong is shocking and calls into question other information about dogs, such as their alleged .impacts' on plants and wildlife.

09

9) The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to .sunset. the DAC and conduct the citywide survey. While the survey was being conducted, the DAC was told, there would be a hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no .direction from the Commission.. This hold was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new DPAs to replace closed ones because of a temporary halt on new designations is absurd. Any analysis of alternatives that does not include this possible mitigation is incorrect and inadequate.

10

10) The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the 15% closures will not cause a significant number of people to drive to other parks to walk their dogs. People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs. Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. This must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate.

Bartolotta-1

11) The NAP EIR does not adequately consider the impacts of the use of herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is on- or off-leash). In a paper on the effects of Garlon, the Marin Municipal Water District (http://www.marinwater.org/documents/Chap4_Triclopyr_8_27_08.pdf) notes that Garlon can cause kidney problems in dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this). The NAP's reliance on herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it has been applied. This is especially true in Glen Canyon, where Garlon was applied over 30 separate times last year. This impact was not considered in the Hazards and Hazardous Materials section of the NAP EIR and a discussion of the health impacts on dogs of repeated exposure to Garlon should be included.

11

12) The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the closures of 15% of off-leash space at Lake Merced, Bernal Hill, and McLaren Park will be less than significant because there will remain sufficient off-leash space in those parks (except for Lake Merced). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs. This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows.

12

13) The NAP EIR refers to dogs as .nuisances.. The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are closed. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections.

13

14) The NAP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR. Other mitigations . education, signage, more extensive

14

Bartolotta-1

14 fencing, etc. , are not discussed. NAP seems to go straight from a single impact to closing the DPA.

15 15) The NAP EIR states that impacts to land use planning can be considered significant if they have a .substantial impact on the existing character of the vicinity.. (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the DPAs and portions of DPAs that NAP wants to close. This community, in many cases, defines the .existing character. of the park. Dog walkers are perhaps the most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate.

16 16) The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting.

17 17) The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people and dogs. The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species. There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will .require. NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives.

Bartolotta-1

18) The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative.

18

19) The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland. The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis.

19

20) The NAP EIR does not consider the negative impact on aesthetics of NAP management decisions. For many people, brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing. For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green not brown half the year. Because these impacts were not considered, the NAP EIR is inadequate.

20

21) The NAP plans call for cutting down over 18,000 healthy trees simply because they are not native. The NAP EIR does not adequately consider the long-term impacts on climate change and global warming of the conversion of land covered by trees with grasslands. Tree are much better at carbon sequestration than grasslands, and the long-term consequences of this difference are not adequately considered. For more on NAP impacts on trees, see: http://milliontrees.wordpress.com

21

22) The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (and tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time when the climate has changed since that time. The environmental consequences (for example,

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22 more herbicides, etc.) of trying to force the old habitat into today's climate should be analyzed more thoroughly.

Best regards,

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Bill Wycko, Environmental Review Officer
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October 31, 2011

SUBJECT: Significant Natural Resource Areas Management Plan (SNRAMP) – Draft Environmental Impact Report, August 2011, State Clearinghouse No. 2009042102

To the San Francisco Planning Department:

Please consider my comments on the Significant Natural Resource Areas Management Plan (SNRAMP) programmatic draft EIR (DEIR), which focus on one of the stand-alone projects covered in the programmatic DEIR, Sharp Park Laguna Salada wetland "restoration" project. These comments represent my independent professional opinion, and were not prepared on behalf of any organization.

My qualifications to provide expert comments on conceptual restoration alternatives for coastal wetlands are based on over 30 years of professional work in coastal wetland and terrestrial ecology, with emphasis on planning, management, and restoration of degraded coastal wetlands. Following my Ph.D. research in coastal ecology, I spent nearly twenty years as a professional technical planner and advisor on California coastal wetland restoration and management, with emphasis on recovery of rare and endangered species. I have worked for the U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers in this capacity, and I have provided consulting services and peer review for California State Parks and National Park Service, and CAL TRANS on coastal lagoon enhancement and restoration projects along the Central Coast during the last 5 years (Rodeo Lagoon, Crissy Field (Presidio) Lagoon, Big Lagoon, Laguna Creek Lagoon, Pilarcitos Creek mouth, Scott Creek Lagoon, Waddell Creek Lagoon). I am a co-author of a 2011 technical report on Laguna Salada wetland restoration alternatives (PWA 2011), and I was an invited speaker to the Sharp Park advisory working group convened by San Francisco Recreation and Parks Department in November 2010, where I presented an introduction to California coastal lagoon wetlands, with an emphasis on Laguna Salada and similar lagoons.

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My comments generally concern the level of analysis provided in the programmatic DEIR for the stand-alone project at Sharp Park, deficient analysis of impacts and mitigation, and the lack of meaningful evaluation of less environmentally damaging alternatives proposed to achieve the same basic purpose as the proposed project. The rigor of impact and alternatives analyses in CEQA should be commensurate with the sensitivity of the environmental setting, and the potential for significant impacts. As explained below, the DEIR presents a seriously flawed and inadequate CEQA assessment of impacts, mitigation, and alternatives for the stand-alone Sharp Park "restoration" project.

1. The DEIR fails to identify the extent of wetlands filled for the purpose of conversion of marsh to golf fairways rather than enhanced upland habitat for endangered species, and fails to identify mitigation for wetland filled to enhance upland golf greens.

The DEIR fails to disclose that a significant area of existing wetlands bordering the northeastern end of the lagoon would be filled and converted to upland golf greens, rather than filled to provide enhanced habitat for endangered wildlife. This fill is shown in Figure 14 of Appendix I (Tetra Tech 2009) and described in a text box in a misleading and inaccurate way as "raise fairways to reduce flooding" along the inland side of the "habitat boundary" mapped near hole 14. Neither the restoration plan nor the DEIR identify the fairway areas to be filled and raised above flood elevations as including existing wetlands consisting of freshwater marsh mown down to a low turf to function as part of a fairway. The mown marsh is in fact composed of dominant marsh vegetation identical to the marsh that isn't mown on the other side of the artificial habitat boundary. The "habitat boundary" in fact is the line of mowing that encroaches into the marsh, not the boundary between upland and wetland soils and vegetation. It is entirely artificial, nominal boundary. The mown marsh was identified as one of the existing degraded conditions of the Laguna Salada wetland complex in the January 2011 report on Laguna Salada restoration alternatives (PWA 2011), which was provided to the City of San Francisco. It was also shown and explained to representatives of the Recreation and Parks Department in a slide presentation at the November 2010 Sharp Park "working group" meeting at McLaren Hall.

01

The mown marsh area lying within the proposed fill area falls entirely within the criteria for wetlands protected by policies of the California Coastal Commission, and it meets all criteria for wetlands under the current U.S. Army Corps of Engineers wetland delineation manual.

The identification of the marsh as wetland is obscured by regular mowing that makes it resemble golf turf, but the mowing does not alter the basic jurisdictional criteria of the wetland determined by dominant obligate and facultative-wet wetland species, hydric soils, and winter flooding and saturation for multiple weeks. The fill of this mown marsh and its conversion to upland golf greens is neither identified as an impact, nor evaluated for impact significance, nor mitigated in any way.

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Mowing of freshwater marsh with saturated soils at the surface mown to height of golf turf, annexing marsh to golf links at N Sharp Park ; fresh-brackish marsh species composition of the mown marsh turf at marsh edge is identical with adjacent marsh: silverweed,threesquare bulrush. Mown marsh grades into facultative wetland grasses (creeping bentgrass) and brass-buttons. Mown marsh zone extended approximately 3 to 5 m (variable) from the unmown emergent marsh edge in 2010.






01
(Cont.)

The golf turf mowing encroaching the northeast end of Laguna Salada, extending directly into the marsh and riparian woodland zones. The apparent golf turf is mown marsh with vegetation composed of the same fresh-brackish obligate and facultative-wet marsh plant species on the lagoon side of the photos: coast bulrush (*Schoenoplectus pungens*) silverweed (*Potentilla anserina* ssp. *pacifica*), creeping bentgrass (*Agrostis stolonifera*) and brass-buttons, *Cotula coronopifolia*. The seasonally flooded outer marsh and its terrestrial ecotone are replaced by turf even with pumped drawdown of the lagoon. Photos: June-August 2010.

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2. The DEIR fails to analyze and mitigate significant predictable impacts of pre-construction lagoon drainage, and dredging sulfidic, anoxic coastal lagoon sediments.

The DEIR's level of CEQA analysis of the proposed 60,000 cubic yard maximum dredging project at Laguna Salada is inadequate for a highly sensitive coastal wetland complex inhabited by two federally listed wetland-dependent endangered species (California red-legged frog, San Francisco garter snake), regardless of intended "habitat restoration" or enhancement aims. Outstanding aspects of this deficiency are evident in the lack of DEIR analysis of the following proposed "restoration" actions and impacts, as well as the omission of reasonable and feasible alternative "restoration" methods:

- draining (dewatering) Laguna Salada prior to construction and dredging, proposed in the Sharp Park Conceptual Restoration Alternatives Report cited by the DEIR (Tetra Tech 2009, Appendix I of the DEIR)
- if the lagoon is not drained prior to construction activities, sediment and water quality impacts of dredging in a closed fresh-brackish lagoon system where red-legged frog tadpoles are present;
- omission of any feasible alternative methods of wetland habitat enhancement other than dredging, such as modification of lagoon water level and flooding management.
- omission of wetland fill at the northeast end of the lagoon, where marsh is currently mown to function as golf turf, to convert them to elevated upland golf fairways (failure to identify wetlands regulated under current policy criteria of the California Coastal Commission, as well as erroneous omissions from the past Clean Water Act Section 404 wetland delineation)

02

The proposed draining of Laguna Salada to prepare for "restoration" construction is clearly articulated in Appendix I of the DEIR (Tetra Tech 2009; DEIR Appendix I, p. 48), but the impacts of draining the lagoon are not assessed in the DEIR. This is an incredibly oversized omission; dewatering the lagoon alone would be sufficient as a significant impact to trigger an EIR. Dewatering the lagoon would kill any late-maturing California red-legged frog tadpoles present in any part of the lagoon prior to dewatering, and would be expected to result in "take". This would be a highly significant impact requiring mitigation, and the only feasible mitigation measure would be to avoid draining the lagoon, i.e., an alternative method. Incredibly, the restoration plan on which the DEIR relies suggests as the only mitigation for draining the lagoon an absurd "capture and relocation" (to where?) of endangered species stranded by lagoon dewatering, with vague, unspecified actions arising during future endangered species consultation to address the uncertain feasibility of mitigation :

> ...although every effort would be made to capture and relocate sensiuve wildlife resources prior to construction, the possibility of harm to listed species remains although every effort would be made to capture and relocate sensitive wildlife resources prior to construction, the possibility of harm to listed species remains. Impacts to listed species would be addressed

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extensively during the Section 7 consultation process with USFWS and during similar consultation with CDFG, and standard and specific practices to minimize the potential for take will be developed at that time. [Tetra Tech 2009, p. 48]

The DEIR simply includes no impact analysis or mitigation for the immensely significant impact of dewatering the lagoon prior to project construction.

If the lagoon is drained, the exposure of sulfidic anoxic lagoon bottom sediments to oxygen on the drained lagoon would release hydrogen sulfide (also not addressed in air quality impacts), and cause rapid oxidation of ferrous and other reactive reduced sulfide compounds, releasing abundant sulfuric acid, ferric oxides, phosphates, and ammonia – all of which would be potentially toxic to aquatic or amphibious wildlife. The DEIR fails to disclose obvious strong indicators of highly sulfidic, anoxic sediments exposed during summer drawdown (low water levels) in the lagoon, as shown below.

02
(Cont.)



Iron oxide surface films and iron sulfide accumulation of muds exposed by artificial lagoon drawdown. Iron oxide (orange-brown mineral films indicative of oxidation of iron sulfide and acid sulfates in brackish coastal sediments subject to alternating strong hypoxia and oxidation) are apparent in drawdown-emergent muds at the northeast end of Laguna Salada (left). Organic rich sediment immediately below the iron oxide-stained surface sediment film is deep black (right), indicative of toxic iron sulfide, formed under strong anoxic bottom conditions, exposed at the marsh surface by artificial drawdown of the lagoon.

If the lagoon is not drained for dredging, dredging would cause suspension of anoxic, sulfidic bottom sediments in the water column of the lagoon, which would potentially cause hypoxia (severe oxygen deficiency associated with high mortality of fish, amphibians, and invertebrates in the water column) and mobilization of toxic sulfides and ammonia. The DEIR severely underestimates the potential severity, complexity, and persistence of wetland impacts due to dredging anoxic, sulfidic organic lagoon bottom and marsh sediments (DEIR, p. 370). The DEIR treats potential impacts of sulfidic anoxic sediment dredging only qualitatively, without any explicit assessment of the severity or level of significance of sediment and water quality impacts in the body of the DEIR.

The DEIR provides no sediment testing data or analysis of potential impacts of dredging anoxic, sulfidic organic brackish to fresh (past seawater-influenced, sulfur-enriched) lagoon

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bed sediments. Suspension of highly reduced organic "black ooze" organic sediments of the lagoon bed has high potential for causing potentially lethal impacts to California red-legged frog tadpoles due to mobilization of toxic sulfides (hydrogen sulfide, ferrous sulfide), ammonia, and subsequent short-term water column hypoxia, and persistent aerobic formation of toxic acid sulfates and nitrates. The DEIR similarly provides no assessment of potential eutrophication impacts (excessive nutrient loading) of the lagoon due to liberation of ammonia/nitrate and phosphates from suspended anoxic dredged bed sediments. The DEIR impermissibly defers dredge sediment testing analysis and mitigation to future permit processes, as part of a programmatic rather than project-specific mitigation measure (Mitigation HY-3).

03

The DEIR also misinterprets its own hydrologic analysis report (Appendix A) in arguing that the project will not cause a change in salinity or salinity stratification within the lagoon after dredging. The DEIR correctly reports that the existing condition of the lagoon's continuous open-water area is relatively well-mixed salinity, with little stratification. The scope of the KHE hydrology report did not include any analysis or discussion of the effects of either localized dredging (dredge-deepened pockets, heterogeneous bed depths) or widespread dredging (deeper homogeneous depths) on salinity stratification or salinity intrusion cumulative impacts with sea level rise, and do not support the arguments of "no significant cumulative impact" (p. 380) in the DEIR. The hydrology report explicitly states that the purpose of the salinity assessment was limited to assess salinity and groundwater interactions, specifically for the potential for salinity intrusion under existing conditions, using a mass balance approach:

> …developed to test the hypothesis that the seasonal change in salinity was affected by shallow groundwater conditions. Given its location along the coastline, there is the potential for seawater intrusion to increase salinity and alter the habitat conditions of the system.(Appendix A, p. 18)

The hydrology report's scope did not include analysis of did not analyze interactions or cumulative impacts of dredge-modified lagoon bathymetry and sea level rise, but it did advise – contrary to the DEIR's conclusion of "no significant cumulative impact" of the project water quality (p. 381-382) – that rising sea level may increase long-term salinity intrusion into the lagoon under its existing regime of artificially low water surface levels maintained by pumping:

> Sea level rise and climate change may also alter seasonal and long-term ocean levels and wave energy, potentially reversing shallow groundwater gradients between the lagoon and ocean and allowing more salts to migrate into the Laguna. The existing salinity and water budget models will prove to be useful tools in evaluating and quantifying potential benefits and impacts to wetlands under proposed enhancement plan alternatives. (Appendix A, p. 23; emphasis added in underline)

Unfortunately, The DEIR subsequently failed to apply the useful salinity and water budget model tools in subsequent analysis of benefits and impacts of the project on water quality. It provided absolutely no analysis or assessment of how dredging up to 60,000 cubic yards of

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sediment from the lagoon, deepening it up to several feet, would affect the stratification and trapping of high salinity pulses during salinity intrusion or storm overwash events. Salinity stratification should be predicted to increase with increased bottom relief and depth in the lagoon, since higher salinity water is denser than fresh or slightly brackish water, and local depressions would be less subject to mixing due to wind-stress current circulation in the lagoon than the existing nearly flat bed. Local dredge-deepened depressions in the lagoon would also be expected to trap fine organic sediments and have elevated water temperature due to the higher specific heat of more saline stratified water. Elevated temperatures, salinity, and organic matter in deeper depressions would be expected to increase anoxia (and hydrogen sulfide and methane gas production). The DEIR cannot cite Appendix A to address these issues because they were not within the scope of the report. These are potentially significant cumulative water quality impacts and impacts on wetland-dependent endangered species that are not assessed in the DEIR.

The DEIR also cannot rely on the findings of the original Laguna Salada conceptual restoration plan (Tetra Tech 2009) for analysis of sediment and water quality impacts of lagoon dredging because that report also failed to provide sediment testing data or impact analysis of dredging anoxic sulfidic sediments in the closed lagoon. In fact, it failed even to identify the potentially huge biogeochemical and water quality impacts of dredging and draining the lagoon. This study considered sediment quality impacts and suitability only from the perspective of re-using dredge spoils for placement on the golf course greens (Tetra Tech 2009, p. 39). Moreover, the City failed to provide sediment or water quality monitoring data from recent "maintenance" dredging episodes of small-scale Horse Stable Pond to elucidate these potential dredging-induced water quality impacts at a larger scale, commensurate with the proposed 60,000 cubic yard dredging proposal.

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These omissions of sediment quality assessment for primary restoration methods that rely exclusively on dredging are unreasonable, because:

- the aquatic habitat impacts of disturbing sulfidic anoxic coastal wetland sediments (including acid sulfate soil development) have been studied worldwide for decades, and are well-known in wetland ecology (e.g., Portnoy 1991, and references within)
- Pre-dredging sediment testing is routinely required by state and federal regulatory agencies, particularly in aquatic habitats that support endangered species, so it should have been presumed to be necessary for a meaningful CEQA analysis of impacts and alternatives in an EIR;
- The San Francisco Recreation and Parks Department was notified in 2009 of this deficiency in analysis of anoxic sulfidic sediments proposed for dredging (see attached comment letter on the Sharp Park Conceptual Restoration Alternatives Report (Tetra Tech et al. 2009).

04

The DEIR specifically fails to identify, assess, avoid, or mitigate potential significant acute impacts of dredging to California red-legged frog larvae (tadpoles, the aquatic life-history phase) due to hypoxia and sulfide toxicity due to dredging-induced suspended sulfidic sediments and organic matter in the water column. The DEIR also fails to address

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04 (Cont.)

overwhelming potential impacts of draining and dewatering the lagoon, a destructive method of facilitating lagoon excavation proposed in the Sharp Park Conceptual Restoration Alternatives Report (p. 45).

Because the DEIR is intended to be project-specific for Sharp Park, and is the lead CEQA document for the project, the deferral of potentially significant dredge sediment impacts and mitigation to future (CEQA responsible and trustee) regulatory agency review is inappropriate, and I believe it is also impermissible under CEQA.

05

In fact, the DEIR misrepresents the factual condition of Laguna Salada's long-term sediment and vegetation changes, and the justification for dredging it to "restore" it. There is no evidence presented to support the DEIR assertion that Laguna Salada suffers from "excess sediments" rather than excessive pumping and drainage to maintain golf greens -- lowering of lagoon levels to the point at which the bottom is so shallowly flooded that tules and cattails can invade most of it. Neither the DEIR nor its supporting documents (Appendix I) identify any source of watershed sediment, field evidence of sediment deposition, sediment deposition rates, or mode of transport to deliver terrestrial sediments into the lagoon. The DEIR simply assumes that if cattails and tules are "excessive", it must be due to sedimentation. This is a fallacy. The pumps are set to maintain the lagoon water surface level at less than +7.5 ft NAVD (Tetra Tech 2009), which results in prevalence of shallow water (3 ft or less deep) across the lagoon bed. This chronic stable drawdown condition makes most of the lagoon bed suitable for progressive long-term spread by tules and cattails, even in the complete absence of any sediment deposition.

The shallowness of the lagoon controlled by the artificial water surface elevation range maintained by pump operations is sufficient to explain the multi-decade encroachment of tules and cattails. There is no direct evidence (sediment cores, bed elevation change, suspended sediment concentration measurements) presented for the hypothesis of that shallowness of the lagoon is driven by increased bed elevations cause by "excess sedimentation" in the lagoon during the period of tule and cattail growth.

The proposed dredging is not really compensating for excessive sedimentation: it is merely a way of compensating for artificially stable low lagoon water levels by lowering the bed instead of raising the lagoon to drown out or inhibit growth of tules and cattails (species with submergence tolerance up to about 4 feet). It is this fallacious, biased analysis of the lagoon's alleged "excessive sedimentation" and "excessive vegetation" problems. This fallacy is at the heart of the flaws of the alternatives analysis as well.

3. The DEIR fails to assess environmentally superior and feasible non-dredging alternatives for Sharp Park wetland and endangered species habitat enhancement and management.

The DEIR uncritically presumes that dredging is the most appropriate (least environmentally damaging) method of providing adequate depth and area of shallow open water marsh-edged wetland habitat suitable for California red-legged frog breeding. It fails to consider feasible

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environmentally superior alternatives that could achieve the same objectives. The most obvious environmentally superior feasible alternative that was ignored was modification of water level management of the lagoon, which is controlled by artificial drainage of the lagoon by pumps operated by the City. Increased water surface elevations and seasonal fluctuation of lagoon levels, combined with peripheral flood control berms that double as buffers, upland refuge, and basking habitat is a wetland habitat management/enhancement alternative that would eliminate the need for high-cost, high-impact risk engineered dredging alternatives, and would have superior environmental benefits for salinity intrusion and endangered species habitat enhancement. Artificially managing water level fluctuations in the lagoon, emulating natural lagoon hydrology, would maintain a favorable seasonal dynamic balance of shallow open water habitat (submerged aquatic vegetation, principally sago pondweed) and emergent marsh (tule, bulrush, cattail, spikerush) that is evident in the constructed GGNRA ponds at the toe of Mori Point slopes, where California red-legged frogs and tree frogs are now breeding.

Under existing conditions, there is an unnecessary conflict between lagoon wetland hydrology and upland golf drainage because there is no hydrologic separation between them. Golf fairways extend (by mowing marsh into turf) into the lagoon. Flooding of the lagoon in winter to elevations above the set upper limit of +7.5 ft NAVD that triggers pumping rapidly forms flooded seasonal wetland conditions consisting of shallow open water edged with emergent marsh vegetation – conditions that are evidently attractive for California red legged frog egg mass deposition. (DEIR, p. 377 describes the long-term winter flooding history) The only reason these flooded wetland margins are not allowed to remain flooded for months in winter (enabling red-legged frog eggs may develop in situ with persistent flooded conditions) is because low-lying golf greens are not hydrologically separated from seasonal lagoon-edge wetlands. Consequently, the entire lagoon is pumped down to drain together both wetlands and topographically continuous golf greens, instead of draining the golf greens alone.

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Construction of a low berm or levee bordering the upland side of the lagoon's wetland-upland transition zone would be a feasible alternative way of separating the flood control of golf greens and seasonally flooded lagoon wetlands that support red-legged frog breeding habitat. This would require less fill than raising all flood-prone low-lying fairways that are above the elevation of mown marsh, but would require some pumping on the landward side of the berm. A low flood control berm or levee would allow seasonal flooding along the lagoon edge to be tolerated without rapid pumping to lower the lagoon to drain golf greens. A low flood control levee, with dimensions commensurate with the 2-3 ft depth increase proposed in the dredging alternatives, would allow tolerance of higher chronic winter flooding levels at the lagoon margins, and consequently would allow a significant reduction in the frequency of pump operation. Reduction in the frequency and amplitude of rapid water level fluctuations caused by frequent pumping would therefore reduce the risk of egg mass desiccation and stranding. This alternative would require reversing the current encroachment of golf greens into seasonal wetlands: some golf greens bordering the lagoon that are subject to flooding are in fact routinely mown marsh vegetation, not turfgrass (PWA 2011, and section 1 of this letter).

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A low flood control berm placed along the truly upland edge of the golf greens would reduce or eliminate the acute flooding conflicts between winter golf management and lagoon management for red-legged frog breeding. A berm would not need to encroach into wetlands at all (as the marsh mowing to expand fairways currently does), and would additionally provide burrowing mammal (ground squirrel, vole, gopher) habitats (estivation and foraging habitat) and emergent thermal refuges (basking sites) for San Francisco Garter Snakes. This may offset "need" for artificial upland fill in wetlands to provide upland refuge habitat. The soils in this infrequently flooded seasonal wetland zone are also relatively lower in sulfide content (less anoxic) and so would be more suited to excavation of shallow ponds (further hydrologically isolating them from lagoon drawdown, allowing more stable pond water levels to further enhance frog breeding habitat quality).

The DEIR failed to consider, even at a screening level, this environmentally superior alternative based on raised winter lagoon levels and low flood control berms bordering golf greens, which is a reconfigured (downsized) golf-adapted version of the comprehensive ecosystem restoration alternative proposed by PWA and others (PWA et al. 2011).

Instead, all DEIR alternatives for Sharp Park that include restoration are exclusively and arbitrarily limited to ones based on dredging potentially toxic sulfidic organic lagoon bed and marsh sediments (and minimize encroachment of golf greens) – even in alternatives that are not "maximum recreation". There is no valid reason given in the DEIR to exclude review of alternatives that allow for flood management to separate well-drained upland golf greens from wetlands within areas of increased lagoon water levels in the range at least +9 to +10 ft NAVD. It appears that (tacit) recreational priorities for the status quo of golf fairway boundaries are an overriding arbitrary consideration in the range of feasible alternatives.

05 (Cont.)

In effect, from a perspective of wetland enhancement methods, the DEIR examines only one "restoration" alternative, one that maximizes potential water quality and sediment impact risks for federally listed California red-legged frogs, and minimize or eliminates wetland management (or recapture) of golf greens. The DEIR provides no rational basis for excluding water level management alternatives for lagoon enhancement (no screening-level CEQA explanation of alternatives considered but rejected), and merely adopts the golf-biased, technically flawed proposal of the City's Sharp Park restoration plan (Tetra Tech 2009), which entirely neglected the issue of sediment and water quality impacts associated with sulfidic anoxic lagoon bed sediments, and also provided no sediment testing data or water quality impact analysis of dredging in endangered species habitat.

The omission of water-level management alternatives in the DEIR, and the cursory, superficial assessment of sediment and water quality impacts of dredging Laguna Salada, are particularly problematic because the San Francisco Recreation and Parks Department (SFRPD) hosted a "Sharp Park working group" composed of stakeholder advisors from Golden Gate National Recreation Area (GGNRA, National Parks Service) and San Mateo County, and other park advisors, in which the issues of sulfidic anoxic sediment impacts and water level management alternatives were explicitly discussed in November, 2010.

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05 (Cont.)

Furthermore, both these issues were assessed (along with field indicators of existing high sulfide lagoon sediments) in a widely circulated technical report on Laguna Salada restoration alternatives provided to the City, prepared by Philip Williams and Associates (PWA et al. 2011). The DEIR's failure to adequately address water level management that avoids potentially significant impacts of dredging sulfidic sediments is arbitrary, given its knowledge of the potential significance of the impacts and feasibility of alternatives.

06

The mitigation measures for Laguna Salada dredging water quality impacts in the DEIR (HY-3) were as cursory and inadequate as the impact analysis: they relied on generalized programmatic, generic best management practices that do not address specific issues of dredging sulfidic lagoon bottom sediments (HY-1, BI-12). The DEIR cannot defer substantive mitigation to future mandatory permits from other agencies (BI-12a mitigation) to address the impacts caused by projects of the CEQA lead agency. The few substantie physical mitigation measures identified for sulfidic sediment dredging (such as addition of lime to dredge spoil sediment) do not address potentially significant water column and water quality impacts in the lagoon itself, which may include acute anoxia or hypoxia, acute short-term concentration of hydrogen sulfide, ferrous sulfide, and ammonia, and long-term liberation of metals (including heavy metals) and acid sulfates. The few programmatic mitigation measures for dredging are based on future dredge sediment testing without any corresponding physical actions to actually minimize impacts: they contain no contingency measures to avoid or minimize impacts if anoxic sulfidic sediments are widespread and problematic for dredging – as should be expected from strong field indicators of widespread intensive formation of ferrous sulfide in bed sediment below surface, and rust-colored ferric oxide films at the surface of the emergent northeastern lagoon flats in summer. The rigor of mitigation feasibility assessment, like the corresponding impact analysis for water quality impacts of dredging, were grossly deficient even for an Initial Study, let alone a full project-level DEIR.

4. Summary of CEQA deficiencies and recommendations for remedies.

In summary, the DEIR:

01 (Cont.)

- fails to disclose fill and conversion of wetlands to uplands used not for purposes of upland habitat enhancement, but for golf recreational enhancement, and fails to assess impacts or mitigate for net fill and conversion of wetland to golf uplands.

05 (Cont.)

- fails to screen or analyze less environmentally damaging alternatives to dredging, such as combined water level management and perimeter flood management, to provide equivalent or environmentally superior wetland benefits;

02 (Cont.)

- fails to disclose the dewatering (draining) of the lagoon as a restoration construction measure proposed in Appendix I of the DEIR;

04 (Cont.)

- fails to analyze impacts or mitigate impacts of lagoon drainage and dewatering;

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06 (Cont.)
- fails to present essential dredge sediment testing data specific to anoxic sulfidic lagoon bed sediments, and analyze sediment (and contaminant) fates and impacts in the context of the sensitive wetland and endangered species habitat, and impermissibly defers dredge sediment testing data analysis and mitigation to post-EIR permitting;

02 (Cont.)
- fails to analyze sediment and water quality impacts of mobilizing sulfidic, anoxic lagoon bed sediment, and subsequent acid sulfate soil formation;

03 (Cont.)
- fails to address significant potential cumulative impacts between dredging, salinity stratification, seawater intrusion, and sea level rise within the 20 year planning period.

04 (Cont.)
The DEIR consequently fails to provide adequate project-level CEQA analysis for the highly significant potential Sharp Park Restoration project impacts, and provides inadequate even for programmatic CEQA of this project.

In my independent opinion as a professional coastal ecologist with extensive experience in management of coastal lagoon wetland ecosystems in this region, the proposed Sharp Park "restoration" project, as currently proposed, is likely to cause risks of more long-term significant environmental harm than good. Risks of long-term harm to the lagoon ecosystem and its resident endangered species would be due to inadequate planning, inadequate scientific understanding and analysis of the lagoon's degradation, inadequate scientific peer review of project design, inadequate CEQA analysis of the impacts of the proposed "restoration" project, and inadequate CEQA analysis of feasible alternatives.

07
The City should either recirculate the DEIR to address these issues, or it should prepare a subsequent project-specific DEIR for Sharp Park. I recommend as the most expedient and efficient CEQA process the separation of the stand-alone Sharp Park project DEIR from an otherwise consistent programmatic DEIR.

Sincerely,

Peter Baye

Peter Baye
baye@earthlink.net

cc: California Coastal Commission, San Francisco
Regional Water Quality Control Board, San Francisco Bay Region, Oakland
U.S. Army Corps of Engineers, San Francisco
Interested Parties

Baye-1

References

Portnoy, J.W. 1991. Summer oxygen depletion in a diked New England estuary. Estuaries 14: 122-129

PWA (ESA- Philip Williams and Associates), P. Baye, and D. Reis. 2011. Conceptual Ecosystem Restoration and Feasibility Assessment, Laguna Salada, Pacifica, California. Report prepared for Wild Equity Institute. 211 pp.

Tetra Tech, Inc., Swaim Biological, and Nickels Golf Group. 2009. Sharp Park Restoration Alternatives Report. Prepared for San Francisco Recreation and Parks Department. 64 pp. plus appendices.

ATTACHMENT
2009 comment letter on Sharp Park Conceptual Restoration Alternatives Report
(highlighting added)



Peter R. Baye, Ph.D.
Coastal Ecologist, Botanist
P.O. Box 65
Annapolis, California 95412

(415) 310-5109



baye@earthlink.net

San Francisco Recreation and Park Commission
501 Stanyan Street
San Francisco, CA 94117

November 18, 2009

Philip Ginsburg
General Manager
San Francisco Recreation and Park Department
McLaren Lodge & Annex
501 Stanyan Street
San Francisco, CA 94117

SUBJECT: Sharp Park Conceptual Restoration Alternatives Report (Tetra Tech et al. November 2009) technical review and comments

To the San Francisco Recreation and Parks Commission and Philip Ginsburg:

Baye-1

I would like to submit the following technical review comments on the Sharp Park Conceptual Restoration Alternatives Report, prepared by Tetra Tech, Karen Swaim, and Nickels Golf Group. I have reviewed the plan and its technical appendices in the very limited time (less than 2 weeks) between its public release and the Commission's pending vote on its findings. My comments reflect my independent professional judgment, and are not submitted on behalf of any organization.

My qualifications to provide expert comments on conceptual restoration alternatives for coastal wetlands are based on over 30 years of professional work in coastal wetland and terrestrial ecology, with emphasis on planning, management, and restoration of degraded coastal wetlands. Following my Ph.D. research in coastal ecology, I spent nearly twenty years as a professional technical planner and advisor on California coastal wetland restoration and management, with emphasis on recovery of rare and endangered species. I have worked for the U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers in this capacity, and I have provided consulting services for California State Parks and National Park Service on coastal lagoon enhancement and restoration projects along the Central Coast during the last 5 years (Rodeo Lagoon, Crissy Field (Presidio) Lagoon, Big Lagoon, Laguna Creek Lagoon, and Pilarcitos Creek mouth).

My comments focus on what I have found to be "fatal flaw" assumptions, conclusions, and recommendations of the Sharp Park alternatives report, and equally profound errors of omission. The reports flaws, in my professional opinion, are severe enough to make the wetland conclusions and recommendations of the report unreliable and misleading for any coastal land use planning or environmental restoration planning decisions by either the City of San Francisco, or adjacent landowners (National Park Service), particularly for long-term planning.

My comments here are summarized for planning consideration, and do not represent the full extent of my critical analysis of the report.

1. **Artificial pumping of Laguna Salada to achieve low water levels is highly likely to cause salinity intrusion and adverse wetland habitat conversion under a regime of accelerated sea level rise in the foreseeable future. Long-term enhancements options proposed by the report would likely fail in the long term because they ignore foreseeable long-term shifts in hydrologic baseline conditions.**

08

The report fails to identify the significant long term constraints of "enhancing" non-tidal seepage lagoon wetlands that are artificially pumped to low water levels relative to sea level behind a permeable sand barrier. The inevitable physical consequences of pumping the lagoon levels near or below sea level are ignored in the report, despite the, clear, explicit, and professionally responsible warnings *in its own hydrology report* that salinity intrusion due to pumping may be occurring in summer even now, and may increase as sea level rises (Appendix A, pp. 22-23). The report's discussion of salinity intrusion (p. 23) does not represent the full scope of the hydrology report's findings, and is misleading.

Peter R. Baye Ph.D.
Botanist, Coastal Ecologist

baye@earthlink.net
(415) 310-5109

Baye-1

08 (Cont.)

The fundamental long-term problem of lagoon pumping reversing groundwater gradients behind the sand barrier, inducing seawater intrusion (Appendix A, p. 23), cannot be overestimated. The alternative report, however, essentially disregards it. None of the intended "enhancement" benefits to wildlife species are physically possible if the long-term effects of pumping, sea level rise, and evaporative concentration of lagoon water interact to convert the wetlands from fresh-brackish to brackish-saline or even hypersaline marsh. Following this first, fundamental misstep, the report's other long-term conclusions and recommendations about wetland enhancement are utterly unrealistic. The target species for "habitat enhancement" proposed are intolerant of persistently high salinity wetland conditions that would inevitably result from continued pumping of the lagoon to low levels as sea level rises.

The lagoon's long-term dynamic stability will require that freshwater lagoon levels rise and equilibrate with rising sea level, to maintain positive, seaward groundwater seepage gradients that maintain freshwater marsh. This fundamental physical constraint is nowhere considered in the main text of the conceptual enhancement plan.

It is distressing that the lead authors of the report either ignored or failed to comprehend fundamental wetland hydrology in "conceptual" habitat enhancement alternatives.

09

2. Reliance on maintenance and upgrading the "sea wall" is incompatible with long-term wetland management.

All habitat enhancement alternatives assume perpetual maintenance and upgrading of the "sea wall" (rip-rap armored earthen berm capping the sand barrier beach), yet exclude highly significant environmental and economic impacts of this assumption. The report fails to address the inherently unstable long-term condition of the beach and "seawall", and the extreme coastal erosion hazard identified for Sharp Park by the U.S. Geological Survey (http://walrus.wr.usgs.gov/elnino/SMCO-coast-erosion/04mori_e.html) and described with emphasis by Prof. Gary Griggs of U.C. Santa Cruz in his book, Living with the Changing California Coast (2003). The report fails to assess the long-term significance of the 1983 storm damage to the golf course and lagoon impacts as a constraint on long-term wetland management.

Again, basic coastal processes controlling lagoon wetland ecology are ignored in the conceptual alternatives report, which treats Laguna Salada as though it were a golf course pond at an inland location. As sea level rises, the beach shoreline necessarily retreats landward. If the beach is armored with boulders, shoreline retreat will steepen the shore profile and cause passive beach erosion, and eventual failure of the beach and collapse of the seawall, causing catastrophic flooding and sedimentation of the wetlands. Beach stabilization is infeasible and futile in the long term. Thus, the golf course that depends on artificial stabilization of the beach is also infeasible in the long-term. The report ignores enhancement alternatives that realign more efficient and cost-effective flood protection designs along borders of residential development, and eliminate costly and futile investment in the

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Baye-1

"emergency"-constructed (post-1983) seawall. Opportunities to utilize lagoon and riparian wetlands as beneficial flood and coastal storm buffers were ignored.

All coastal lagoons originate and are maintained by landward migration during sea level rise. *The Laguna Salada wetland complex's long-term survival depends on planning for gradual landward migration of the barrier beach and its wetlands with rising sea level,* which requires geomorphic accommodation space. That space is currently displaced by the golf course, built on filled riparian wetlands of the past – the historic freshwater end of the Laguna Salada wetland complex. Rising level and a static golf course together will inevitably squeeze the existing (reduced area of) fresh-brackish wetlands out of existence, regardless of ephemeral "habitat enhancement" plan actions.

09 (Cont.)

It is not feasible to stabilize the lagoon wetlands in the reduced "footprint" of the 20th century lagoon as sea level rises over three to four feet in coming decades of the 21st century. Oceanic overwash processes during extreme storms must drive the beach and its lagoon wetland complex landward as sea level rises. Any long-term wetland management plan for a backbarrier lagoon must presume upward and landward displacement of existing lagoon wetlands over multiple decades. This lagoon accommodation space (location of historic freshwater riparian wetlands) is occupied by golf links that will be subject to adverse increases in flooding and coastal storm risks.

3. The report's design and estimated costs of the "full restoration" alternative are unrealistic, grossly inflated, and inconsistent with professional wetland restoration precedents of lagoon restoration.

The conceptual alternatives report arbitrarily assumes that excavated soils for "full restoration" of wetlands would require off-site disposal (p. 53). Off-site fill disposal is a principal cost factor for the full restoration alternative. The off-site disposal assumption is invalid. I have designed wetlands and provided peer review services for innumerable coastal wetland restoration plans during the last 20 years, and I know of no coastal wetland restoration plan that has made this assumption.

10

Only plans for the most constrained coastal wetland restoration sites consider off-site fill disposal as a last resort. Balancing cut/fill to the greatest extent possible, minimizing fill import or export to the extent feasible, is a standard planning objective for restoration feasibility. The report failed to consider beneficial re-use applications of locally excavated sediments, including obviously needed ones like flood control berms or platforms, upland/wetland and riparian transition zones, and upland refuge mounds peripheral to wetlands.

In addition, the report utterly neglects one of the principal constraints on dredging or excavating anoxic, organic wetland soils – excessive release of toxic sulfides, and their subsequent acid sulfate oxidation products. Failure to address sulfide and sulfate toxicity in wetland excavation can result in extreme mortality of wildlife, and inhibition of wetland revegetation. This omission adds to the strained technical credibility of the report.

11

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Baye-1

12 Furthermore, the report ignores the obvious role of golf course and residential fertilizer contamination of lagoon wetlands as a factor in overgrowth of tule marsh (reduction in open water edge).

13 Most astonishing of all is the report's assumption (p. 48) that the lagoon should or must be *drained* in order to implement "enhancement" work. This not only technically in error, it is absurd. Amphibious excavation equipment (floating or low ground-pressure tracked vehicles) is routinely used in wetland engineering, and is the professional standard for minimizing impacts during wetland construction. Draining wetlands at Laguna Salada would cause intolerable impacts (likely including increased salinity intrusion) and is unwarranted for any reasonable enhancement alternative.

The number of significant errors of omission and invalid assumptions about wetland ecology in the report suggest that the authors lack adequate experience and expertise for coastal wetland planning, and failed to solicit adequate technical peer review or supplemental consulting services to remedy technical deficiencies.

14 **Conclusion.** The Sharp Park conceptual alternatives report is fundamentally flawed as a coastal habitat planning document for both short-term and long-term conservation or land uses. The report either omits or misinterprets fundamental geomorphic and hydrologic controls of coastal lagoon wetland ecology that are essential to long-term conservation planning. The habitat enhancement recommendations in the report utilize unrealistic ecological and wetland engineering assumptions, and are likely to be infeasible in the long term. Many of the report's basic assumptions conflict with or are unsupported by the scientific literature on coastal processes, wetlands and lagoons. In my professional opinion, the report should be either set aside or subject to rigorous interdisciplinary scientific peer review, including expertise in coastal geomorphology and engineering, wetland hydrology, and ecology.

Respectfully submitted,

Peter R. Baye

Peter R. Baye, Ph.D.

Peter R. Baye Ph.D.
Botanist, Coastal Ecologist

baye@earthlink.net
(415) 310-5109

Beberman-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Please don't reduce off leash dog areas
Date: 10/05/2011 09:07 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:07 AM -----

Gary Beberman
<gbeberman@mindspring.com>

10/04/2011 09:26 PM

To bill.wycko@sfgov.org
cc
Subject Please don't reduce off leash dog areas

Dear Mr. Wycko:

I recently learned of the draft environmental report and appreciate its objectives in protecting native plant species and endangered animals.

At the same time, I have a strong interest in retaining large DPAs. Exercising our active dog has significantly increased the amount of physical activity in our family and has helped us to appreciate the beauty of parks like McLaren and Bernal.

01 If you are forced to restrict dogs from certain areas, I request that you add an equal or greater amount of acreage adjacent to the DPA. I also ask that dogs be permitted to play in the reservoir at McLaren.

Dogs play a vital role in the life of the city and ours does in our family. The exercise and joy she brings would be challenged if we lost access to those areas, especially McLaren.

Thank you for your attention to this and your help keeping our city beautiful.

Best wishes,

Gary Beberman
697 Douglass St.
San Francisco, CA 94114

Beemsterboer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:25 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Public Comment

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:26 AM ----

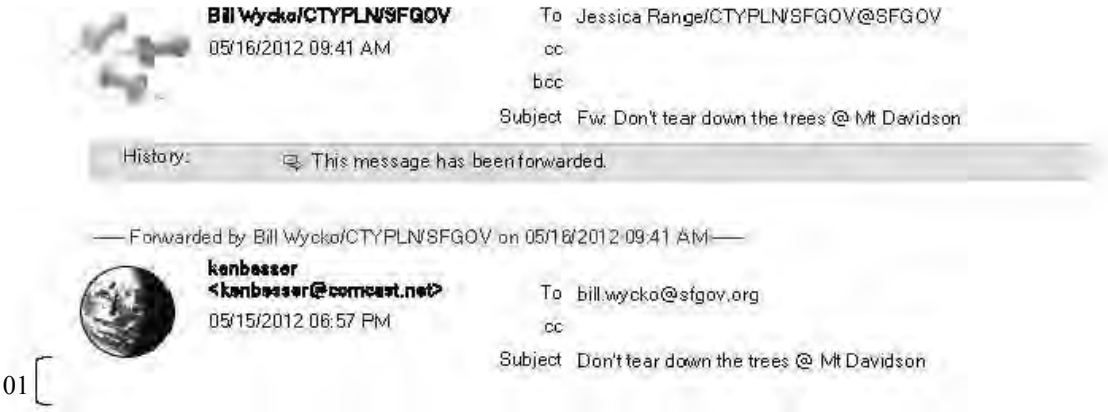


Joni Beemsterboer
<jibandgabi@sbcglobal.net>
10/29/2011 03:49 PM

To bill.wycko@sfgov.org
cc
Subject Public Comment

01 Please support the **maintenance alternative**-the environmentally superior option in planning for rec and park. Dog play areas, already limited will be more limited with other approaches.
Joni Beemsterboer
SF Resident and Home Owner

Besser-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 09:41 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Don't tear down the trees @ Mt Davidson

History: This message has been forwarded.

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 09:41 AM ----

kenbesser <kenbesser@comcast.net>
05/15/2012 06:57 PM

To bill.wycko@sfgov.org
cc
Subject Don't tear down the trees @ Mt Davidson

01

Betcher-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:10 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:10 PM ——



Peter Andrew <peterandrewsf@sbcglobal.net>
10/31/2011 03:38 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR

Dear Mr. Wycko,

I am particularly concerned that present off-leash areas available for people with dogs in San Francisco will be even more limited than they are already. For better or worse, the animal species that can continue to co-habit our planet with people
are increasingly limited. For the vast majority of people who live in our urban areas, shared living experiences with dogs or cats are the only contact we have left with our fellow creatures. Dogs need to have at least some time every day when they can
01 run free, and people need to accompany them. There's of course a down side to everything, including children playing in parks and playgrounds, disturbing others and sometimes damaging the environment a little, but we know that such activities are essential to
the health, happiness and well-being of our children. We have to consider that, in the case of dogs and dog-owners, urban dwellers really have no alternatives to the parks and beaches. It is unfair and unkind to take that away. Please leave the off-leash dog areas intact.

Thank you for your consideration.

Peter Betcher
San Francisco resident, former dog-owner, lover of dogs and of our green planet

Bley-1



"Andrew Bley" <ajbley@mindspring.com>
08/11/2012 03:37 PM

To <Bill.wycko@sfgov.org>, <Jessica.range@sfgov.org>
cc
bcc
Subject Comment regarding Natural Areas Program DEIR

Dear Mr. Wycko and Ms. Range,

Thank you for talking with me about the SF Recreation and Parks Department's Natural Areas Program DEIR. Please add my comments (below) to the document. Do you need my contact information or is "Andrew Bley, San Francisco resident" sufficient?

All the best,

Andrew

01 In regard to cutting down healthy trees, please do not proceed with the San Francisco Recreation and Parks Department's Natural Areas Program. According to the SF RPD's own outreach material, this will involve the felling of thousands of healthy trees to make way for plots of as-yet-unplanted native vegetation that will require increased use of pesticides and herbicides. The native plants have a poor chance of survival (many of SF RPD's previously planted native trees and shrubs have died before being able to take hold), the program blocks off trails and other areas of public use, and the existing trees, though non-native, are healthy, thriving, and contribute all of the benefits that large, living trees offer (urban cooling, pollution mitigation, verdant views, and more). It will take immense amounts of energy, money, effort, time, and increased pollution to move forward with the tree removal and native plantings; instead, please leave the trees standing and use just a fraction of the proposed NAP resources to maintain them. Thank you very much, Andrew Bley, San Francisco resident.

Blum-1

Ms. Jan Blum
2160 Leavenworth Street #201
San Francisco, CA 94133

RECEIVED
OCT 14
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

By Electronic Delivery: October 12, 2011

Mr. Bill Wycko, Environmental Review Officer, SF Planning Department

Cc: Recreation & Parks Commission:
PROSAC:
Phil Ginsburg (Rec-Park General Manager):
John Rahaim (Planning Director):

RE: SIGNIFICANT NATURAL RESOURCE AREAS MANAGEMENT PLAN (SNRAMP) DEIR

Dear Mr. Wycko:

Thank you for the opportunity to comment on the SNRAMP DEIR. This document, so vital to the continued success of the Natural Areas of San Francisco has been anticipated for many years.

It was, therefore, very disturbing to find that Sharp Park, located in in San Mateo County had been included in this long awaited document. By including Sharp Park in this document, the integrity and approval of the DEIR has been seriously compromised.

01 As you well know, the issues around Sharp Park's natural resources and their management are inextricably linked with multiple other issues which, to date, remain unresolved. Therefore, by including Sharp Park in the SNRAMP, the SNRAMP approval may be delayed unnecessarily, putting in jeopardy the entire management of San Francisco lands. Because the issues surrounding Sharp Park are multiple, complicated, and unresolved, the DEIR is, therefore, fatally compromised.

Some of the unresolved conflicts surrounding Sharp Park include:

02
- finding a legally acceptable, long term, solution to the crime of "taking" endangered species by RPD

03
- failure of RPD to deal with the financial losses of Sharp Park Golf Course which are being underwritten by San Francisco taxpayers even as San Mateo County has offered to help manage the Golf Course and take on certain responsibilities to alleviate the situation.
- improper redirection of limited RPD financial resources from San Francisco located RPD parks to shore up the losses of Sharp Park, in San Mateo County.
- Failure by RPD to implement sound financial restraint and management practices at Sharp Park in a way that makes it financially self-sustainable.
- Potential mis-management of taxpayer funds by taking funds from one RPD account, redirecting it to the Sharp Park Golf Course, and not reimbursing the original RPD account.

04
- Failure to deal adequately with the science of climate change and sea rise, how such events will continue to further negatively affect the Sharp Park property, and what those costs will

1

Blum-1

Ms. Jan Blum
2160 Leavenworth Street #201
San Francisco, CA 94133

04 (Cont.) be

- Failure to consider the increased maintenance costs it will take to stave off sea rise which will further damage the park and the endangered species and who will pay for the increased maintenance cost
- 05 Failure to ascertain if the citizens and taxpayers of San Francisco are willing to allow RPD to continue to redirect limited funds to continue to underwrite a failed San Mateo golf experience at the cost of shortchanging San Francisco City parks even further than they are today.

06 I urge you to withdraw this DEIR, sever the Sharp Park areas from the document and reissue the San Francisco portion for public comment so we can move forward in an ethical and forthright manner.

Thank you.

Jan Blum

Borden-1

Tom Borden
2353 Third St.
San Francisco, CA 94107
Tel: 415-252-5902
Fax: 415 252 1624
email tom@intrinsicdevices.com

November 2, 2010

RECEIVED
OCT 27 20
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

Bill Wycko Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: NAP EIR

Dear Mr. Wycko

I was unable to attend the October 6 meeting regarding the SFRPD Natural Areas Plan environmental impact report. I do have some comments I would like to share with you.

I believe the NAP has severe implications for the people of San Francisco. We live in a compact city with little access to nature. Landscaped parks are nice, but we also need access to natural areas (not capitalized). The existing NAP and the possible expansion of the Program to the Maximum Restoration Alternative would be harmful for the vast majority of San Franciscans. We need better access to the outdoors, not less. Under those alternatives, we would see more trail closures, roped off areas and herbicide spraying, reducing the access to wild areas we enjoy today.

01

The Maintenance Alternative is the best choice. It has the least environmental impact and minimizes resources spent on the Sisyphean battle against invasive species. It is better that we be able to hike, run and bike in natural areas composed largely of invasive species than to create expanded Natural Areas where native plants are defended from people and invasive species at great cost. The Proposed Project and Maximum Restoration alternatives go too far.

02

Those plans focus too much on trying to keep people out of the Natural Areas by removing the attractions that draw them there. There are three manifestations to this, closing popular social trails, trying to prohibit bicyclists from using the trails, and making the areas off limits to people walking dogs off-leash. I strongly disagree with the first two. As for dogs, they are destructive when walkers allow them to dig up the ground and it is all too common to find plastic bags of dog poop left trailside.

01 (Cont.)

Natural Areas desire to close narrow social trails is misguided. (page 256 DEIR) The narrow foot tread social trails are generally sustainable from an erosion viewpoint and those that exist are the result of a long evolutionary process. Granted, they are unsafe when compared to a smooth paved trail in Golden Gate Park, but tame compared to any trail in the Sierra Nevada. The web of social trails offers up a much more engaging outdoor experience than the "channelized" trails the NAP has in store for us. For the same square footage of disturbed surface, the narrow social trails can accommodate many more users having their own nature experience than the broad bland trails

03

Borden-1

envisioned. The closure of these social trails will have much more than a "less than significant impact".

03 (Cont.)

It is interesting to note the nicest sections of the Philosophers Walk route in McLaren Park were chosen to run on social trails. SFRPD Natural Areas has already closed several key social trails in McLaren Park, two of these were heavily used and at sustainable grades. Both were subsequently reopened by social traffic.

04 In Glen Canyon, Natural Areas closed the only trail that enters the park from O'Shaughnessy Blvd., cutting off access for all of the neighborhoods west of the park. That trail started near the end of Del Vale Ave. and dropped down to the Silver Tree day camp facility. The closest entry points to the park are now at Turquoise Way or at Bosworth Street. This is a clear example of how implementation of the NAP has physically divided an existing community. See LU-1 on page 177 of the DEIR.

05 Natural Areas singles out bicycle riders as a problem. However, the insistence that people not be allowed to ride bicycles on trails in Natural Areas is not based on any sound logic. Cyclists are much more likely to stay on trail than pedestrians. When people stay on trail, no damage is done to the sensitive habitat the trail runs through. (There are trails in Glen Canyon where bicycle use is inappropriate due to heavy use by hikers and dog walkers, combined with trails that are marginally sustainable.)

I question a couple of conclusions of the EIR.

06 I question the EIR's statement the impact of tree cutting on wind will be less than significant for all project alternatives. It will come down to which specific trees Natural Areas decides to cut.

07 I question the EIR's statement the impact of herbicide use will be less than significant for all project alternatives. If people and animals pass through areas that have recently been sprayed with herbicides, is it safe? Natural Areas already does a lot of herbicide application. I frequently pass through such areas.

I think we should try to preserve the vestiges of the City's natural heritage, but we should not set aside large portions of our park land as nature preserves where only limited "passive" human use is allowed.

I serve on the board of SF Urban Riders and am an active participant in the McLaren Park Collaborative.

Sincerely,

Tom Borden

Bors-1

785 Carolina Street
San Francisco, CA 94107
September 26, 2011

Bill Wycko, Environmental Review Officer,
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

re: SNRAMP - DEIR

Dear Mr. Wycko,

I am writing to comment on the DEIR for the San Francisco Natural Resource Areas Management Plan, SNRAMP. Please do not send me paper copies or CDs of any material. The Planning Department's website is comprehensive. I am a long time resident of San Francisco and have volunteered with the Natural Areas Program since its inception, particularly at Bayview Park.

01 Overall I feel the SNRAMP has been well prepared for the 31 natural areas within San Francisco. The Bayview Park section of the Plan, with which I am most familiar, is very well done and thoroughly covers all aspects involved in managing the natural resources of the area. I am pleased with the progress that has already been made there following SNRAMP guidelines. One

02 personal thought, a short natural wildlife corridor and trail between Bayview Hill and Candlestick Point SRA might be mentioned as a future possibility. For both parks it would benefit wildlife and offer additional recreational opportunities.

03 I feel that Sharp Park's location and unique problems make it quite different from the natural areas in San Francisco. It is very controversial with too many unanswered questions. I am concerned that approving the DEIR as is could lock Sharp Park into an unfortunate uncertain future. On the other hand, I do not want to delay approval of the SNRAMP for the 31 natural areas within San Francisco where I feel the SNRAMP does a very good job. I feel that Sharp Park should be separated from the SNRAMP and the SNRAMP DEIR should be approved for the 31 natural areas within San Francisco without further delay.

Sincerely,

Margo Bors

Margo Bors

Bose-1



Bill Wycko/CTYPLN/SFGOV
10/24/2011 01:12 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments on Draft EIR on the SNRAMP

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/24/2011 01:12 PM ——



Rk Bose
<fk94131@yahoo.com>
10/24/2011 01:12 PM
Please respond to
Rk Bose
<fk94131@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Comments on Draft EIR on the SNRAMP

Dear Mr Wycko,

I am writing with my comments on the Draft Environmental Impact Report on the SNRAMP.

The report has some significant errors of fact that should be corrected.

01 1. Page 2, Section 1B: It's the .Maintenance Alternative. that was determined to be the Environmentally Superior Alternative on Page 526.

02 2. Pg 319: Mission Blue Butterfly .occurs at Twin Peaks and Sharp Park.. The species is not recorded to occur at Sharp Park within the last decade. However, reintroduction is being attempted at Twin Peaks. (See also point #9 below.)

03 3. Pg 365: Garlon .degrades quickly in the environment and has low toxicity to aquatic Species.. This is not true of Garlon 4 Ultra, which is what the NAP has been using in the Natural Areas. What the Dow MSDS actually says is, .Material is expected to degrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradeability.. It also says it is ..highly toxic to aquatic organisms..

04 4. Pg 457: The DEIR cites an irrelevant study showing that grasslands reflect more sunlight in northern latitudes above 50 degrees north. Since this does not apply to any part of the US but Alaska, it is misleading.

05 5. Pg 457: Grasslands as .a significant carbon sink.. Compared with what? The cited study compares badly managed agricultural land to better-managed pasture (with the single most important factor being fertilizer addition). Since the comparison here is with land covered with trees, the study is again irrelevant to this EIR. Cutting down trees and substituting grassland and scrub will inevitably reduce carbon sequestration. There has been no attempt to quantify the loss of sequestered carbon from the Proposed Project or

Bose-1

05 (Cont.) any of the alternatives, though clearly with thousands of trees scheduled for destruction the impact would be considerable.

06 6. Pg. 192–193: Pictures purporting to show the .before. and .after. effects of tree removal are the same pictures with superimposed red ovals. This cannot be considered a good–faith effort to show the impact of tree removal.

07 7. Pg 466: .Feral geese.. The geese in San Francisco, including the ubiquitous Canada Geese, are not feral (meaning domesticated animals living in the wild). They are authentic wild geese and as such are protected species.

8. Throughout the DEIR, the term .invasive. is used repeatedly as a pejorative, without any definition, and without any parameters for establishing whether a particular species is actually invasive at that location. In particular, there is no evidence that the eucalyptus and Monterey pine/ cypress scheduled for removal have in any way invaded the landscapes they are in. They were planted there.

08 In fact, the research elsewhere in the Bay Area actually shows that these forests are declining, not invading. In .Vegetation Change and Fire Hazard in the San Francisco Bay Area Open Spaces,. William Russell (USGS) and Joe McBride (UC Berkeley) used aerial photos of Bay Area parks taken over a 60 year period from 1939 to 1997, to study changes in vegetation types. They studied photos of 3 parks in the East Bay (Chabot, Tilden, Redwood), 2 parks in the North Bay (Pt Reyes, Bolinas Ridge), and one on the Peninsula (Skyline). These photos revealed that grasslands are succeeding to shrubland, dominated by native coyote brush and manzanita. Eucalyptus and Monterey pine forests actually decreased during the period of study, and thus cannot be considered .invasive..

09 9. pg 115, Pg 294: Bayview Park is described as Mission Blue Butterfly habitat, without any evidence. Within the last decade, the butterfly has only been recorded at Twin Peaks. In very recent times, this is the result of importing dozens of them from San Bruno, where they do occur naturally. (The butterfly is also said to occur at Sharp Park, but again no evidence is provided.) Since this species depends on unstable .disclimax. habitat, only recent sightings would be relevant as the vegetation would change through natural succession. Attempts to create a habitat for this species would mean constant intervention to plant and then maintain disclimax habitats.

10 10. Pg 92: The DEIR notes that the trees removed would be replaced one–for–one. This is impossible on several counts:
(a) The SNRAMP does not have any plan for tree–planting, only for conversion to grass and shrubland.
(b) Given that a .tree. is defined as greater than 15 feet in height, the .trees. that will be planted would actually be .seedlings. or .saplings. by the definitions used in this report. Since the SNRAMP plans to remove an uncounted number of seedlings and saplings in addition to the 18,500 .trees. over 15 feet in height . replacement is clearly not feasible.

Bose-1

10 (Cont.) (c) The majority of the trees would be removed in Sharp Park, where windthrow is acknowledged to be a factor. This implies that the actual trees lost would exceed the 18,500 number, and replacing them is essentially impossible.

11. Pg. 195: ..all removed vegetation would be replaced with native vegetation that is more appropriate for the area's precipitation pattern, water availability, animal populations, and local ecosystems, thereby allowing the new vegetation to thrive more successfully than the invasive vegetation..

11 This statement is self-contradictory. If the .invasive vegetation. is not thriving more successfully than other vegetation, it is not invasive. Moreover, there is practical evidence that .native vegetation. does not in fact .thrive more successfully. but instead requires irrigation to get established, followed by continuing maintenance in the form of herbicides and replanting. The rising use of herbicides by the NAP attests to this, as do the thousands of volunteer-hours it uses for maintenance.

12. Pg 365: .Pesticides would be used as infrequently as possible in the Natural Areas to achieve the desired results..

12 The DEIR is vague about the amounts of pesticide to be used, and in what situations. .Desired results. being an undefined object, this statement may be used to justify anything. Given the NAP's record of sharply increasing pesticide use, we think it should specify the expected amounts to be used under each of the options . both the Proposed Project and the Alternatives. (NAP's Garlon application increased from 16 times in 2009 to 36 times in 2010; Glyphosate was used 7 times in 2009 but 42 times in 2010.) Quite aside from any herbicides associated with Native Plant introductions, we would expect a sharp increase in toxic pesticide use owing to tree-felling. It is important to quantify these to assess Environmental Impact.

13. p 365: .Pesticide use would be carefully monitored, would involve the use of least toxic methods and materials that are appropriate to the environment in which they are applied, and would adhere to the IPM Program..

13 A large number of violations of the IPM by NAP have been brought to our attention in the last two years: applications of Garlon by spraying instead of daubing; no respirators worn when working with chemicals requiring them; no dates on application notices; use of unauthorized pesticides; pesticides used at unauthorized locations (e.g. glyphosate used near red-legged frog habitat).

(Some of these are shown on our website at http://sutroforest.com/2011/10/02/san-francisco-natural-areas-pesticide-violations/) In addition, the NAP has been routinely using pesticides classified by San Francisco's Department of the Environment as Tier I or Tier II, so .least toxic. is a meaningless descriptor in the context. They are using chemicals that are as toxic as they are permitted

Bose-1

to use.

13 (Cont.)

In view of this use and these incidents . and these are only the ones we ran across or were shown . the DEIR's assertion of .careful monitoring. and compliance seems excessively sanguine. Violations seem to be unnoticed, ignored or .regularized. post facto. We would like to see concrete measures of oversight from a neutral person or board.

14

14. The .Maintenance Alternative. appears to be the most rational option:

- the Environmentally Superior alternative;
- lower investment of time and money required;
- lowered requirement for pesticides compared to the Proposed Project;
- and in terms of potential outcomes that are aesthetically pleasing and ecologically viable.

Other than an irrational preference for .Native. species without reference to ecological function, the Proposed Project has no apparent advantage over the Maintenance Alternative.

Thank you for the opportunity to provide comments on this EIR draft.

Sincerely,

Rupa Bose, (fk94131@yahoo.com)

Bose-2



Bill Wycko/CTYPLN/SFGOV
08/11/2012 12:41 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comment on SNRAMP DEIR: Use of "basal area"

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 12:41 PM----



Rk Bose
<fk94131@yahoo.com>
06/11/2012 11:06 AM
Please respond to
Rk Bose
<fk94131@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Comment on SNRAMP DEIR: Use of "basal area"

Dear Mr Wyco,

This is a further comment on the Draft Environmental Impact Report on the SNRAMP.

The language around the issue of tree removal is extremely confusing to the lay-person.

1. Two separate measures are used: The height of the tree, and "basal area."

Tree height is intuitive and easily understood. For the purposes of the SNRAMP (and the DEIR) a "tree" is defined as a plant with a single stem exceeding 15 feet in height.

However, the determination of extent of tree removal in the DEIR is worded in terms of "basal area."

01 This term is never properly explained, either in the SNRAMP or in the DEIR, nor is the public given the formula in summary. This forces the public to make their own calculations and estimates, and impairs their ability to properly assess impacts.

2. "Basal area" also appears to be a poor choice as a measure.

(a) There is no easy equivalence between basal area and the measures the public finds more familiar: number of trees per acre, tree height, canopy cover.

(b) According to US Forest Service, this is the definition of Basal Area:

"Basal area (BA) is the area of the cross section of a tree stem, including the bark, measured at breast height (4.5 feet above the ground)."
[http://www.fs.fed.us/postfirevegcondition/glossary.shtml]

Bose-2

"Basal area per acre" is therefore the number of square feet of basal area of all the trees in one acre.

Using a fixed basal area per acre target suggests that as trees grow larger, more will be felled. This is the opposite of what good management would suggest when San Francisco is seeking to increase its urban forest cover.

01 (Cont.)

(c) "Basal Area" does not consider the size or spread of branches or canopy. The canopy is an important determinant in a tree's pollution-fighting ability by trapping pollutants on its leaves. It also is critical to its ability to slow water impacts and run-offs by mediating rain-fall. The canopy is important from a wildlife standpoint. Finally, a tree's canopy also affects its aesthetics.

02 The final EIR should explicitly discuss the impact of tree felling in each specific area.

Thank you for the opportunity to comment.

Sincerely,

Rupa Bose

Bowling-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:06 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SNRAMP comment

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:06 AM -----



Alane Bowling <abowlinglane@gmail.com>
10/31/2011 08:52 AM

To Bill Wycko <bill.wycko@sfgov.org>
cc
Subject SNRAMP comment

Mr. Bill Wycko

Environmental Review Officer

San Francisco Planning Department

1650 Mission Street, Suite 400

San Francisco, CA 94103

Dear Mr. Wycko:

I have been a volunteer with the Natural Areas Program since 2004, doing habitat restoration on Bayview Hill and in the Oak Woodlands of Golden Gate Park. I am also a street park steward through Nature in the City and the San Francisco Parks' Trust. I've stewarded two small gardens on Department of Public Works' land, helping to establish a natural habitat corridor between two Green Hairstreak butterfly populations in my neighborhood. I own a home in the Inner Sunset and neighbors have been supportive of this effort because it is beautifying the area as well as providing butterfly habitat.

01 I support the Significant Natural Resource Area Management Plan because so much thought, research, and preparation has gone into it. I believe that the Draft Environmental Impact Report for the Natural Areas Management Plan is an adequate, accurate, and complete review of the plan based on detailed studies by scientific experts. It proposes mitigation measures to address any possible adverse effects, and it is consistent with several directives, including the Recreation

Bowling-1

and Open Space Element, the Public Utilities Commission's water-saving mandates, and the City's Sustainability Plan. It looks at alternatives and discusses the potential effects for both the natural and recreational amenities of the City's Natural Areas as well as potential effects on the City's resources.

I believe that implementation of the Plan will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. The Plan is the most cost-effective method for managing our resources and protecting these areas for future generations. It provides clear direction to the City on how to prioritize management and restoration of our Natural Areas, and it presents an innovative way to safeguard our City's Natural Areas. This is very important to me, all San Franciscans, and for future generations of San Franciscans.

01 (Cont.)

As you know, the mission of the plan is to provide guidelines and amenities for passive recreational uses compatible with natural resources, to identify the causes of adverse effects on habitats, to enhance biological diversity, and to maintain populations of sensitive species. It also aims to inventory the biological resources in our Natural Areas to provide background information for planning, restoration, and management activities; to develop a Geographic Information System database, containing baseline information for each of the Natural Areas; and finally, to provide guidelines for educational, research, and stewardship programs. These are all commendable goals and attainable with the Significant Natural Resource Area Management Plan to guide us.

02 If we have to separate Sharp Park from the rest of the Natural Areas Plan in order to move forward, although not my preferred approach, please, let's do that and make some progress for our City.

Thank you for your support,

Ms. Alane Bowling

2227 15th Avenue

San Francisco, CA 94116

abowlinglane@gmail.com

Bowman-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:37 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR Public Comment

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:38 PM ——



Amita Bowman <amitabowman@hotmail.com >
10/31/2011 04:38 PM

To <bill.wycko@sfgov.org>
cc
Subject NAP EIR Public Comment

I am a frequent visitor with my family and dog to Sharp Park, McLaren, Lake Merced, Golden Gate, and Glen Canyon. In addition, my step daughter lives in San Francisco and my elderly in-laws have lived in the Richmond District for over 40 years. While I live in San Bruno, almost everything I do is in San Francisco so I very feel a part of the San Francisco community. I support the Maintenance Alternative or the Recreation Alternative. San Francisco city-managed parks are landmarks and part of our communities' identities and health and well-being. Preserving existing native plant communities should be supported but that should not include restoring 1/3 of our small parklands to native plants and displacing recreation and our existing landscape and nature.

01

Only in extreme cases should the Parks & Rec Dept defer from McLaren's policy of NO "Keep off the grass" signs. These are city parks and are not major environmental conservation areas; plus non-native trees are part of our planted landscape and should be celebrated not demonized. I am also quite concerned about cutting 25% of park trails and the increased use of toxic pesticides that has an impact on almost every potential user of the parks.

02

03

Sharp Park Aesthetics/Land Use:

The EIR does not account for the significant impact on the aesthetics and land use at Sharp Park. I often talk to people that have been going there for 30 some years, and the berm is definitely as much of the historic value of the Sharp Park as the golf course. The fence is ugly and creates a psychological barrier between the people on the berm and the golf course that completely changes the aesthetics for the hundreds of people that walk along the berm each day. This change is not even recognized as such in the EIR.

04

As a frequent walker and runner with my dog and family at Sharp Park, I am quite concerned about the ugly fence that was installed, the potential of a permanent barrier, and prohibiting people and dogs from the lagoon. Before the addition of the ugly fencing along the berm, the lagoon was a favorite end to our runs and a lovely quiet magical place. As I heard the commissioner talking about keeping the 18th hole for the

Bowman-1

golfers, I realized that the lagoon was the equivalent of the 18th hole for the hundreds of people including children, the disabled, senior, minorities, every income group, etc. that share and walk the berm each day. It's the stop along the way where one typically meets one or two other people and stops for a chat, which really makes me feel like part of the community.

05 In addition, I've lived in the Bay Area for about 15 years, and I've never been on a golf course here. However, I fully support that Sharp Park is an historic course that is lovely for even those of us that don't golf. Before the addition of the ugly fencing along the berm, the golf course always felt like it was for everyone to enjoy. I don't golf but I love looking at the ocean for a while, looking at the lagoon for a while, and then the green, green of the golf course and the happy people playing. For me, it is a wonderful combination; the ugly fence and any future barrier destroys the aesthetics of the golf course. John McLaren had the philosophy that there should be NO "Keep Off the Grass" signs, which is a brilliant philosophy that makes our parks inviting and us part of the parks and the nature in the parks.

Unfortunately, the people on the berm, which represents the largest group of users for Sharp Park, doesn't have any organization to represent their interest and are thus being ignored; plus they are trusting that government official are considering their interests instead of just small special interest groups such as the native plant extremists.
For Sharp Park and all the other parks, I don't see any attempt to survey users of the parks to understand their perspective on the value of the changes or how those changes impact the historic, aesthetic or recreational value of the area. Real people that use these parks need to have input into the process.

Dogs are Not Invasive and are not Merely a Nuisance

06 **The EIR does not address the significant precedence of the NAP labeling dogs as an "invasive" nuisance and how that impacts the likelihood of daily recreation being reduced for at least 30% of the San Francisco population and visitors with dogs. If the NAP allows for reducing usage by people with dogs then the maximum reduction should be evaluated and presented in the plan. Reducing the usage by such a large population is certainly a significant impact on recreation as well as on the health and safety of people and dogs. A well-exercised and socialized dog is a safe dog, and these dog play areas are critical for providing the space needed for exercising and socializing dogs. In addition, these areas are important for people to socialize and exercise as well.**

The EIR and the NAP treat dogs as an "invasive" nuisance with no value. Dogs were the only domestic animal in pre-Columbian times, and the dogs we have today are the same species as in pre-Columbian times. Based on the way that "invasive" is used in the EIR/NAP, dogs should not be referred to as an invasive. In pre-Columbian times, free roaming dogs would have been as integral a part of the nature in these parks as ravens, bobcats, mountain lions, black bears, grizzlies, hawks, etc. Granted there are more dogs today because of the larger human population but those dogs aren't out scavenging and

Bowman-1

hunting for their daily meals, so theoretically, it is unlikely the dogs today have a greater impact on local nature than 250 years ago. In addition, the dogs are under the supervision of owners which significant changes the impact of a single dog on the environment in comparison to self-reliant, free-roaming dog.

07 This plan seems to give NAP free-will to exclude people with dogs based on "observations" and "mays" than can be used arbitrarily. For example, the claim is that dogs are causing erosion at Lake Merced and thus dog play areas should be closed. In truth, dog have almost no impact on Lake Merced because few dogs use the area. The fact that a dog play area is there is almost hidden, and the dog play area signage is non-existent in the park; in fact, all the signs I see around the park indicate dogs on-leash only. While the area isn't currently being used, the NAP will assure that it can never become a dog play area.

08 As another example, the city has attempted to exclude people and dogs from the lagoon at Sharp Park, where people have gone for generations. In Issue SP-8, NAP claims dogs "may" have an impact on the SF Garter Snake and the California Red Legged Frog and that is sufficient to exclude people with dogs. However, there is no concrete evidence that dogs are having any impact on either species or their populations, even at these sites. Collectors seem to be the biggest known impact at the site.

The extremists in the environmental community are coming up with these "mays" and acting as they are proven facts and aren't actually scientifically studying the issue. People with dogs are being treated as if they are a member of the community that is merely a nuisance and does not matter. It only takes accusations, on par with those used during the Salem witch hunts, for all dogs and their people to be convicted and expelled. The city and NAP are not even questioning whether the SF Garter Snake (SFGS) is indeed a unique sub-species. In looking at the information on the SFGS, I find it questionable that DNA analyze has not been performed and the population of SFGS isn't even known or estimated. If recreation was a priority, NAP would ensure that valuable resources are truly being dedicated to the preservation of an endangered species and not just being used to high-jack recreational areas.

Personally, I'm suspicious that the SFGS is being used as a decoy to camouflage those that want the lagoon to be a bird sanctuary like all the other bird sanctuaries around the Bay Area. For the zealots that theorize that dogs have a significant impact on the shorebird populations, they should be supporting dogs in and around the lagoon since the shorebirds are real predators of both the snakes and the frogs and their young. If the city truly wants to encourage the snakes and frogs then there should be programs to deter the shorebirds. Note I'm not proposing that approach but believe the current stance is hypocritical and shows extreme bias and sets an unhealthy precedence.

09 **Prioritization Precedence**

The EIR does not address the precedence of prioritizing native plant restoration over

Bowman-1

recreation and increasing green space. The opportunity cost of these plans is not evaluated.

This plan prioritizes unsustainable native plant restoration over humans. While native plants do provide recreation for people that enjoy gardening in the parks and has value in preserving special status plants and wildlife, the scale of this program is overwhelming for the benefits. More than 1/3 of the little parklands in SF cannot become like a museum, not to be touched by anyone but a select few. Fortunately or unfortunately, SF has little open space and dense housing, and there is little likelihood of changing that. In some ways, it is good that people stack into a small housing area and then share open space instead of spreading out and taking up more open space in suburbs.

09 In addition, the plan does not address areas such as Bernal Hill that has little green year around, and this plan is unlikely to result in the addition of aesthetically pleasing trees that would add to the character and charm of the park. Predominately brown native grass and even attempts to establish native trees are unlikely to significantly improve the aesthetic beauty of the park as non-native trees would. This plans prevents beutifying these parks for the community.

The plan also does not account for the expansion of endangered species and that can permanently remove land from ever being available for other purposes in the future. From what I understand, endangered status is not just related to the actual population of a species but also the number of sites. SF has no control on expanding sites so even if a species flourishes in these SF sites; the species are unlikely to be removed from the endangered species list. For example, the California Red Legged is common on the coast; it is the populations in the Sierras that are an issue. No matter how well the frogs do in SF city parks, the frog is unlikely to be taken off the endangered list.

10 In addition, the NAP is not free. Just removing and replanting some 15,000 trees in Sharp Park has to be a significant cost and yet no financial information is provided. I am personally quite appalled that large amounts of time and money are spent on removing healthy trees and vegetation when toilets are non-existent (e.g. Stern Grove) or badly maintained (e.g. Lake Merced), and the city is cutting other critical services. No plan should be complete without a financial analysis to evaluate the opportunity costs.

Toxic Pesticides/Herbicides

11 **The amount of toxic chemicals being used on existing natural area restorations needs to be comprehensively evaluated, and this should be done for as many years as information is available.**

The use of toxic pesticides and herbicides is increasing with the native plant projects, and I cannot find recent information on the amount of these that are actually being used for the current projects. The use of toxic chemicals to control invasive plants not only impacts wildlife and people's health but is also a major aesthetic impact for me. I

Bowman-1

always love finding blackberries in season and having a snack. Now I'm looking at the park quite differently and wondering about what I, my family, or my dog is walking on and touching that may be sprayed with poisons. I particularly worry about the toddlers and other small animals and beings in our parks.

Air Quality

Air quality needs to be quantitatively reviewed for the removal of trees and limbs and for the suppression of replacement growth and underbrush instead of just presenting abstract information.

I cannot find a comprehensive analysis on carbon dioxide absorption from converting large areas of land from forest to grasslands/scrub. Cutting 18,500 trees is only a small part of the conversion since the actual goal is to slowly convert these areas to grassland/scrub. Just because the conversion is slow does not negate the fact that large areas, particularly in Sharp Park, will soon be almost devoid of trees and all the under canopy / vegetation that exists today. From what I can see, it appears that more 50% of the forest area is planned to be converted slowly to scrub and grassland just like what predominates most of San Mateo county and the nearby area.

12

Wildlife/Nature/Visitor Experience

The success of the NAP existing restorations should be evaluated and incorporated into the EIR. In additions to studying the actual changes in vegetation and wildlife, the studies should include evaluating how the public perceives the changes. As an example, I loved Pine Lake the way it was before the fences and the de-vegetation of the area, and I would express that in a survey. I personally feel the Glen Canyon and Sharp Park forests could do with some trimming but find them magical oasis and expect others find them equally unique and special. I equally appreciate the more manicured parks or the vast open spaces up and down the coast that are pre-dominated by coastal scrub like that being promoted. However, I believe the current balance of these areas is appropriate and does not warrant major changes.

13

I cannot find a comprehensive analysis showing that actual monitoring of wildlife in the Sharp Park forested/eucalyptus areas versus the scrub/grassland areas. The analysis seems to be completely speculative. One would expect to see the actual monitoring that has occurred that actually demonstrates that more wildlife is supported by native vegetation than by the non-native plants.

Based on my extensive experience in hiking in the Bay Areas, I do not perceive a significant difference. The places I see the least nature is places like Pine Lake with the restoration areas. The slopes at Pine Lake feel barren with the attempted replant and the harshly trimmed trees. My impression is there is far less vegetation mass, insects, and birds in the restoration areas than in the areas that have not been restored. By attempting to convert slowly so the public doesn't realize what is happenings, means the shade prevents the scrub from taking hold, and it is a no win situation. My feeling is

Bowman-1

there should be museum like areas that are dedicated to native plants, and not just trying to take a 1/3 of the park without people realizing and attempting this change in the balance of native to non-native plants.

Removing these planted urban forests cannot be quickly reversed, particularly with the trees that are over 50 years old and should not be done without the full understanding and commitment from the community. I was quite surprised to learn that these trees and underbrush were not being removed for safety or for aesthetic reasons and that the real justification is a costly attempt to restore native plants in areas that prior generations deliberately and successfully planted beautiful trees. I don't believe most people in SF would support turning large areas into savanna like the often brown San Bruno Mountain; particularly without a compelling safety justification or improvement in quality of life. Instead 25% of trails and 15% dog play areas are being closed, reducing the quality of life for most residents.

Native Nuisances

14 **NAP does not address monitoring of native species and maintaining the balance of these species. Any species whether it be native (e.g., sea gulls, ravens, shorebirds, scrub, etc.) or non-native can become a problem for other species survival. I cannot find where the plan addresses monitoring and addressing native species, other than non-natives, that over-populate and threaten other species. This over-focus on "native" could be damaging to our current ecosystems and species.**

Sincerely,
Arnita Bowman
2130 Crestmoor Dr
San Bruno, CA 94066

Bowman-2

Bill Wycko/CTYPLN/SFGOV
08/11/2012 05:15 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Public Comment Regarding SNRAMP DEIR 2005.0912E - Part 1

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 08/11/2012 05:15 PM ——

Anita Bowman <anitabowman@hotmail.com>
08/11/2012 04:46 PM

To <bill.wycko@sfgov.org>
cc
Subject Public Comment Regarding SNRAMP DEIR 2005.0912E - Part 1

Dear Mr. Wycko:

This is an additional public comment from me regarding the Draft Environmental Impact Report (DEIR) for the Significant Natural Resources Area Management Plan (SNRAMP) and a request for additional revisions to the DEIR. I have also read the Public Comments on the DEIR submitted by the San Francisco Forest Alliance (SFFA) and request that RPD address the revisions requested by SFFA.

This is summarized list of the revisions requested in the detailed justification document attached:

Section 1. Table 5 - Summary of Natural Areas Management Plan

01 1. Correct the distances for Existing Trails and To Close/Relocate Trails
02 2. Add a summary of urban forest acres to be converted long term to coastal scrub and grassland
06 3. Correct the "existing" trees and clarify impact of trees removed since initiation of SNRAMP
07 4. Clarify plans for reforestation and types of trees used for reforestation

Section 2. Table I - Summary of Environmental Effects - Recreation

08 1. Change all recreation environmental impact statements to Significant for Proposed Project, Maximum Restoration and No Project to reflect the significance of the proposed plan and the current Natural Areas Program management on park visitors. Consider Conducting an unbiased survey of Natural Areas visitors to determine the significance of decommissioning trails, removing park greenery (aka Trees, ivy, etc.), restricting visitors to trails, removing park benches, closing dog play areas, spraying herbicides, etc. on visitor experience and use of the parks.

Bowman-2

11 2. Evaluate the environmental impacts on public health related to discouraging daily exercise and recreation and on the changes to air quality for those exercising in the parks.

Section 3. III.A.1 Background

14 Clarify in the DEIR that most of the "Natural Areas" are predominately non-native plants and trees and not remnant or sensitive habitat. Most of the Natural Areas are planted forests and old livestock pastures that SNRAMP plans to convert to native coastal dunes, scrub, and grassland to treat as conservation areas instead of recreational areas. The statement "The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas" is incomplete without incorporating the current land use and type of land.

Because of the size of the files, I will be sending additional emails with the attachments noted in the above sections.

15 In general, I found the DEIR to be biased towards promoting the SNRAMP proposals instead of impartially and scientifically presenting the environmental impacts of the program. It is troubling that RPD spent more than $1 million for the development of such a flawed SNRAMP and DEIR and that this was done with limited input from the general public who are unlikely to support the costly implementation or the significant changes to the use of 25% of park land in SF. RPD continually misuses words like "invasive" and "noxious" instead of the more clearly understood "non-native plants" which misleads the public about the types of plants and trees to be removed. RPD also uses "nature" and "natural" and "habitat" which would be more correctly stated as "native plants". Using these marketing words or codes represents a deceptive tactic that undermines the value of the entire DIER public comment and review process, since the general public is not being made aware of the significance of what is actually planned.

In addition, RPD continues to marginalize the extent of the plans in the media, on their website, and in presentations and even propagates myths particularly about eucalyptus being different from other trees (e.g., nothing growing under eucalyptus, fire hazards, hazardous from tree/limbs falling, killing birds, etc.). They also talk about the myth that non-native plants and trees are not used by wildlife in the parks or that nothing grows in a eucalyptus forest, one visit to a Bay Area forest that isn't intensely managed shows the falseness of this claim. RPD has

16 also made almost no effort to proactively inform the general public of this significant project that changes the land use of highly valued parks from neighborhood parks to "sensitive habitat". This change of the land use to conservation will significantly change the visitors' experience. As indentified by SFFA, few residents are aware of the proposed plan even though the plan with impact the more than 60% of people that say they use trails in SF parks.

17 It is also disturbing that RPD has proceeded with implementing much of the SNRAMP plans prior to the completion of the DEIR, which doesn't seem to comply with CEQA. For example, 1) signs are already posted at the Natural Area entrances calling the entire Natural Area "sensitive

Bowman-2

17 (Cont.)

habitat" and requiring visitors to "stay on the designated trails" and 2) the 2008 Park Bond Trail Restoration Program - $4 million budget with about $900,000 already spent - has already been used to start the SNRAMP proposed plans to decommission trails, erect permanent fencing, remove existing landscaping, and install new native plants. In addition in the Glen Canyon Creekside Trail Habitat Conservation Fund (9/13/10) (See Attachment A), RPD claims that the proposed project is "not related to any larger project, series of projects, or program", when in fact the project is directly implementing the SNRAMP proposed plans and altering the park land use.

Sincerely,



Arnita Bowman Justifications for Revising the SNRAMP DEIR.pdf

Bowman-2

Justifications for Revising the SNRAMP DEIR

Prepared by Arnita Bowman, 6/11/2012

Section 1: Table 5 - Summary of Natural Areas Management Plan

1.1 Need to correct Existing and Resulting Trail Distances in Table 5: Summary of Natural Areas Management Plan

The following inaccuracies were observed in the trail distances in Table 5:

1. The 2008 Park Bond Trail Restoration Program (Bond Trail Restoration) for Billy Goat Hill and Twin Peaks demonstrates RPD's intentions for decommissioning trails based on the SNRAMP and this intent far exceeds the feet of trails designated in Table 5. *Attachment B* includes some of the project documents illustrating the decommissioning of trails.

2. It is likely that the street roads and sidewalks were included in the trails distances designated in Table 5 since the existing and remaining trails distances are much greater than the trails depicted on the DEIR trail maps for Twin Peaks and Billy Goat Hill DEIR maps. Including city streets and sidewalks is not appropriate because they are not maintained by RPD and/or are not Natural Area's trails.

3. The McLaren proposed plan also includes creating habitat for the endangered Mission Blue Butterfly, which based on the Final Bond Trail Restoration Twin Peaks conceptual trail design (http://sfrpd.org/wp-dev/wp-content/uploads/Twin-PeaksTrail-concept-plan.pdf), results in closing even primary trails. Also, the Interior Greenbelt trail is missing from the SNRAMP map of existing trails and should be added to the map and the existing trail feet in Table 5.

01 (Cont.)

These inaccuracies indicate that Rec & Park must reevaluate and restate the trail distances for all sites represented in the Table 5 for the revised DEIR to ensure that:

1) The distances reflect the most likely SNRAMP plans for decommissioning existing secondary trails (aka social trails) and primary trails based on the actual trail projects already completed or designed for the Natural Areas. For example, Billy Goat Hill, Twin Peaks, Glen Canyon, and McLaren all contain(ed) significant secondary trails (aka social trails) than are represented in Table 5 and Twin Peaks and McLaren contain primary trails crossing planned endangered species restoration zones.
2) Trail distances are only for actual Natural Areas' foot trails and not city streets and sidewalks, particularly those not maintained by the Natural Areas or even RPD.

Additional Notes:

The Bond Trail Restoration projects represent the most conclusive evidence of RPD's intentions regarding decommission trails and erecting fencing based on the SNRAMP. While I do not have the professional tools necessary to measure the trail distances on the Bond Trail Program or the DEIR maps with complete accuracy, the rough measurements demonstrate that the numbers represented in the DEIR Table 5 are significantly different both in percentage and overall distance for both Billy Goat Hill and Twin Peaks and represent a far greater impact on recreation than currently is represented in Table 5. Below is a rough analysis based on using string and a ruler to measure the trail distances that is purely to illustrate the need for RPD to reevaluate and correct the values presented in Table 5.

1

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2008 Bond Trail Restoration Project	Rough Trail Feet Estimate**** After Trail Project	Existing	Decommissioned by Trail Project	%	DEIR Draft Table 5 Trail Feet After Trail Project	Existing	Decommissioned by Trail Project	%
Billy Goat Hill *	688	1912	1224	64%	1855	2600	745	29%
Grand View **	1471	1853	382	21%	1313	1722	409	24%
Twin Peaks ***	2718	8050	5332	66%	6939	8741	1802	21%

** The estimated feet of authorized trails after the trail restoration is per the map in the Billy Goat Hill Trail Enhancement And Restoration Project - SCOPE OF WORK for Yerba Buena Construction. The estimate of the original trails is based on the trail depictions on the Scope of Work map and the trails depicted on the Draft DEIR FIGURE 6.9 - 4 MANAGEMENT AREAS AND TRAIL PLAN BILLY GOAT HILL. Note there is a significant difference in the trail feet between the estimate and the DEIR draft which may be represented by the city street that runs beside the park and that isn't appropriate to include as a Natural Areas' trails.*

*** The estimated feet of authorized trails after the trail restoration is per the map in the Grand View Trail Enhancement And Restoration Project - SCOPE OF WORK for Yerba Buena Construction. The estimate of the original trails is based on the trail depictions on the Scope of Work map and the trails depicted on the Draft DEIR FIGURE 6.5 - 17 MANAGEMENT AREAS AND TRAIL PLAN GRAND VIEW.*

**** The estimated feet of authorized trails after the trail restoration is the Final Twin Peaks Conceptual Project Plan. The estimate of the original trails is based on the trail depictions on the conceptual plan and the trails depicted on the Draft DEIR FIGURE 6.8 - 5 MANAGEMENT AREAS AND TRAIL PLAN TWIN PEAKS. Note that DEIR draft likely included the non-RPD road as a trail, which was not included in the rough estimates as it is not a NAP trail.*

***** These estimates are rough estimates based on the use a string and ruler technique to measure the distances and calculate using the scales provided on the map. These only provide a general assessment of the trail distances.*

01 (Cont.)

Table 5 also likely understates the trails to be decommissioned for other Natural Areas based on the actual history of the Natural Areas Programs and the Bond Trail Program, which is the best evidence of RPD's intentions. Based on the Bond Trail Program projects, one must project that NAP intends to decommission almost all secondary trails (aka social trails) plus some primary trails that cross the MA-1 zones or proposed endangered species reintroduction areas. For example, the primary trails at McLaren are approximately 3 miles, which is far less than the more than 8 miles stated in Table 5 for trails to remain. Even though much of MA-1e doesn't even contain the lupine host plants for the Mission Blue, the proposed plan is to "augment the Mission Blue Butterfly Habitat" and "monitor" and "install fencing" in the extensive MA-1e zone, which is predominated by non-native oat grassland. Based the strategy for decommissioning primary trails illustrated by the final Twin Peaks design, the distances for several of the McLaren MA-1e primary trails must be included in the trails designated to be decommissioned in Table 5.

1.2 Add a summary of urban forest acres to be converted long term to coastal dunes, scrub, and grassland in Table 5: Summary of Natural Areas Management Plan

Rec & Park and city officials have routinely attempted to marginalize the publics' opposition to the SNRAMP by stating in the media and at public presentations that only 5% of trees will be removed and that trees will be replaced one-for-one. This deceptive information regarding the SNRAMP undermines the public and official's understanding of the proposed plans and current management practices and their ability to comment fully on this significant issues related to the plan; therefore, the DEIR needs to clarify this controversial issue in the executive summary to ensure reviewers of the DEIR are not mislead by the omission of significant information.

02

Specially, the revised DEIR needs to provide the public with an additional summarized analysis of the total acres of urban forest that the SNRAMP states will be eliminated long-term and replaced with coastal scrub, dunes, and grassland. The public needs to be aware that the direct cutting of trees will only cause part of the significant environmental impact with equally significant impacts from:

Bowman-2

02 (Cont.)

1) Thinning the remaining MA-3 forest,
2) Removing all small trees in MA-1 and MA-2 , thus stopping the natural regeneration of self-sustaining trees, until the conversion is complete,
3) Accelerating the windthrow and erosion attrition for the remaining trees, due to removing trees

03

The 2006 Pine Lake project is the best representation of the SNRAMP proposed plan for tree removal and fencing in the Natural Areas. Pine Lake demonstrates how the removal of trees impacts the park by opening up the forest curtain to expose houses and how removal of trees results in wind throw which along with the understory removal results in erosion as demonstrated in the pictures in Attachment C. Real depictions should be used to demonstrate the results of the deforestation on the Natural Areas instead of the unrealistic and misleading pictures used for Impact AE-4 in the DEIR, which don't show the removal of any trees particularly for visitors within the park. Because the aesthetics of a park are so significant to visitors and has been highlighted by speakers at many public meetings, the aesthetics environmental impact section should also include realistic pictures, such as those from Pine Lake, that demonstrate realistic changes that will result from the adoption of the SNRAMP.

04

05

These long term plans for eliminating forest acres should also be incorporated into the significance analysis of aesthetics, hydraulics, air quality, biological resources, wind and shadow, and recreation environmental impacts.

1.3 Correct the "existing" trees and clarify impact of trees removed since initiation of SNRAMP

The DEIR existing trees must be reevaluated to correctly state the actual trees existing at each site. Rec & Park presentations to the public, media, and decision makers about the DEIR almost always refer to the percentage of trees to be removed, which indicates the importance of correctly stating the existing number of trees so that this percentage is fairly stated.

As an example, Pine Lake indicates systemic problems with the tree numbers presented in the DEIR. HORT Science conducted a tree survey at Pine Lake in March 2011 for Rec & Park and identified only 229 trees at Pine Lake, which includes the 82% of Pine Lake acres that is not in the Natural Areas. This indicates that it is impossible for 1000 trees, as stated in Table 5, to exist on the 8.4 NAP acres, which is largely open water and Riparian vegetation with small shrubs and a highly thinned MA-3 and MA-2 forest. It also indicates that the methodology for determining existing trees is flawed and needs to be corrected to more accurately reflect the number of existing trees summarized in Table 5 and also contained in the Forestry Appendix F. Otherwise, the percentage of tree removal will be significantly misstated for those reviewing the final EIR and in presentations to the public. Also, existing tree counts represented for Glen Canyon and Mt Davidson are of particular concern because the numbers do not seem reasonable based on the actual density of trees and the existing open spaces with few trees in the zones included in the tree acreage. Because the number and percentage of trees is such a significant measure used in all presentations regarding the DEIR, the DEIR should reflect the actual trees at the sites not some highly inaccurate estimate which overstates the existing trees and thus significantly understates the percentage of trees to be removed.

06 (Cont.)

It is also not stated in the DEIR as to whether trees removed since the creation of SNRAMP are included in the "existing" or "to remove" trees or neither, which is important information for decision making and for understanding the impact of the proposed plan. As examples of trees that have already been removed since the creation of NAP, according to the SNRAMP Forestry Appendix F, Pine Lake had 132 trees removed in 2006 and the DEIR Table 5 shows no additional trees to be cut. Note that extensive numbers of trees have also already been removed by various trail projects (e.g., Corona Heights, Interior Greenbelt, Grand View), by vandals (e.g., Glen Canyon), by construction projects (e.g., Mt Davidson), by tree assessment projects (e.g., Pine Lake, Interior Greenbelt), etc.

The on-going deforestation at Grand View and Pine Lake in the MA-3 forests is also a concern since even in areas that SNRAMP proposes to maintain forests; the areas are being converted to native plants instead of retaining the forest. See Attachment C for pictures of trees removed and the new native plant gardens in areas zoned as MA-3 forests at Pine

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Lake. Also, below is the Google Map street picture from April 2011 for Grand View that shows young cypress trees that are not at Grand View after the 2008 Bond Trail Restoration. Note these young trees are in a zone designated as MA-3 where SNRAMP proposes to retain the Cypress trees. As shown in the picture the MA-3 zone has numerous tree stumps instead of Cypress trees. This illustrates how the "no project" status is also significantly detrimental to the aesthetic and scenic value of the Natural Areas and pictures showing these changes in the DEIR should be shown in the DEIR.



06 (Cont.)

Picture 1: *Screenshot from Google Maps street view of Grand View. Google Maps shows that the picture was taken in April 2011. I added the circle to show several young cypress trees that are no longer at Grand View. One of the young cypresses is still there but it appears to be outside the RPD park boundary.*



Picture 2: *A large section of trees were remove at the Stanyan entrance of the Interior Greenbelt, which is also a MA-3 zone.*

4

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07 (Cont.)

1.4 Clarify plans for reforestation and types of trees used for reforestation

Any reforestation plans or the lack of a reforestation plans should also be stated with an analysis of the likelihood of success, since the NAP has had limited success with establishing native trees with past projects (e.g., Tank Hill, Mt Davidson). I have observed successful oak plantings at Golden Gate Heights and two McLaren locations but all three sites have been in areas sheltered from wind by surrounding urban forests and are park areas outside the Natural Areas. Difficulties with establishing oaks is likely indicative of the environmental changes relating to global climate change, pollution related to densely populated city, the limited locations in the Natural Areas where native trees thrive in a windy and foggy environment, and that the Westside Natural Areas are naturally sand dunes.

The public should also be made aware in the summary about the type of trees expected to be planted, since shrubs that may grow into small trees do not have the same aesthetic quality as the majestic, large trees currently in the urban forests nor do shrubs that may grow into small trees have the same environmental impacts (e.g., air pollution absorption, carbon sequestration, etc.) as large trees. Note that per Rec & Park records provided from a Sunshine request, the only trees planted in the Natural Areas during the past three years except for 74 oaks where really shrubs. Below in Table A is a summary of the trees planted by location and Table B is the actual list of NAP Tree Planting 2009 to 2012 that was provided by RPD based on a Sunshine Act Request.

Table A: FY 2009 to 2012 Natural Areas Program Tree Planting – Almost all Shrubs that May Grow into Small Trees
Summarized from NAP Tree Planting List Provided by an Rec & Park Sunshine Request (Shown in Table B)

Row Labels	AESCAL-Buckeye	ALNRUB-N/A	HETARB-Toyon	MYRCAL-Myrtle Scrub	PRUILI-Hollyleaf cherry	QUEAGR-Coast Live Oak	SALSPP-Willow	SAMMEX-Blue Elderberry	SAMRAC-Elderberry	SALLUC-Shining willow	Grand Total
Bayview					25						25
Billy Goat	8				5	3					16
Buena Vista			10			15			10		35
Corona Heights			8			12	2				22
Edgehill					17	15		8	19		59
Glen Canyon		15			25			10	9	10	69
Lake Merced	10	15	18	25		20			55		143
McLaren	29	10	2	40	15			19	25		140
Oak Woodlands			57								57
Pine Lake	8	29		24		9	9		63		142
Grand Total	**55**	**69**	**95**	**89**	**87**	**74**	**11**	**37**	**181**	**10**	**708**

Row Labels	2008/09	2009/10	2010/11	2011/12	Grand Total
Bayview	20	5			25
Billy Goat		11	5		16
Buena Vista	10	10	10	5	35
Corona Heights	8	10		4	22
Edgehill	15	27	17		59
Glen Canyon	25	25	19		69
Lake Merced	78	60	5		143
McLaren	15	42	24	59	140
Oak Woodlands	12	20	25		57
Pine Lake	41	73	28		142
Grand Total	**224**	**283**	**133**	**68**	**708**

Row Labels	2008/09	2009/10	2010/11	2011/12	Grand Total
AESCAL-Buckeye	5	27	13	10	55
ALNRUB-N/A	15	38	6	10	69
HETARB-Toyon	23	40	30	2	95
MYRCAL-Myrtle Scrub	21	48	15	5	89
PRUILI-Hollyleaf cherry.	35	37	10	5	87
QUEAGR-Coast Live Oak	21	33	13	7	74
SALSPP-Willow	6		3	2	11
SAMMEX-Blue Elderberry	5	10	5	17	37
SAMRAC-Elderberry	93	40	38	10	181
SALLUC-Shining willow		10			10
Grand Total	**224**	**283**	**133**	**68**	**708**

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Table B: NAP Tree Planting 2009 to 2012

Annual Total				Four Year Total	676		
61	2011/12						
124	2010/11						
273	2009/10						
218	2008/09						
2011/12	**Species**	**Number**	**Park**	**2010/11**	**Species**	**Number**	**Park**
	AESCAL	10	McLaren		AESCAL	5	Billy Goat
	ALNRUB	10	McLaren		AESCAL	2	McLaren
	HETARB	2	McLaren		AESCAL	6	Pine Lake
	MYRCAL	5	McLaren		ALNRUB		
	PRUILI				HETARB	5	Buena Vista
	QUEAGR	5	Buena Vista		HETARB	25	Oak Woodlands
	QUEAGR	2	Corona		MYRCAL	5	Lake Merced
	SALSPP				MYRCAL	10	McLaren
	SAMMEX	17	McLaren		PRUILI	10	Glen Canyon
	SAMRAC	10	McLaren		QUEAGR	5	Buena Vista
	Subtotal	**61**			QUEAGR	5	Edgehill
					QUEAGR	3	Pine Lake
2009/10	**Species**	**Number**	**Park**		SALSPP		
	AESCAL	3	Billy Goat		SAMMEX	3	Edgehill
	AESCAL	5	Lake Merced		SAMMEX	2	McLaren
	AESCAL	17	McLaren		SAMRAC	9	Edgehill
	AESCAL	2	Pine Lake		SAMRAC	9	Glen Canyon
	ALNRUB	5	Glen Canyon		SAMRAC	10	McLaren
	ALNRUB	10	Lake Merced		SAMRAC	10	Pine Lake
	ALNRUB	23	Pine Lake		**Subtotal**	**124**	
	HETARB	5	Buena Vista				
	HETARB	5	Corona Heights	**2008/09**	**Species**	**Number**	**Park**
	HETARB	10	Lake Merced		AESCAL	5	Lake Merced
	HETARB	20	Oak Woodland		ALNRUB	10	Glen Canyon
	MYRCAL	10	Lake Merced		ALNRUB	5	Lake Merced
	MYRCAL	15	McLaren		HETARB	3	Corona Heights
	MYRCAL	23	Pine Lake		HETARB	8	Lake Merced
	PRUILI	5	Bayview		HETARB	12	Oak Woodlands
	PRUILI	5	Billy Goat		MYRCAL	10	Lake Merced
	PRUILI	17	Edgehill		MYRCAL	10	McLaren
	PRUILI	10	McLaren		MYRCAL	1	Pine Lake
	QUEAGR	3	Billy Goat		PRUILI	20	Bayview
	QUEAGR	5	Buena Vista		PRUILI	15	Glen Canyon
	QUEAGR	5	Corona Heights		QUEAGR	5	Corona Heights
	QUEAGR	10	Edgehill		QUEAGR	10	Lake Merced
	QUEAGR	10	Lake Merced		QUEAGR	6	Pine Lake
	SALLUC	10	Glen Canyon		SALSPP		
	SAMMEX				SAMMEX	5	Edgehill
	SAMRAC	15	Lake Merced		SAMRAC	10	Buena Vista
	SAMRAC	25	Pine Lake		SAMRAC	10	Edgehill
	Subtotal	**273**			SAMRAC	40	Lake Merced

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SAMRAC	5	McLaren
SAMRAC	28	Pine Lake
Subtotal	218	

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Section 2: *Table I - Summary of Environmental Effects - Recreation*

Change all recreation environmental impact statements to Significant for Proposed Project, Maximum Restoration and No Project to reflect the significance of the proposed plan and the current Natural Areas Program management on park visitors. Consider conducting an unbiased survey of Natural Areas visitors to determine the significance of decommissioning trails, removing park greenery (aka Trees, ivy, etc.), restricting visitors to trails, removing park benches, closing dog play areas, spraying herbicides, etc. on visitor experience and use of the parks.

Proposed Plan, Maximum Restoration, and the No Project alternatives impact ratings for Recreation need to be changed to "Significant" to reflect the high value that residents place on trails and visiting nature and the significant change in people's recreational access to the land that is proposed. By decommissioning existing trails, installing fences, removing benches, and requiring visitors to stay on the trail, SNRAMP does the opposite of improving these highly valued facilities and encouraging visitation to parks and represents a significant negative environmental impact to recreational activities in the park and this is not fully recognized or analyzed in the DEIR.

According to the 2004 Rec & Park Assessment Survey, 67% of households run or walk in parks and 61% visit nature plus 55% of residents consider walking and biking trails to be one of the most important recreational facilities. Trails were by a wide margin the most important recreation facility according to the survey. Running, walking, and enjoying nature are also low cost options for all residents to combat public health issues such as obesity, diabetes, heart disease, mental health issues, etc., and restricting access discourages residents from fully using parks to promote health and well-being. Any analysis that assumes the SNRAMP plan does not have a significant impact of recreation needs to be supported by unbiased evidence such as an independent survey. Note that public hearing are not sufficient as RPD has a reputation for filtering public input to only present the information that supports RPD's current position.

08 (Cont.)

Excerpt from 2004 Rec & Park Assessment Survey

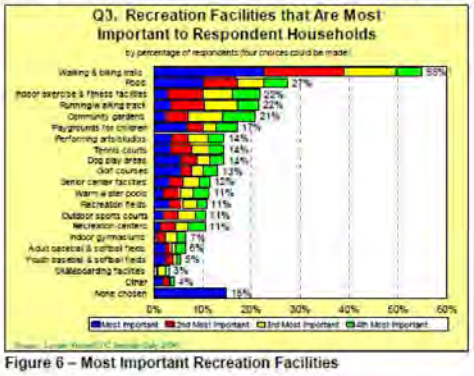

Figure 6 – Most Important Recreation Facilities

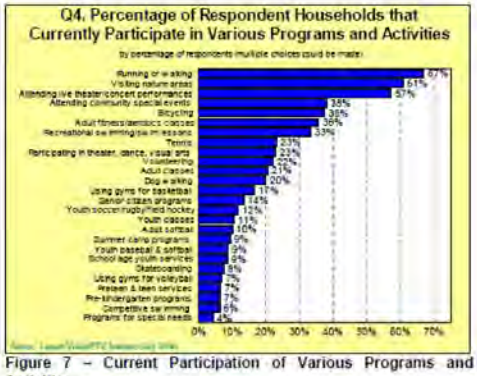

Figure 7 – Current Participation of Various Programs and Activities

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08 (Cont.)



In addition, freedom to play in parks promote children engaging with the outdoors and also provides health benefits as summarized by the National Wildlife Federation: http://www.nwf.org/News-and-Magazines/Media-Center/News-by-Topic/Get-Outside/2012/04-12-12-Getting-the-Dirt-on-Dirt-for-Healthier-Happier-Children.aspx. See *Appendix D*.

In addition to decommissioning trails, the Natural Areas' Sensitive and Important Habitat signs requiring people to "Stay on the Designated Trail" have already been posted at the entrances of Natural Areas which indicates that these rules apply to even the highly resilient forest and grassland areas and significantly alters the recreation land use of all Natural Area zones.

In addition, rows of fencing have already been installed in the Natural Areas which restrain people from using park areas and also mar the park aesthetics. See *Appendix E* with pictures of unattractive fencing that mars the beauty and views of the Natural Areas. The fencing that runs the length of the Sharp Park berm has a large number of holes in the fence which illustrate that the public wants to use these areas and trails for recreation where the Natural Areas Program is attempting to bar access. My understanding is also that the transfer of the property to the City of San Francisco stipulates that these areas are for recreation and converting these park areas to habitat conservation zoning does not comply with that stipulation.

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Picture 3: One of the many holes in the ugly wire fencing along the Sharp Park berm, which is a high use recreational area with walkers, runners, bicyclists, dog walkers, fishermen, and golfers. Also note the dead trees which also diminish the aesthetics of the area.



Picture 4: The Natural Areas have a significant number of mysteriously dead trees that have not been addressed, such as at Sharp Park. These trees once represented a beautiful forest that once improved the aesthetics of the area for visitors.

Bowman-2

08 (Cont.)

Examples of significant SNRAMP conservation focused recommendations that will have a significant degrade the recreational land use of the Natural Areas include:

GR-11a: plan recommends re-routing or closing 10.3 miles of trail (approximately 26 percent of total existing trails).

GR-11c: Public use in all Natural Areas, unless otherwise specified, should encourage on-trail use. To reduce the deleterious effects of trampling in unstable areas, formal use areas, including designated trails, shall be created at locations that are sufficiently stable to withstand the pressure of public use (see GR-11a). Additionally, interpretive and park signs should be installed or modified as appropriate to include "Please Stay on Trails" with information about why on-trail use is required.

GR-11d: Natural Areas shall be monitored on a routine basis for the development of new social trails. Those that impact sensitive species or sensitive habitats or that contribute to erosion problems shall be closed or re-routed (see GR-11b) with signs and brush barriers. Temporary fencing will be used as a last resort in these areas if less obtrusive measure (signs, brush barriers) are not effective.

What I'm struck by when I visit Natural Areas is that while the Natural Areas Program deems it a sensitive habitat, most of the area is really quite resilient. Instead of being an "important habitat" it is far more important to me as place for families with small children to gain confidence, explore and enjoy nature and the outdoors. There are thousands and thousands of acres of coastal scrub and grassland and oak woodlands that are nearby on the San Francisco Peninsula at places like San Bruno Mountain and the San Francisco Peninsula Watershed but families have few places within walking distance of their homes to enjoy the outdoors. When I visit expensive native plant restoration areas like Milagra Ridge that confine people to the designated trails, there are few people and even fewer young children. I recently went to Indian Basin Shoreline Park for the first time. A group of local school children were visiting the park and the most gleeful moment was when they got to leave the trail and turn over rocks to try to find crabs. At Glen Canyon, the big thrills for children are climbing over a tree, forging a creek, taking the social path far from the adults (aka 10 feet away), showing off the "Tiger Claw" trees, etc. Glen Canyon is alive with wild critters but watching the wonders of children exploring is by far the most entertaining activity in the park.

08 (Cont.)

Closing trails and access not only impacts children exploration and enjoyment. I visit Sharp Park often and the lagoon was the equivalent of our 18th hole on our hiking trips that I miss deeply. I'm obviously not the only one as the fence along the berm is riddled with holes made by individuals that obviously believe as I do visiting the lagoon is a significant recreational activity. The ugly fence also diminishes the aesthetic of the golf course for those walking on the berm and creates an exclusionary atmosphere where before it felt as if the golf course was for everyone.

09

Side Note: The Lagoon is not a critical habitat for any species. It is not any more critical to the frogs than the water bodies in Golden Gate Park that may also support the California Red Legged Frog. The 22,000 acre San Francisco Peninsula Watershed is the critical habitat for the frogs, which are actually common along the coast but have declined in the Sierras. Because it was a salt water lagoon, it is also questionable as to whether the frogs where introduced or naturally

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09 (Cont.)

exist in the lagoon. There is also no substantive evidence that recreation is harming the frogs in the lagoon.

10

Equally concerning is the constant pesticide warning signs with little indication of where the spraying is occurring. This certainly impacts my willingness to go to the parks, particularly Mt Davidson, which appears to have spraying right next to the trail to kill the blackberries and ivy.

08 (Cont.)

Rec & Park seems to believe that creating "volunteer" stewardship programs in some way replaces or compensates for the millions of self-guided visits each year that residents make to these parks. While volunteering is important for many reasons, it does not replace personal, daily interactions with nature in the parks, plus the Natural Areas Program is alienating large segments of daily park users, thus reducing these users willingness to participate in volunteer programs or support Rec & Park. With more than 800,000 residents, the FY 2009-2010 volunteer hours of 129,703 of habitat restoration, gardening and recreation program support represents a minor element of people's recreational use of the park. In addition, the volunteer habitat restoration projects are in some cases assisting with decommissioning recreational access to the parks. It is also concerning that RPD is directing most volunteer hours to native plant gardening and few hours to other park maintenance needs.

Rec & Park recently used volunteers to create lovely new trails in the Corona Heights forest and re-opened a historic trail in the Interior Greenbelt forest and both are popular with residents. However, these trails do not compensate for the social trails to be closed in other Natural Areas or the intense "sensitive habitat" controls planned and both trails could easily have been created under the recreation or maintenance alternative. Both these trails indicate that residents appreciate having trails through forests and there are few such opportunities in San Francisco and SNRAMP's restoration and conservation objectives minimize the opportunity for creating more such highly valued trails through forests to meet the needs of residents.

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2 Evaluate the environmental impacts on public health related to discouraging daily exercise and recreation and on the changes to air quality for those exercising in the parks.

11 (Cont.) The DEIR does not specifically address the public health implications of policies that discourage exercise and diminish mental health benefits of the Natural Areas. In addition, trees benefit air quality and the plan does not address the impact of the removal of trees on air quality for those exercising or using the parks. The environmental impact on public health is significantly degraded by the SNRAMP proposed plan and the policies implemented by the Natural Areas Program since the creation of the SNRAMP.

12

The following are articles substantiate the need for such analysis:

How Getting Dirty Outdoors Benefits Kids, National Wildlife Federation
http://www.nwf.org/News-and-Magazines/Media-Center/News-by-Topic/Get-Outside/2012/04-12-12-Getting-the-Dirt-on-Dirt-for-Healthier-Happier-Children.aspx
See *Attachment D.*

Trees – The Air Pollution Solution, Center for Urban Forest Research
http://www.ncbi.nlm.nih.gov/pubmed/18648125
See *Attachment F.*

Parks and recreation settings and active living: a review of associations with physical activity function and intensity. Kaczynski AT, Henderson KA.
http://www.ncbi.nlm.nih.gov/pubmed/18648125

13 In addition, poison oak is increasing in the parks and herbicide use is escalating. From personal experience, I know that poison oak outbreaks are debilitating for one to two weeks. When I have a poison oak outbreak, I am typically bedridden for 4 to 5 days with a painful reaction. Allowing poison oak to proliferate near city park trails should never be allowed because of health reasons.

14

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Section 3. III.A.1 Background

14 (Cont.)

Clarify in the DEIR that most of the "Natural Areas" are predominately non-native plants and trees and not remnant or sensitive habitat. Most of the Natural Areas are planted forests and old livestock pastures that SNRAMP plans to convert to native coastal dunes, scrub, and grassland to treat as conservation areas instead of recreational areas. The statement "The Natural Areas Program mission is to preserve, restore, and enhance the remnant Natural Areas and to promote environmental stewardship of these areas" is incomplete without incorporating the current land use and type of land.

Throughout the SNRAMP, it discuss that the Natural Areas are predominated by plants that are not native to SF, and the urban forests are almost exclusively non-native plants. RPD often makes the claim in the media and public presentations that the Natural Areas are remnant Natural Areas is misleading and does not provide the public with a clear understanding of the extend of the SNRAMP plans.

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Attachment A

Excerpts from the Glen Canyon Creekside Trail Habitat Conservation Fund application for the Glen Canyon Loop Trail Improvement Project Environmental Evaluation Application dated 9/13/10



Red box designate specific concerns with the Application. These areas indicate that RPD did not disclose that this project relates to SNRAMP, which is in the process of an environmental review and the project contains significant modifications to the Natural Area that are based on the SNRAMP recommendations.

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Glen Canyon Creekside Loop Trail
Habitat Conservation Fund – Trails Category

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
Compliance Certification Form

Grantee: San Francisco Recreation and Park Department

Project Name: Glen Canyon Creekside Trail
Project Address: Diamond Heights Blvd. and Berkeley St.

When was CEQA analysis completed for this project? Date 9/29/2010

What document(s) was filed for this project's CEQA analysis: (check all that apply)

☐Initial Study ☐Notice of Exemption ☐Negative Declaration ☐Mitigated Negative Declaration

☐ Environmental Impact Report ☒Other Environmental Evaluation finding project Categorically Exempt from Environmental Review under the California Environmental Quality Act guidelines Section 15301, Class I (h) Maintenance and restoration of landscaping and trails.

Note: If a Master Environmental Impact Report was used to comply with CEQA you are certifying that the project is covered in adequate detail to allow the project's construction or acquisition.

Attach the Notice of Exemption or the Notice of Determination as appropriate.If these forms were not completed please attach a letter from the Lead Agency explaining why.

Lead Agency Contact Information:

Agency Name: San Francisco Planning Department Contact Person: Brett Bollinger
Mailing Address: 1650 Mission Street, Suite 400, San Francisco, CA 94103-2479
Phone: (415) 575-9024 Email: bbollinger@sfgov.org

Certification:
I hereby certify that the lead agency listed above has determined that it has complied with the California Environmental Quality Act (CEQA) for the project identified above and that the Project is described in adequate and sufficient detail to allow the project's construction or acquisition.

I represent and warrant that I have full authority to execute this CEQA Compliance Certification on behalf of the lead agency. I declare under penalty of perjury that the foregoing certification of CEQA Compliance for the above named project is true and correct.

Signature 9-30-2010 Date

Dawn Kamalanathan, Capital & Planning Mgr.
San Francisco Recreation and Park Department
Authorized Representative

Submitted by the San Francisco Recreation and Park Department

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Glen Canyon Creekside Loop Trail
Habitat Conservation Fund

GRANT SCOPE/Cost Estimate Form
Recreation Feature - Development of 8,500 Square Feet of existing trail construct. Construct new low retaining walls as needed, soil erosion control measures including biotechnical solutions,and provide new plantings and native plant restoration.
Recreation Feature - Development of 100 linear feet of new trail.
Recreation Feature - Closure of 1,177 linear feet of social trail and provide new protective fencing as needed to protect habitat and for public safety
Recreation Feature - Restore existing steps and provide new box steps as needed.
Recreation Feature - Construct turnpikes along trail as needed.
Recreation Feature - Install foot bridge or boardwalk near creek.
Recreational Feature - Install wayfinding and interpretive signage; trail welcome signage.

GRANT SCOPE items – PRE-CONSTRUCTION costs	HCF Grant	Required Match	Total
Pre-Construction and Planning Cost funded by non-grant match.	Subtotal: $0	$0	$0
GRANT SCOPE items – ACQUISITION or CONSTRUCTION costs	HCF Grant	Required Match	Total
Soil Binder	$ 880	$ 880	$1,760.00
BioTech Erosion Control	2,600	2,600	$5,200.00
Boardwalk	5,500	5,500	$11,000.00
Creek - cape ivy removal	1,200	1,200	$2,400.00
Fencing - split rail	9,400	9,400	$18,800.00
New Trail	10,000	10,000	$20,000.00
Retaining Walls (less than 2' tall)	13,302.5	13,302.5	$26,605.00
Retaining Walls (greater than 2' tall)	15,300	15,300	$30,600.00
Sign - Wayfinding	250	250	$500.00
Social Trail closure	19,662	19,662	$39,324.00
Box steps (4' wide)	1,500	1,500	$3,000.00
Trail Edging	1,450	1,450	$2,900.00
Trail Restoration	21,250	21,250	$42,500.00
Trailside Planting	37,462.5	37,462.5	$74,925.00
Turnpike	22500	22500	$45,000.00
Water Bars	1330	1330	$2,660.00
Total:	**$163,587**	**$163,587**	
TOTAL PROJECT COST			**$327,174**

APPLICANT's MATCH Sources (by name and date committed)	Total
2008 Clean and Safe Neighborhood Parks Bond , July 1, 2009	**$163,587**
Total of MATCH Sources	**$163,587**

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PART 3 – ADDITIONAL PROJECT INFORMATION	Yes	No
1. Would the project involve a major alteration of a structure constructed 50 or more years ago or a structure in an historic district? If yes, submit a *Supplemental Information Form for Historical Resource Evaluation*. Instructions on how to fill out the form are outlined in the *San Francisco Preservation Bulletin No. 16* (see pages 28-34 in Appendix B).	☐	☒
2. Would the project involve demolition of a structure constructed 50 or more years ago or a structure located in an historic district? If yes, a Historic Resource Evaluation Report (HRER)* will be required. The scope of the HRER will be determined in consultation with the Department's Preservation Coordinator.	☐	☒
3a. Would the project result in excavation or soil disturbance/modification greater than 10 feet below grade? If yes, how many feet below grade would be excavated? _____ What type of foundation would be used (if known)? _____	☐	☒
3b. Is the project site located in an area of potential geotechnical hazard as identified in the San Francisco General Plan or on a steep slope or would the project be located on a site with an average slope of 20% or more? If yes to either Question 3a or 3b, please submit a Geotechnical Report.*	☐	☒
4. Would the project involve expansion of an existing building envelope, or new construction, or grading, or new curb cuts, or demolition? If yes, please submit a *Tree Disclosure Statement*.	☐	☒
5. Would the project result in ground disturbance of 5,000 gross square feet or more?	☐	☒
6. Would the project result in any construction over 40 feet in height? If yes, apply for a Section 295 (Proposition K) Shadow Study. This application is available on the Planning Department's website and **should be submitted at the Planning Information Center**, 1660 Mission Street, First Floor.	☐	☒
7. Would the project result in a construction of a structure 80 feet or higher? If yes, an initial review by a wind expert, including a recommendation as to whether a wind analysis* is needed, may be required, as determined by Department staff.	☐	☒
8. Would the project involve work on a site with an existing or former gas station, auto repair, dry cleaners, or heavy manufacturing use, or a site with underground storage tanks? If yes, please submit a Phase I Environmental Site Assessment (ESA).* A Phase II ESA (for example, soil testing) may be required, as determined by Department staff.	☐	☒
9. Would the project require any variances, special authorizations, or changes to the Planning Code or Zoning Maps? If yes, please describe.	☐	☒
10. Is the project related to a larger project, series of projects, or program? If yes, please describe.	☐	☒
If yes, and the project would be over 55 feet tall or 10 feet taller than an adjacent building built before 1963, please submit an elevation or renderings showing the project with the adjacent buildings.		

* Report or study to be prepared by a qualified consultant who is contracted directly by the project sponsor.

Bowman-2

2008 Bond Trail Restoration Projects

Decommissioning "Natural Areas" Trails





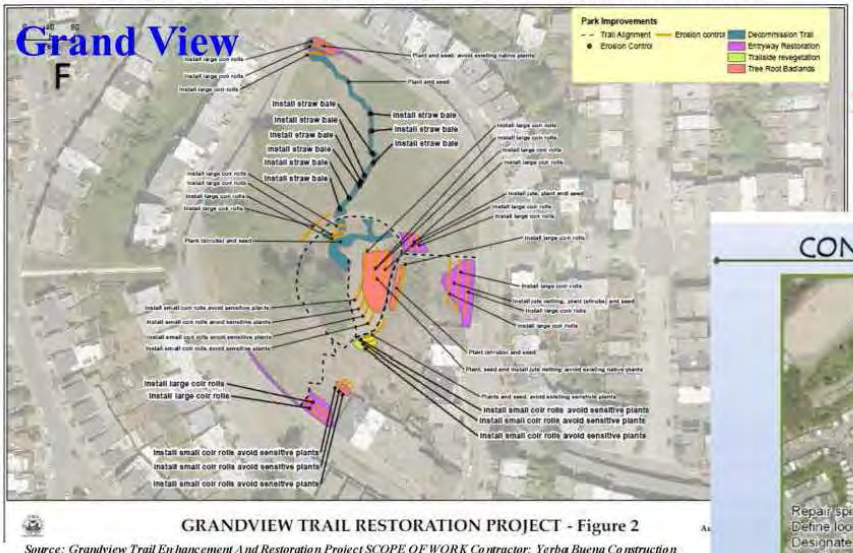


Draft DEIR shows 9.4 miles (25%) cut in trails in "natural areas" in SF however 2008 bond trail restoration projects are decommissioning more

Billy Goat Hill 2010 Restoration

Decommisioned ~ 63 % of Trails

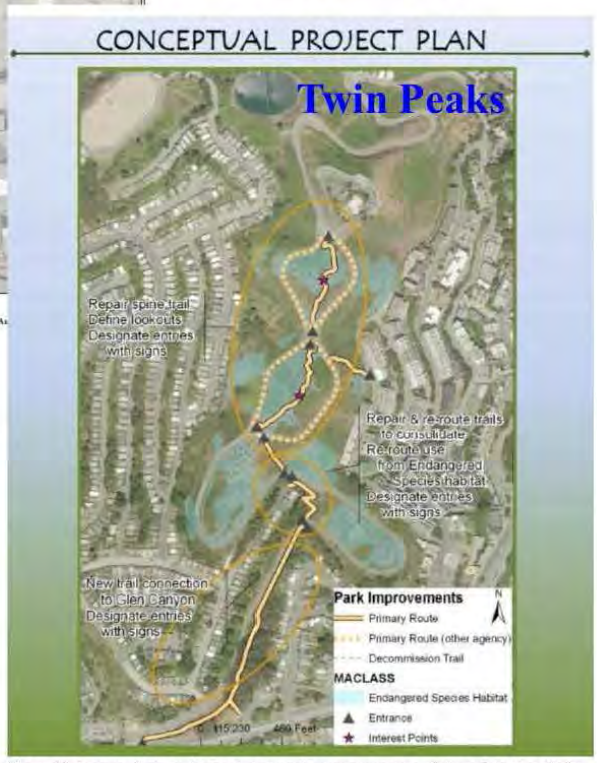
Much greater than 29% cut planned in Draft SNRAMP DEIR



Grand View 2011 Restoration

Decommisioned ~ 21 % of Trails

Comparable to 24% cut planned in Draft SNRAMP DEIR



Note: % decommissioned based on rough measurements of the original trails in the SNRAMP maps (not shown here) and the trail restoration project maps.

"Natural Areas" Welcome Signs

"Important Habitat"

"Stay on Designated Trail"



PlusFrequent Pesticide Notices

Twin Peaks Conceptual /Planned Restoration Plan

Decommisions ~ 66 % of Foot Trails

Much greater than 21% cut planned in Draft SNRAMP DEIR (draft seemed to consider non-RPD paved car traffic roads as trails)

Bowman-2


Neglected & Removed Forests Degrade "Natural Areas" Aesthetics
Examples of Deforestation in Areas Zoned to Retain Existing Forest (MA-3)
Grand View "Forest"
Pine Lake "Forest"
2006/2012 Trees & Saplings Removed
Interior Green Belt Forest
2011 Trees Clear Cut Next to Trail Entrance
Glen Canyon "Forest"
Unremediated Erosion
Causes Failed/Hazardous Trees
Example of "Neighborhood Park" vs "Natural Area" Forest Buffer
The long-term goal for MA-1 and MA-2 zones is to slowly convert to native scrub and grassland.
UN-restored
Pine Lake
Restored
"Neighborhood Park"
Trees create refuge from sights and sounds of city
"Natural Area" (MA-2)
Initial trees removed exposing houses
2006 132 trees removed from Pine Lake -
NAP MA-2 still predominately non-native plants

Bowman-2


The Dirt on Dirt
BE OUT THERE
NATIONAL WILDLIFE FEDERATION
How Getting Dirty Outdoors Benefits Kids

Bowman-2

All the Fuss About Mess

"Don't track mud in the house!"

"Wash your hands before dinner!"

"You can't play with that, you don't know where it's been!"



Parents wear those phrases out like old blue jeans put through the spin cycle too many times. Many have come to see D-I-R-T as a four-letter word. Only two decades ago, kids made forts with sticks and mud, waded up to their knees in streams. How many do that now? Fears about dangers lurking in the muck (microbes, parasites and amoebas, oh my!) and a societal slant in favor of over-sanitization keep families from letting kids do what comes naturally, which is to go outside and get a little messy.

"If your child isn't coming in dirty every day, they're not doing their job."

Dr. Mary Ruebush, immunologist and author of ***Why Dirt is Good: 5 Ways to Make Germs Your Friends.***

But here's a dirty little secret:

Dirt and germs can actually be good for kids. The things small children want to do outside, like building mud castles, splashing around in puddles and rolling down hills until their clothes are irreparably grass-stained—all those things that make mothers reach for hand sanitizer and laundry detergent—may, in fact, be a grubby little prescription for health and happiness.



Bowman-2

Unfortunately, boys and girls today spend the better part of their time, seven hours per day on average (Rideout, 2010), indoors, in the sterile company of technology, rather than following their in-born impulses to explore the natural world with their senses. This indoor childhood is damaging to kids. In fact, in the last twenty years as kids spent less and less time outside, childhood obesity rates more than doubled (CDC, 2008), the United States became the largest consumer of ADHD medications in the world (Sax, 2000), 7.6 million U.S. children are vitamin D deficient (Kumar, 2000), and the use of antidepressants in pediatric patients rose sharply (Delate, 2004).

When kids do leave the house, a growing body of research suggests the exact things we do in the name of protecting them from dirt and germs, such as not letting them get too messy and frequently using hand sanitizers and anti-bacterial products, can inhibit their mental and physical health and resilience.



This report reveals how getting down and dirty in the great outdoors — far from being a bad thing — helps children lead healthier, happier lives.

The DIRT on DIRT: How getting dirty outdoors benefits kids

For the Health of It:
How getting messy outside benefits the heart, skin, and immune system

The Joy of Dirt:
How playing outside in the dirt increases happiness, reduces anxiety and enhances learning

Good Clean (Dirty) Fun:
Dirty-hands-on tips for parents and caregivers

Bowman-2

For the Health of It

Getting messy outside benefits the heart, skin, and immune system.

Children who don't spend time outside run the risk of serious health issues, such as obesity (CDC, 2008), myopia (Reuters, 2009), and vitamin D deficiency (AAP, 2009). The good news is that outdoor activities kids love, like running, jumping, climbing, playing games with friends, and taking nature walks are a great strategy for keeping children healthy.

In addition, experts say, if we dig a little deeper—literally—there are even more benefits to be found. Playing in the dirt and even ingesting a little along the way, some researchers say, helps children build stronger immune systems. The Hygiene Hypothesis, first put forth in the 1980s, holds that when children are too clean and their exposure to parasites, bacteria, and viruses is limited early in life, they face a greater chance of having allergies, asthma, (Yazdanbakhsh, 2002) and other autoimmune diseases such as multiple sclerosis and type-one diabetes during adulthood (Platts-Mills, 2005).

While no one disputes the wisdom of basic, common-sense sanitation measures, such as washing hands and using hand sanitizer when soap and water aren't available, experts say some exposure to dirt and germs does not hurt children, and may very well help.





According to Dr. Joel Weinstock, director of gastroenterology and hepatology at Tufts Medical Center in Boston, "Children raised in an ultraclean environment are not being exposed to organisms that help them develop appropriate immune regulatory circuits." For their own benefit, Dr. Weinstock argues,

"Children should go barefoot in the dirt, play in the dirt and not have to wash hands when they come in to eat."

(Brody, 2009)

Bowman-2

Dr. Mary Ruebush, immunologist and author of *Why Dirt is Good: 5 Ways to Make Germs Your Friends,* counts letting kids play in the dirt as immune-system-building step number one. "Let your child be a child," she says. "Dirt is good. If your child isn't coming in dirty every day, they're not doing their job. They're not building their immunological army. So it's terribly important."
(CBS News, 2009).



You know the smile on your child's face when he's covered in mud? Doesn't it just warm your heart? Well, it is benefiting his. Dirt, says a Northwestern University study, is good for childrens' cardiovascular health. Analyzing data collected from thousands of children over two decades, researchers have concluded that when children are exposed to germs and pathogens during infancy their risk of cardiovascular inflammation in adulthood, a precursor to heart attacks and strokes, is reduced. The study found that children who had early exposure to animal feces and infectious microbes like those found outside in soil resulted in lower levels of CRP, or C-Reactive Protein, a biomarker for cardiovascular problems, later in life. (Channick, 2010).

Being too clean also can be a liability for kids who get a lot of scrapes and cuts, which is pretty much all kids.



Luckily, dirt's benefits are skin-deep as well.

Researchers at the University of California School of Medicine, San Diego, found that a common bacterial species that lives on skin, Staphylococci, triggers a pathway that helps prevent inflammation, improving skin's ability to heal (BBC News, 2009).



Bowman-2

The Joy of Dirt

Playing in the dirt increases happiness, enhances learning.



According to a four-year study that examined approximately two million children under the age of 18, antidepressant use is on the rise in kids, with the fastest growing segment found to be preschool children aged 0-5 years (Delate, 2004). While not a substitute for medication, an increasing number of experts are recognizing the role of nature in enhancing kids' mental health. It's easy to see the effect when you watch children play outside. Kids are different when they're outdoors; free of school pressures and harried schedules, they relax and simply become kids. In fact, according to one study, children's stress levels fall within minutes of seeing green spaces, making outside play a simple, no-cost, and time-efficient antidote for an overstressed child (Kuo, 2004).

Studies now also show that going beyond seeing green spaces to touching them has a powerful and positive effect. Making direct contact with soil, whether through gardening, digging for worms, or making mud pies has been shown to improve mood, reduce anxiety, and facilitate learning.

In a study by Bristol University, Mycobacterium vaccae, or M. vaccae, a "friendly" bacteria found in soil, was shown to activate a group of neurons that produce the brain chemical serotonin, enhancing feelings of well-being, much in the same manner as antidepressant drugs and exercise. Interest in the study arose when patients treated with M. vaccae for another health issue reported increases in their quality of life (Lowry, 2007).



"The typical human probably harbors some 90 trillion microbes. The very fact that you have so many microbes of so many different kinds is what keeps you healthy most of the time."

Dr. Mary Ruebush, immunologist and author of ***Why Dirt is Good: 5 Ways to Make Germs Your Friends.***

Bowman-2

The results, "leave us wondering if we shouldn't all be spending more time playing in the dirt," says the study's lead author Dr. Chris Lowry.



Beyond raising mood, time kids spend in the dirt may be the best preparation for the classroom, according to researchers at The Sage Colleges in Troy, New York. They wondered whether, in addition to its antidepressant effect, M. vaccae may also have an effect on schoolwork. "Since serotonin plays a role in learning, we wondered if live M. vaccae could improve learning in mice," says Dr. Dorothy Matthews who co-authored the study. What they found was the bacteria did, in fact, significantly improve learning, and, in addition, the mice demonstrated fewer anxious behaviors.

"This research suggests that M. vaccae may play a role in anxiety and learning in mammals," says Matthews. "It is interesting to speculate that creating learning environments in schools that include time in the outdoors where M. vaccae is present may decrease anxiety and improve the ability to learn new tasks." (Science Daily, 2010).



Bowman-2

Good Clean (Dirty) Fun

Dirty hands-on tips for parents and caregivers.

Getting messy is a win-win for children, because it's also FUN. Here are some wonderful ways to get started.



Be an Artist

- Give your child a stick and a muddy surface to draw on. Mistakes are no problem; mud is a very forgiving medium. Just smooth them over and start again!
- Mud prints are fun too. Your child's muddy hands and/or feet can stamp cool patterns onto a sheet of paper. If you prefer to keep it simple, the sidewalk is another canvas.
- And then there's sculpture. Mud balls can become out-of-season snowmen or abstract sculptures. If your child's creation isn't sticking together, just add more water.

Be a Builder

- Your children can make buildings of all shapes and sizes if they use sticks to create a frame and pack mud on to it. Houses or forts perhaps, a castle with a moat, a stable to put toy horses in.
- If they also like the idea of large-scale public works, have them make a river by digging a trench in the mud or dirt. Then, add water as needed. Most importantly, build a dam to protect the town!



For more wonderful outdoor activities visit: www.BeOutThere.org/ActivityFinder

Bowman-2

Be a Biologist

- Take a walk through your neighborhood or a local park so your children can learn which animals go under cover during rain and which come out in this type of weather. You might not have pigs nearby, but some dogs will happily wallow in a mud puddle if they have a chance. You may also see birds swooping down to take a bath.
- This is also a fine time to study worms that surface to breathe when their burrows fill with water. Supply a magnifying glass so your children can get an even closer look. Then, enlist the kids in a Worm Rescue Squad. Ask them to move any worms they find on the sidewalk back to the dirt so they don't dry out.
- Now, help them build a worm hotel.

Be a Chef

- If you're going to play in the mud, why not make some mud pies? If you have some old cake or pie tins, great. Otherwise, shallow plastic containers work just fine. Once the pies are "baked," it's time to make them beautiful! Encourage your children to scour the yard for pebbles, petals, and leaves that will make perfect decorations on top.
- Collect dirt, grass, leaves, twigs, and acorns in a large container, and you have a bountiful nature salad. Add some water, and it's mud stew! (Remind small children to play with their dirt food, not eat it!)



Note: If there are concerns about toxins in your neighborhood soil, or if you don't want to dig up the yard, you can purchase an organic potting soil from a local gardening or landscaping shop and let kids play in that.

Be a Gardener

- Little hands love to garden! Get some kid-size gardening tools and let kids help mom and dad plant vegetables—it's so exciting to watch them grow and it just might help kids eat more of them.
- Read *Growing Vegetable Soup,* by Lois Ehlert for inspiration.
- Let kids choose and plant flower seeds or bulbs. See if they can remember what colors they planted come spring.

Got Galoshes?

All you need for these filthy-fun activities are clothes you don't mind getting dirty and some mud! If it hasn't rained in a while, you can mix up your own with water and dirt. Remember to have clean clothes and some towels ready—and for heavy mud stains, rinse first outside with a hose before washing in the machine.

Bowman-2

Grime is Good

The last word on dirt.

Who would have thought something we spend so much time wiping, sweeping, and mopping away could be so good for kids' health? Spending time outside is great for kids, and studies show that getting dirty while they're out there might be even better. With benefits to immune systems, hearts and skin, as well as kids' emotional wellbeing and learning skills, doctors may well soon prescribe:



Bowman-2

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Bowman-2

Join the Be Out There movement



National Wildlife Federation's (NWF) **Be Out There** is a national movement to give back to American children what they don't even know they've lost – their connection to the natural world.

With a wealth of activities, events, and resources, Be Out There reconnects families with the great outdoors to raise happy, healthy children with a life-long love of nature.

Join us and take the pledge to Be Out There

www.BeOutThere.org/Pledge

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Bowman-2











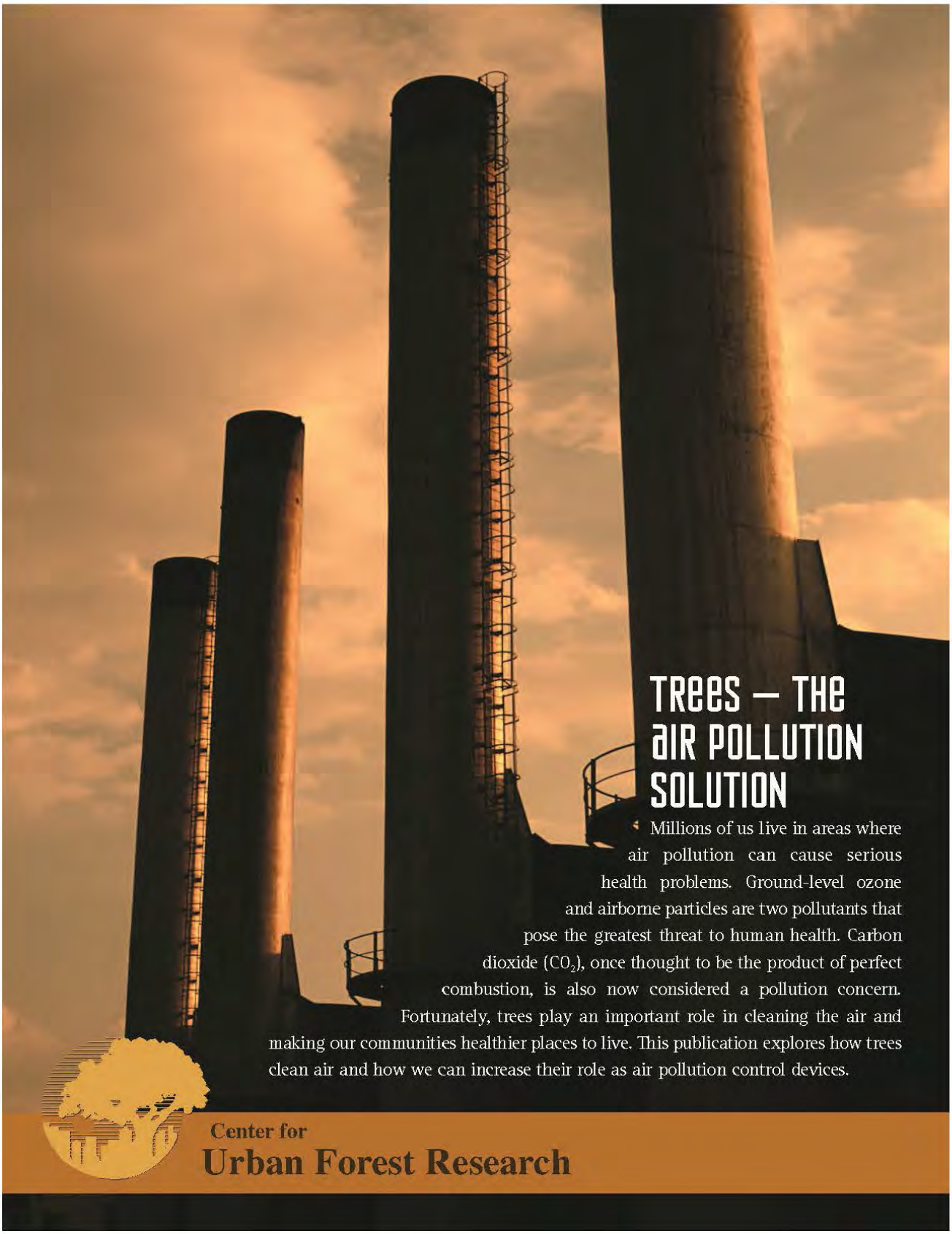
Rows of NAP Fencing close access & mar aesthetics

unlike Golden Gate Park which boosts of "NO Keep Off the Grass Signs"

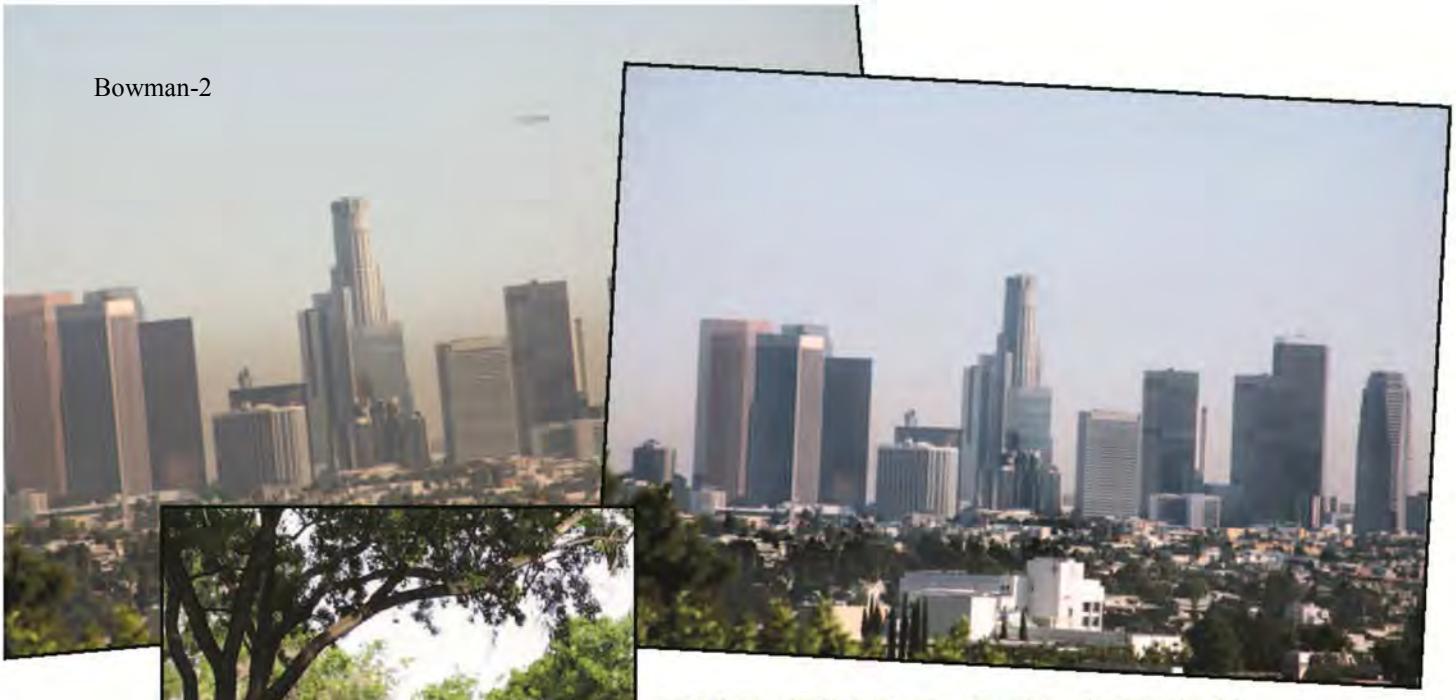




Bowman-2


TREES – THE AIR POLLUTION SOLUTION
Millions of us live in areas where air pollution can cause serious health problems. Ground-level ozone and airborne particles are two pollutants that pose the greatest threat to human health. Carbon dioxide (CO_2), once thought to be the product of perfect combustion, is also now considered a pollution concern. Fortunately, trees play an important role in cleaning the air and making our communities healthier places to live. This publication explores how trees clean air and how we can increase their role as air pollution control devices.
Center for
Urban Forest Research

Bowman-2





THE TREE SOLUTION

CO_2 REDUCTION

Community trees reduce atmospheric CO_2 by storing it or by reducing demand for heating and cooling. On the other hand, vehicles, chain saws, chippers, and other equipment release CO_2 during the process of planting and maintaining trees. And eventually, all trees die and most of the CO_2 that has accumulated in their woody biomass is released into the atmosphere through decomposition. A comprehensive study of these "opposing" effects was conducted in Sacramento County, California. Its 6 million trees contribute to an annual net reduction of CO_2 by about 335,000 tons. Of that total, 262,300 tons of CO_2 remain sequestered in the trees. But, the encouraging piece of this annual reduction is that an additional 83,300 tons – nearly 25% of the reduction – is attributable to tree shade on homes, buildings, and other structures. The CO_2 released due to tree planting, maintenance, and other program-related activities is only about 2 – 8 percent of annual CO_2 reductions and the release of CO_2 through decomposition accounts for only another 1 percent. So, the total CO_2 released in Sacramento County is less than 10,600 tons per year.

OZONE & PARTICULATE REDUCTION

Three factors principally affect the uptake of ozone and particulates: concentrations of pollutants, canopy cover, and "surface roughness." Sacramento County's 6 million trees remove approximately 1,607 tons of air pollutants annually. As expected, they were most effective at removing ozone and particulate matter (PM_{10}). These trees removed 665 tons of ozone and 748 tons of PM_{10}.

WHAT IS THIS SERVICE WORTH?

Our findings indicate that the reduction of atmospheric CO_2 by the 6 million trees in Sacramento County has a current annual value of $3.3 million. That means that each tree's contribution is worth $0.55/yr on average. The total value of the annual reduction of ozone and particle pollution is $28.7 million, or nearly $5 per tree on average. However, it is important to understand that even though trees are highly efficient at reducing air pollution, their contribution to the overall reduction of air pollutants is fairly small, amounting to only about 2 percent of the total emitted. Nearly 98% of air pollution is currently not being "treated" by trees.

THE POLLUTANTS

OZONE *is not emitted directly, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOCs) in sunlight. The rate of ozone formation is increased by higher air temperatures. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gas vapors, and chemical solvents are some major sources of NOx and VOCs.*

PARTICULATES *Particle pollution consists of microscopic solids or liquid droplets so small that they can be inhaled deep into our lungs, causing serious health problems. Most of them start as smoke and diesel soot and form in the air from NOx and sulfur oxides (SOx), even obscuring our visibility.*

CO_2 *is a greenhouse gas that traps the earth's heat and contributes to global warming. Human activities add greenhouse gases to the atmosphere at a rate of about 3 percent of annual natural emissions – enough to tip the balance and overwhelm the environment.*

Bowman-2

THE STRATEGY: The Planting Solution



Get trees into your State Implementation Plan:

1. Conduct a resource assessment. Assess the current canopy cover in your Air Quality Management District (AQMD). Determine how many potential sites could be successfully planted or regenerated.
2. Develop a range of planting scenarios representing business as usual, and selected future plantings to determine the impact of different species mixes and tree densities on air quality 10 to 40 years in the future.
3. Model the effects of planting scenarios on air quality. Using data in the canopy cover assessment, conduct a modeling analysis to account for the following:
   - Impacts of air temperature changes on atmospheric chemistry including formation of ozone, other oxidants and particulate matter.
   - Impacts of deposition (removal of pollutants from the atmosphere) changes on air pollutant concentrations.
   - Impacts of increased tree cover on biogenic volatile organic compounds (BVOCs) emissions. Emissions of BVOCs are of concern because they are precursors to ozone and particulate matter formation.
   - Impacts of avoided emissions changes. Avoided emissions may occur because of reduced urban temperatures resulting from increased tree cover. Examples include reduced mobile source emissions and reduced emissions related to power generation for air contitioning.
4. Develop a plan to increase tree canopy cover based on the modeling. Be sure to consider the number to plant, where to plant, species (particularly the high emitters of BVOCs), growth, ultimate size, maintenance requirements, and mortality. For information on tree selection go to: *http://selectree.calpoly.edu*
5. Consider developing a database to account for new plantings and a change in tree canopy cover. This program evaluation will be required to verify that the estimated increase in canopy is attained. One idea being used in Houston is a web-based system for tracking new plantings.
6. Submit measure within your State Implementation Plan (SIP). Since trees are new to the SIP process, work with your EPA regional office and local AQMD to develop your tree canopy enhancement program.

Consider both urban forestry options – new tree plantings and preservation of canopy.

1. New tree plantings include all trees added to your area, both public and private. Be sure to count any natural regeneration.
2. Preservation of canopy is a totally different approach. The goal here is to maintain existing canopy cover and you must demonstrate that canopy was preserved by incorporating various urban development strategies. In other words, a predetermined loss of canopy was avoided because of your intervention.

Increase the traditional tree planting programs in your state.

Don't stop what you are already doing. Make a good thing better.

Think extremely long term (40-50 years).

Once you have reached attainment, planting millions of trees to mitigate air pollution will be part of a long-term plan. Bad air quality is a regional problem that requires a regional solution, especially one requiring millions of trees. Communities must work together in public-private partnerships to achieve better air quality.

Develop a Greenprint project for your region or state.

Greenprint in the Sacramento, California region is a great example of how to establish a regional coalition. Greenprint invites a region's cities and counties to develop livable and sustainable communities by building the best urban forests. Adequate tree canopy contributes to a healthy community. For more on Greenprint go to: *http://www.sactree.com/aboutUs/programsServices/greenprint/STF_GP_broch_v12.pdf*

Continue caring for and nurturing your existing trees.

They already provide the benefits you are seeking. The air pollution solution is to add more of them.

Follow the progress we are making as a nation.

Periodically visit our partnership website at: http://*www.treescleanair.org*

Bowman-2

Resources

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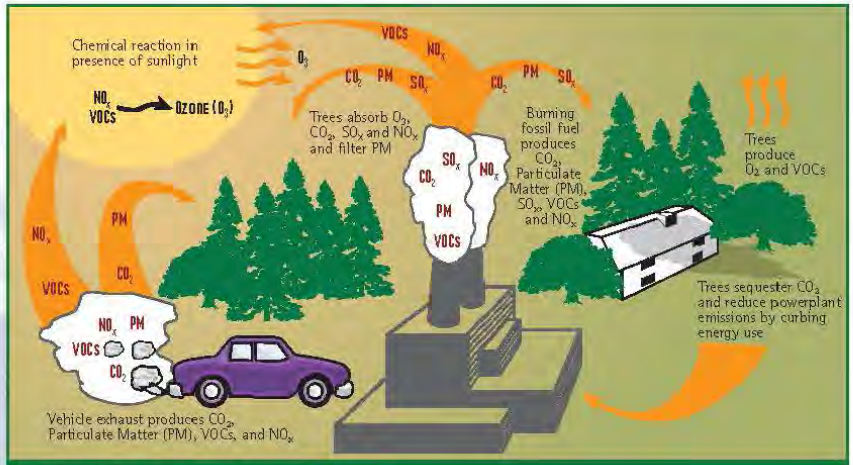

The Tree Factor – "Green Cleans"

Trees absorb, bind, intercept, and sequester pollutants. They also reduce air temperatures, provide shade, and reduce winter wind to curb energy use.

Pollutants: Particulate Matter (PM), Carbon Dioxide (CO_2), Nitrogen Oxides (NOx), Volatile Organic Compounds (VOCs), and Sulfur Oxides (SOx)

Community trees help to reduce air pollution by:

- absorbing the gaseous pollutants through leaf stomata during the normal exchange of gases.
- binding or dissolving water soluble pollutants onto moist leaf surfaces.
- intercepting and storing larger particulates on outer leaf surfaces, the epidermis, which may be waxy, resinous, hairy, or scaly.
- capturing and storing particulates on the uneven, rough branch and bark surfaces.
- sequestering CO_2 aboveground in woody tissue and belowground in the roots.
- lowering local air and building temperatures through transpiration, shading, and reducing winter wind infiltration, thus lessening the demand for cooling and heating and the formation of ozone.



Planting Pollution Control

What an opportunity!

The contribution of trees could be substantially increased if we strategically plant a large number of trees and provide long-term stewardship to maximize their health and longevity. This will maximize their benefit potential and provide us with future energy savings and improved air quality. A study we conducted in 2002, and summarized in *Green Plants or Power Plants*, found that 50 million new trees in California would eliminate the need for seven new 100-megawatt power plants–and all of the resultant air pollution.

For Additional Information On:

Controlling air pollution with trees go to:
http://www.fs.fed.us/psw/programs/cufr/products/cufr562_Newsletter_Jan05_Special_Edition.pdf

Air pollution and the law go to:
http://www.epa.gov/oar/oaqps/peg_caa/pegcaain.html

The Clean Air Act go to:
http://www.epa.gov/air/caa

Brown-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Thursday, December 08, 2011 10:23 AM
To: Bock, John
Subject: Fw: My comments on the NAP EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 12/08/2011 10:23 AM -----

Bill Wycko/CTYPLN/SFGOV
12/07/2011 10:13 AM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: My comments on the NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 12/07/2011 10:14 AM -----

zoie nicholas <zoie_pa28@yahoo.com>
10/28/2011 11:01 AM
Please respond to zoie nicholas <zoie_pa28@yahoo.com>

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: My comments on the NAP EIR

Brown-1

Dear Mr. Wycko,
I am a senior who walks my dog in the dog park areas of Bernal Hill, McLaren Park and Lake Merced. I walk to maintain my health, social interaction and as my entertainment. I walk with my dog for safety. I am disappointed in reviewing the NAP EIR for the reasons cited below. I am an environmentalist, but I also believe in intelligence, reason and practicality. The issue of off-leash dogs is a significant one for me and I have become politically active around this issue as are thousands of other dog owners who are subject to the unreasonableness of your and the GGNRA plan.

I wish to to consider the following issues:

1) The NAP EIR provides no evidence to prove claims that dogs have an impact on plants and wildlife in natural areas. An EIR should be based on scientific evidence, and there is little presented here. Because the NAP EIR's analysis of impacts from dogs is not based on any evidence, the analysis is inadequate. Without any demonstrated evidence of impacts from dogs, there is no justification for excluding people with off-leash dogs from natural areas. There is, therefore, no justification for the closure of the DPA at Lake Merced, nor for the reductions in the DPAs at McLaren Park and Bernal Hill.

2) The NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. These studies were provided to the Planning Department by SFDOG in its comments on the Initial Study for the
01 NAP EIR. Ignoring them shows that the NAP EIR is inadequate and inaccurate when it comes to dogs and "impacts."

3) The NAP EIR repeatedly says: Dogs MAY be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate.

4) In several places, the NAP EIR says: Observations indicate dogs are impacting erosion, or plant damage, or damage to natural communities (pp. 471, 500, 505, 516, 519), yet offers no information on these "observations." Who made them? Were they done in a scientifically rigorous way? Were they made by people biased against dogs? We have seen with the GGNRA's attempts to get rid of dogs and with Point Reyes attempts to get rid of an oyster farm that reports by "observers" biased against dogs or oyster farmers do not stand up to independent scientific scrutiny. Is this the case here as well? We do not know,
01 (Cont.) since the NAP EIR provides no information about them. Again, EIRs should be based on solid, scientific data, and definitely not on anecdotal "observations." If not, their analyses cannot be trusted and are inadequate.

5) The NAP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. Do people in the natural areas with dogs cause significantly more
02 impacts than people in the natural areas without dogs? Clearly a 200-pound person will have a much more significant impact on plants than a 20-pound dog. Because this was not evaluated in the EIR, the analyses presented in the NAP EIR are inadequate.
If there is little difference in impacts, then the EIR cannot justify banning dogs from the natural areas.

6) The NAP EIR considers only the NAP plans to close 15% of the legal off-leash space in SF city parks when considering impacts on the remaining DPAs and on recreation. However, the NAP
03 plan also calls for expanding the most sensitive areas within natural areas, and this potentially could result in the closure of significantly more DPAs (up to 80% of the total off-leash space currently available in city parks, off-leash space that is

2

Brown-1

03 (Cont.) located either within or adjacent to a natural area). These added closures (up to 80%) will significantly increase the impacts on recreation, on people with dogs, and on the remaining DPAs. These increased impacts were not considered in the EIR when it evaluated the Project Alternative, and without them, the analysis of the Project Alternative is incomplete and inadequate.

04 7) The NAP EIR acknowledges that the NAP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's plans to cut off-leash access by 90%, will have a significant and unavoidable cumulative impact on remaining off-leash areas in city parks and on recreation. However, the EIR says that because they don't know the final GGNRA plan, they cannot analyze what that cumulative impact will be. We do know what the GGNRA originally proposed (cutting off-leash access on its lands by 90%) and the cumulative impact of that plan, when combined with the NAP closures can and should be analyzed. We saw on Tsunami Friday what the impacts could be. The GGNRA closed both Fort Funston and Ocean Beach to all visitors on the morning of Friday, March 11, 2011 because of concerns that a tsunami triggered by a major earthquake in Japan would strike the coast. The busiest weekend days normally find about 60 dogs at the Pine Lake DPA at any one time. Weekday mornings normally have far fewer, closer to 20. On Tsunami Friday, a Rec and Park Dept staffer counted over 200 dogs at the Pine Lake DPA at 10 am, almost 10 times more dogs than on a normal weekday and more than 3 times the maximum numbers of dogs seen on weekends. This example can be used to quantify the cumulative impacts of the GGNRA and NAP closures of off-leash space. The analysis presented in the EIR, which does not contain this, is inadequate.

05 8) The number of DPAs in city parks listed in the NAP EIR is wrong. Page 155 says there are 19 DPAs, when the actual number is 29. To get such a basic fact wrong is shocking and calls into question other information about dogs, such as their alleged "impacts' on plants and wildlife.

06 9) The NAP EIR incorrectly summarizes RPD's so-called moratorium on creating new DPAs until a systemwide survey of DPAs is conducted. The NAP EIR says that this moratorium was a directive from the Rec and Park Commission that was announced at the October 10, 2006 meeting of the RPD Dog Advisory Committee (DAC). This is not true. The idea of a systemwide survey of where dogs and DPAs are in San Francisco came not from the Commission, but from RPD staff. It was not discussed at the October 2006 DAC meeting. It was not fully discussed in the DAC until 2007 when RPD made the decision to "sunset" the DAC and conduct the citywide survey. While the survey was being conducted, the DAC was told, there would be a hold on new DPAs. The DAC was told the survey would take maybe a year or a year and a half at the most. The idea of the citywide survey was not presented to the Rec and Park Commission until mid-2007. This was no "direction from the Commission." This hold was never meant to be permanent. Yet the NAP EIR implies it will last for decades (the length of time covered by the NAP EIR) and therefore the EIR does not have to consider new DPAs. In the four years since the DAC was sunset, however, RPD has done nothing on the citywide survey. And now this inaction by RPD is being used to prevent the EIR from considering whether or not creating new DPAs to replace ones closed by NAP could decrease the impacts of the closures. The NAP plan will last for decades, and for the NAP EIR not to consider a major mitigation like opening new

07 DPAs to replace closed ones because of a temporary halt on new designations is absurd. Any analysis of alternatives that does not include this possible mitigation is incorrect and inadequate.

08 10) The NAP EIR assumes that, because the DPAs at McLaren Park and Bernal Hill are not being closed completely, the 15% closures will not cause a significant number of people to drive to other parks to walk their dogs.
People will just walk in different parts of the parks that are still off-leash, the EIR assumes. However, the NAP EIR does not take into account the topography of the remaining land in the two DPAs. If what is left is mostly steep hills, people will not be able to walk there with their dogs.
Thus, even though the acres of off-leash space may remain relatively high in these two parks, the amount of space that is practically available for off-leash access may be much less. This will increase the impacts on recreation and also will make it more likely that people will be forced to drive to other parks to walk their dogs off-leash. This must be included in the analysis of any and all alternatives. Since it is not, the analysis in the NAP EIR is inadequate.

09 11) The NAP EIR does not adequately consider the impacts of the use of

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Brown-1

herbicides, especially Garlon, on dogs who walk either within or adjacent to natural areas (this applies whether the dog is on- or off-leash). In a paper on the effects of Garlon, the Marin Municipal Water District (http://www.marinwater.org/documents/Chap4_Triclopyr_8_27_08.pdf) notes that Garlon can cause kidney problems in dogs because of their limited physiological ability to excrete weak acids such as those in Garlon in their urine (they are somewhat unique among mammals in this). The NAP's reliance on herbicides to speed the removal of non-native plants in natural areas will have a negative impact on the health of dogs walked where it has been applied. This is especially true in Glen Canyon, where Garlon was applied over 30 separate times last year. This impact was not considered in the Hazards and Hazardous Materials section of the NAP EIR and a discussion of the health impacts on dogs of repeated exposure to Garlon should be included.

09 (Cont.)

12) The NAP EIR says that the impact of people driving to other parks to walk their dogs because of the closures of 15% of off-leash space at Lake Merced, Bernal Hill, and McLaren Park will be less than significant because there will remain sufficient off-leash space in those parks (except for Lake Merced). However, the EIR does not consider the impact of people driving to other parks if 80% of the legal off-leash space in city parks is eventually closed because NAP claims impacts from dogs. This must be included in the analysis of the Project Alternative, and will likely show a much more significant impact than what the EIR now shows.

10

13) The NAP EIR refers to dogs as "nuisances". The EIR does not consider any positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. This lack is especially noticeable in sections dealing with impacts on recreation of the various alternatives considered. The reason so many people walk their dogs off-leash in Bernal Hill and McLaren Park is that those areas are large enough that people can hike long distances with their dogs off-leash. The majority of DPAs in city parks are too small for similar hikes. You can play fetch with a dog in these smaller DPAs, but not take a long walk. You cannot have the same recreational experience in a small DPA that you can have in a larger one; DPAs are not interchangeable. This difference in DPAs creates a significant impact on the recreational experience for dog walkers if the DPAs in Bernal Hill or McLaren Park are closed. In addition, there would be a significant negative impact on the physical and mental health of dog walkers if 80% of off-leash space were closed because NAP claims impacts from dogs. This is not considered in the NAP EIR, which is inadequate without it. These negative impacts on the physical and mental health of dog walkers of the 80% closure will be amplified considerably when combined with closures of off-leash in the GGNRA. This must be considered in the cumulative impacts sections.

11

11 (Cont.)

14) The NAP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA. Fences are mentioned briefly, while DPA closures are featured prominently in the EIR.
Other mitigations – education, signage, more extensive fencing, etc. – are not discussed. NAP seems to go straight from a single impact to closing the DPA.

12

15) The NAP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NAP EIR never considers the impact on the social community of people who walk with their dogs in the DPAs and portions of DPAs that NAP wants to close. This community, in many cases, defines the "existing character" of the park. Dog walkers are perhaps the most diverse group of park users. If you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. There are few places in San Francisco where you will see so many different types of people interacting without rancor. People who walk in the same park at the same time every day know their fellow dog walkers.
These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NAP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate.

13

13 (Cont.)

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Brown-1

16) The NAP EIR does not adequately consider the impacts on the social fabric of San Francisco if one-quarter of its city parklands are closed to residents. Natural areas are not generally accessible to people, whether they have a dog or not. The NAP plan calls for the closure of many trails and reduction of recreational access. You cannot play catch with your child, have a picnic lunch, or play with a dog in a natural area. It can only be a plant museum. The EIR does not adequately consider the significant impact on families and the sense of shared community that access to parks fosters in our urban setting.

14

17) The NAP EIR does not adequately analyze the impacts on recreation of NAP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas. These plants, by virtue of their special status, trigger automatic federal and state protections, the primary one of which is severe restrictions on access to people and dogs. The NAP goal to preserve existing remnants of historical habitat does not require the planting of threatened and endangered species.

15

There are plenty of native species that are not threatened or endangered that can be planted in San Francisco's urban parks. Ecologists have noted that planting a few sensitive species plants does little to preserve the species. It is not an ecological decision; it is a landscaping decision. So why does NAP feel it should plant so many sensitive species when it knows their mere presence will "require" NAP to restrict access to its lands? The NAP EIR should consider the major negative impact on recreation that planting threatened and endangered species causes in its analysis of the Project Alternative and other alternatives.

15 (Cont.)

18) The NAP EIR does not consider impacts on recreation and land use from the fact that NAP controls the entire park in over half of the parks (18 of 32) where there is a natural area. No other recreational use is possible in those parks. In an additional 10 parks, NAP controls over 50% of the land.

Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NAP. A majority of land under NAP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2.

16

In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NAP EIR must consider this large-scale denial of access when analyzing the Project Alternative.

19) The NAP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. In most parks, the NAP plan allocates fewer than 20 days/year for planting/maintenance of the natural areas. In 16 of the 32 natural areas, the total maintenance planned is 10 or fewer days each year. There are countless stories of volunteers who have spent long hours planting native plants in NAP areas, only to see absolutely no maintenance performed once the plants are there. Without maintenance, the plants die, creating unsightly vistas of dead and dying plants. The NAP EIR should have considered the impacts of scaling back the program to a few areas that can be well maintained, as opposed to the current plans to take over one-quarter of San Francisco's city parkland. The NAP plan is more ambitious in the amount of work to be done annually than NAP has demonstrated it has the capacity to actually DO on a consistent basis.

17

20) The NAP EIR does not consider the negative impact on aesthetics of NAP management decisions. For many people, brush piles used in natural areas look like accumulations of trash and are aesthetically unpleasing.

For many people, shaded areas with tall, non-native trees are aesthetically pleasing, while areas without tall trees are less so. People like to see their parks green not brown half the year. Because these impacts were not considered, the NAP EIR is inadequate.

18

21) The NAP plans call for cutting down over 18,000 healthy trees simply because they are not native. The NAP EIR does not adequately consider the long-term impacts on climate change and global warming of the conversion of land covered by trees with grasslands. Tree are much better at carbon

19

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Brown-1

19 (Cont.) sequestration than grasslands, and the long-term consequences of this difference are not adequately considered. For more on NAP impacts on trees, see: http://milliontrees.wordpress.com

20 22) The NAP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suited to the earlier climate may no longer be suited to today's (and tomorrow's) climate. The NAP EIR does not consider the lack of sustainability of trying to re-create what the habitat was at one snapshot in time when the climate has changed since that time. The environmental consequences (for example, more herbicides, etc.) of trying to force the old habitat into today's climate should be analyzed more thoroughly.

Sincerely, Judith Brown

==========

The Planning Department will have reduced services available the last week of December 2011. In addition to the regular observed legal holiday on Monday, December 26, 2011, most Planning Department offices will be closed on December 27, 28, 29, & 30. On these dates, only the Planning Information Center (PIC), located on the 1st floor of 1660 Mission Street, will be open normal business hours as follows:
Tuesday, December 27, 2011: 8:00 AM to 5:00 PM Wednesday, December 28, 2011: 8:00 AM to 5 00 PM Thursday, December 29, 2011: 8:00 AM to 5 00 PM Friday. December 30, 2011: 8:00 AM to 5:00 PM Please note that the PIC will have reduced staffing on these days. The PIC phone number is (415) 558–6377. The Planning Department will resume full services on January 3, 2012.

==========

6

Browne-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:13 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:14 AM -----



Luke Browne <playitagainsam.sfdog@gmail.com>
10/31/2011 01:01 AM

To bill.wycko@sfgov.org
cc David.Campos@sfgov.org, mayoredwinlee@sfgov.org
Subject NAP EIR

Dear Mr. Wycko,

I am a home-owner in Bernal Heights and have lived in this neighborhood since 1995. Bernal Heights is one of the most beautiful sections of this city and I have never considered any other place to live.

01 My family and I have been walking our dogs on Bernal Hill for as long as we've lived here. The proposals in the NAP EIR would drastically impact our use and enjoyment of this area. I have read the NAP EIR and believe it's assessments and suggestions are faulty, to say the least.

02 For example, I witnessed some of the people "studying impacts by people with dogs". I even spoke with them. They were not conducting studies based on solid, rigorous science. They weren't even scientists! Having walked up there for the last 15 years, I could have given you more accurate information, based on long-term observations. For instance, the main culprits to ground erosion are rainwater, gophers, and certain species of invasive plants. I have watched, over time, the impact these have had on the hill, and it has been significant. Many of the Bernal residents spend time every year pulling these damaging plants. I have pulled entire sections and am happy to have seen no return, even after five years, at no cost to the city!

03 When I first started walking on the hill with my dogs, I'd run into the same neighbors at the same hours everyday. Now that more people in the city have discovered the hill, it has become a popular place for many. In fact, many users are refugees from various city parks that only allowed on-leash recreation for there dogs. They were **told** they could find off-leash walking on Bernal Hill. And so they came. And it's a wonderful refuge in this city.
As far as the impact of people walking their dogs, the majority stay on the paved road or the designated paths. We don't have a problem of dogs digging that I have seen in other parks. Dogs are having a minimal impact on this area. The new signs that have been placed at the beginning of the park have been helpful in explaining how to use the park in these sustainable ways. Most our willing to comply. In other words, this community has been using this hill in a responsible and sustainable way for many years, with very little intervention.

04 This report is another misguided attempt at "improving" or "saving" an area that needs no

Browne-1

04 (Cont.)

improvement, let alone saving. It may need some management, but not based on this report and not by this group of "experts". We are a small SF community that is doing just fine preserving this beautiful hill. I don't appreciate my tax dollars being wasted on this study and it's recommendations to remove large areas of land from public use. Remember, this is an urban environment and we need to find sound, balanced solutions that fit.

Sincerely,
Luke Browne

Browning-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:52 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: please save off-leash dog areas

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:53 AM ——



Nadine Browning
<nbardoi@gmail.com>
10/31/2011 11:52 AM

To Bill.wycko@sfgov.org
cc
Subject please save off-leash dog areas

Hi Mr. Wycko
I am writing you today to beg you to reconsider the plan to eliminate or reduce off-leash dog areas in the city. These areas are so important to the mental and physical health of our dogs and our people. Please don't let this flawed report by the NAP convince you to take such drastic measures. Please be the voice of reason. You must listen to the howling of the dogs and the people!
Thank you.

01

Browning-2



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:42 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Save Off-leash Dog Areas

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:42 AM -----



nadine browning <nadinebrowning@yahoo.com >
10/31/2011 11:35 AM
Please respond to nadine browning <nadinebrowning@yahoo.com >

To "Bill.wycko@sfgov.org" <Bill.wycko@sfgov.org>
cc
Subject Save Off-leash Dog Areas

01 I implore you to reconsider the NAP EIR plan. I have 3 dogs, all of them rescued, and I the off-leash areas in the bay area are crucial to their well-being. I take them to Ft. Funston, Bernal Hill, McLaren Park, Alamo Square Park, Glen Park, Dolores Park, Alta Plaza Park, Golden Gate Park, Esprit Park, McKinley Park and Stern Grove. I am diligent about picking up after my dogs, and about making sure the dogs are not destroying the vegetation. I pick up after other people's dogs when I see it has been left there. Even if you don't care about dogs, you must recognize that eliminating these areas will have a SIGNIFICANT negative impact on the people who live with these dogs. Please do not let this happen.
Nadine Browning

Make a Small Loan, Make a Big Difference - Check out Kiva.org to Learn How!

Browning-3



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:34 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: STOP THE NAP EIR PLAN

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:35 AM -----



nadine browning <nadinebrowning@yahoo.com>
10/31/2011 11:26 AM
Please respond to nadine browning <nadinebrowning@yahoo.com>

To "Bill.wycko@sfgov.org" <Bill.wycko@sfgov.org>
cc
Subject STOP THE NAP EIR PLAN

01 PLEASE, PLEASE, PLEASE don't do this! The NAP EIR seems to be biased speculation; how can you drastically reduce the off-leash dog areas for thousands of dogs based on speculation? Please consider the impact of this plan on the citizens and the remaining dog parks. DO NOT DO THIS! I am begging you!
Nadine Browning
dog lover

Make a Small Loan, Make a Big Difference - Check out Kiva.org to Learn How!

Buckley-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:07 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Rec and Parks NAP EIR is inadequate

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:08 PM -----



K Buckley
<buckleyk98@yahoo.com>
10/31/2011 04:01 PM
Please respond to
K Buckley
<buckleyk98@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc "mayoredwinlee@sfgov.org" <mayoredwinlee@sfgov.org>, "David.Campos@sfgov.org" <David.Campos@sfgov.org>
Subject Rec and Parks NAP EIR is inadequate

Dear Mr. Wycko,
I live in the Mission and since the Mission is short on green space that is suitable for hiking, one of my main sources of exercise is walking my dogs at Bernal Hill and Glen Park. As a past victim of crime, my dogs are crucial to me getting this exercise since they make me feel safe and give me the confidence to visit the Hill or Glen Park even when there may not be very many people around. We walk in these parks pretty much every evening - having off leash dog space allows me and them the exercise we need to keep healthy. This is crucial for me because I do not have children, and I emigrated here far away from my family, therefore my dogs are a major source of personal happiness and comfort to me.

I urge you to oppose any measures to take away these wonderful off leash resources from dog owners and their pups. In addition,
I think the NAP EIR is inadequate and that additional work must be done:

01 1) The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

02 2) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

03 3) The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas).

01 (repeated) 4) The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk

Buckley-1

01 (repeated) with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

04 5) The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered.

05 6) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Regards,
Kathy Buckley

Buffa-1

Andrea Buffa
620 Joost Avenue
San Francisco, CA 94127
andreabuffa2006@gmail.com

Oct. 29, 2011

Bill Wycko, Environmental Review Officer
SF Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
bill.wycko@sfgov.org

To Mr Wycko:

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

02 I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco.

Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas.

San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city.

03 I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks.

Sincerely,

Andrea Buffa

Burgard-1

RECEIVED
JUN 14 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

June 10, 2012

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission St., Suite 400
San Francisco, CA 94103
Fax: ~~588-6409~~ 558-6409

Re: Natural Area Plan, Mount Davidson

01 As a resident of Miraloma Park since June 2003, we have been able to regularly enjoy the beauty of the forested hill of Mount Davidson both from accessing the trails for hikes and explorations with our family and from the windows of our home on Molimo Dr. We fill that the plan to deforest the hill of mature trees to return the area to native plants is an ill-conceived venture as the park has a natural beauty and ecology that is well serving the community that surrounds it.

Further, the native ecology of the hill has been in flux for millions of years. It is true on our planet that ecological conditions have changed, at times, over thousands of years as well as in much shorter periods.

02 The claim that the existing flora presents a fire hazard has been reasonably cast into doubt as the natural ecology is that of a cloud forest with high moisture.

03 The drastic measure of taking down long standing mature trees to replace them with natives that will take years to establish themselves will undoubtedly have a negative impact on the aesthetics of the park area. Moreover, it will devastate a thriving ecosystem based on the microclimate created by the existing forest.

04 We ask that the Planning Department reconsider its plan to remove trees from Mount Davidson and spend the resources on improving access to the open area with improved trails, interpretative signage, and benches.

Joe Burgard J. Burg

Suzanne Kirrane

31 Molimo Dr.
San Francisco, CA 9412

Butler-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:20 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: PRESERVE OFF-LEASH ACCESS IN CITY PARKS!

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:20 AM ----



"Barbara Butler" <barbara@barbarabutler.com>
10/30/2011 05:47 PM
Please respond to <barbara@barbarabutler.com>

To <bill.wycko@sfgov.org>
cc
Subject PRESERVE OFF-LEASH ACCESS IN CITY PARKS!

To:
Bill Wycko, Environmental Review Officer
SF Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103

Re:
public comment on the NAP EIR

Bill,

01 We are opposed to the elimination of off-leash dog walking as proposed in the NAP EIR.

We have walked our dogs off-leash since 1989 without incident or without harming the natural habitat of many of the parks, including Glen Park, Bernal Heights, McLaren Park, as well as the GGNRA Beach areas – Fort Funston, Crissy Field & Ocean Beach.

02 After reviewing the NAP EIR, we find that no evidence is offered that dogs do have a negative impact on the plants and wildlife in the natural areas. Where is the evidence?

01 (Cont.) We walk our dogs as our way of enjoying the parklands. As taxpayers, we are opposed to NAP's attempts to stop us from exercising and enjoying the parks, especially since there is no proof that dogs off-leash cause harm to plants & wildlife.

Those of us who walk dogs are a community and it is a diverse & fun community where we get to interact with people from all backgrounds and form bonds & friendships. DPA closures would severely impact this and for no clear reason!

03 We are also opposed to NAP's plans to cut down perfectly healthy trees and the growing use of pesticides to achieve their "native" environment.

Please preserve our off-leash dog access in City parks!

Sincerely,

Barbara Butler & Jeffrey Beal
2703 20th St.
San Francisco, CA 94110

Cabada-1

Oct. 29, 2011

Bill Wycko. Env. Review officer
SF Planning Department
1650 Mission Street, Suite 400
SF, CA 94103

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Comments to the draft DEIR for the SNRAHP

01 Please accept the report for it is a long worked on and comprehensive review of the plan

It is very important to save the last few public areas we still have that support native plants. Native plants are not only beautiful but also support our wildlife (insects, bees, birds). Lets keep some of it for future generation

Sincerely
Ingrid Cabada
434 Fair Oaks
SF, 94110
ingridcabadax yahoo com

Campbell-C-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:12 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SNRAMP DEIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:13 PM -----



Christopher Campbell <christopherpc@mac.com>
10/31/2011 03:19 PM

To bill.wycko@sfgov.org
cc
Subject SNRAMP DEIR

October 31, 2011

Bill Wycko,

Environmental Review Officer,

San Francisco Planning Department,

1650 Mission Street, Suite 400,

San Francisco, CA 94103

Dear Mr. Wycko,

I am writing regarding the Draft Environmental Impact Report (DEIR) for Significant Natural Resources Management Plan (SNRAMP). I am a Graduate Student at SFSU, working toward a degree in Resource Management and Environmental Planning. I have fourteen years experience working in San Francisco's Natural Areas. I have found our natural areas to be a tremendous biological, educational and recreational resource.

01 I reviewed the DEIR and feel it is an accurate and complete review of the SNRAMP. The plan reflects years of research and community input, incorporating scientific studies and expert opinions. The plan provides guidance for prioritizing restoration and management, enhancing biodiversity while maintaining populations of sensitive species.

Campbell-C-1

02 The DEIR considers a broad range of potential impacts to San Francisco's natural resources while providing guidelines for passive recreational uses compatible with natural resources. In addition, it proposes mitigation measures to address impacts where possible.

03 The City's SNRAMP is truly an innovative plan that will improve wildlife habitat, access, and recreational uses while increasing safety. This comprehensive plan is the most cost effective method of managing our resources and protecting lands for future generations.

Thank you for supporting the DEIR in it's entirety.

Christopher Campbell

59 Hazelwood Avenue

San Francisco, CA 94112

Campbell-N-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:37 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: 2005.1912E Significant Natural Resource Areas Management Plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:37 PM ——



"norma campbell" <sqmlady@hotmail.com>
10/31/2011 04:26 PM

To <bill.wycko@sfgov.org>
cc
Subject 2005.1912E Significant Natural Resource Areas Management Plan

Mr. Wycko: I no longer live in San Francisco but I was born there as was my Mother and Grandparents. My Grandparents used to tell me of the wind and the blowing sand when the dunes were planted with only the small natural dune plants. They were always so grateful when other types of planting even though non-native were planted. Those plantings saved the dunes from tragic sand erosion, sand blowing that matched the dust bowl.

Do you really want to be responsible for a repeat of that.

01

Leave the plantings as they are, some of the planting may not be native species but they are mature, hold down the soil, feed the bees which are having a very hard time and on which a great majority of our food pollination depends, provide nectar for the Monarchs and Hummingbirds not to mention the vast numbers of songbirds and migratory avian species.

We do not need to be part of the hysteria over native vs non-native. The plantings as they are serve our area well in many many ways.

Norma Campbell, a native San Franciscian and Californian
37 Decorah Lane
Campbell, California 95008 408-559-7379

"Only after the last tree has been cut down
Only after the last river has been poisoned
Only after the last fish has been caught
Only after the last wolf, buffalo and wild horse has been killed
Only then will we find that money cannot be eaten." Cree Nation

Carrington-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Off leash restriction proposals
Date: 10/05/2011 09:06 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:07 AM -----

"Rick Carrington" <rcarrington@sbcglobal.net>

10/04/2011 11:18 PM

To <bill.wycko@sfgov.org>
cc
Subject Off leash restriction proposals

Bill Wycko, Environmental Review Officer, San Francisco Planning Department, 1650 Mission St., Suite 400, San Francisco, CA 94103.

Dear Mr. Wycko,

I am a San Francisco resident of many years standing now and for a long time have also lived with and roamed with a dog. I wish to go on record against the proposed restrictions. First, if one were to look at old photographs of this City there were sand hills and rather barren landscape in many of the areas now being proposed for "restoration." This city needs to respond to the needs of its current residents and not turn its back on us. 01

Second: restricting and narrowing the areas in which we can take our dogs off leash is in effect setting up ghettos for us. As the areas remaining become more crowded (as Upper Douglass Park is already becoming) the turf and quality of existence not just for the plants but for the people being packed inside diminishes. The wear and tear on the ground cover cannot withstand such heavy use. Some of that overburden is the result of dog walkers with limited options for off leash places and dogs needing exercise; but the limitations will also force more people into these remaining areas. 02

Suggestions that this added burden can be addressed with added monitoring are ludicrous. As the dust and dirt swirl up just what is going to be done? Hose us all down?
Rather than propose closures and restrictions the City should step up and improve its maintenance of these areas. There seems to be a disregard for the condition of many dog parks, orphans of the City. Shame. 03

Yours truly,
Richard Carrington

Caskey-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Keep our Dog Play Areas!!!
Date: 10/05/2011 09:45 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:45 AM -----

Julie Caskey
<julie@juliecaskey.com>

10/05/2011 09:35 AM

To bill.wycko@sfgov.org
cc
Subject Keep our Dog Play Areas!!!

01 Closure or restriction of our dog parks, specifically Bernal Hill, would be devastating to the Bernal community.

We are responsible dog owners, and want to express our *ernest* desire to maintain access to Bernal Hill, and all other existing DPAs with our dogs.

Sincerely,
Julie Caskey
136 Andover Street
San Francisco, CA 94110

Caughman-1



"Erin Caughman" <erin.caughman@att.net>
08/10/2012 09:55 PM
Please respond to <erin.caughman@att.net>

To <jessica.range@sfgov.org>
cc
bcc
Subject Comment Re: 20050912E Significant Natural Resource Areas Management Plan

Ms. Jessica Range:

01 I am concerned about preservation of both native and non-native resources discussed in the proposed EIR for Significant Natural Resource Areas Management Plan. The alternative I favor is the Maintenance Alternative because the proposed tree removal carries danger of erosion and loss of habitat, especially for birds and insects. Please forward my comments to the commissioners voting on the alternatives presented in the draft EIR.

Thank you,

Ms. Erin Caughman
1938 33rd Ave.
San Francisco, CA 94116
erin.caughman@att.net

Cech-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: EIR closures for dog areas
Date: 10/05/2011 09:07 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:08 AM -----

Nancy Cech <necech@gmail.com>

10/04/2011 07:52 PM

To bill.wycko@sfgov.org
cc
Subject EIR closures for dog areas

Dear Mr Wycko

01 I'm writing to voice my concerns over closing and reducing public access areas where I can exercise with my dogs. We need more areas not less, that's why there's pressure on the few areas we can go.

We live in a very populated city and need every inch of space. Thats why communities take over spaces from Cal-trans like the corner of Pennsylvania and 18th to create areas to walk our dogs and commune with each other in a small taste of nature.

The parks are where I meet my neighbors, where we create community bonds. I've spent time at them with my son, but no where near as much time there as I do with my dogs. Dogs are not the enemy. Restricting them isn't going to solve anything.

I've seen dog people change the fabric of areas for the better, not for the worse. There were years that I was scared to walk the beautiful trails in McLaren, fearful of undesirable people. Now that its well used by people walking dogs, it's a safe and vibrant area. The same is true of parks in my neighborhood. McKinley used to be just a hang out for teenagers to get drunk and break bottles on the rocks, the community with MANY dog owners organized and created a vibrant area that is well trafficked.

What I have noticed are more dogs everywhere. Downtown, 3rd St. Areas that used to be less residential. Now that every inch of SF has turned residential we need more dog areas - not less.

Nancy Cech

Cerf-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 01:19 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 01:19 PM -----



Diane Cerf
<dijecerf@gmail.com>
10/31/2011 12:03 PM

To bill.wycko@sfgov.org
cc
Subject NAP

Oct. 31, 2011

Bill Wycko, Environmental Review Officer
SF Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
bill.wycko@sfgov.org

To Mr Wycko:

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco.

02

Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas.

San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city.

03 I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks.

Sincerely,
Diane Cerf

Chambers-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:47 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: comments on the NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:48 AM ----



"thompson chambers" <tpc124@gmail.com>
10/31/2011 10:14 AM

To <bill.wycko@sfgov.org>
cc
Subject comments on the NAP EIR

THOMPSON CHAMBERS, MPH
Environmental Planner
124 Genebern Way
San Francisco, CA 94112
415-810-9876
tpc124@gmail.com

October 31, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103

Dear Mr. Wycko:

I am an environmental planner with over 30 years experience in environmental planning and consulting in the Bay Area. I am a San Francisco resident, home-owner, dog-owner, small business owner and regular voter. Further, with my dog and family members, I am a regular user of city parks, playgrounds and several city DPAs. I am also very active with local park issues as an executive officer with our neighborhood association (the St. Mary's Park Improvement Club) and with our local RPD rec center (my son and I are members of the new RPD Community Recreation Council).

01 The NAP EIR provides no evidence to prove claims that dogs have an impact on plants or wildlife in natural areas. EIRs must be based on solid, documented impacts, and there is no evidence cited to justify closing or reducing the size of any DPA. The NAP EIR repeatedly says: Dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred. Unsubstantiated claims cannot be made in an EIR. The NAP EIR goes on to say: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." Analysis in the EIR based on this speculation is incorrect and inadequate.

02 The EIR does not differentiate between impacts caused by people with dogs

Chambers-1

02 (Cont.) and impacts caused by people without dogs. For example, a 200-pound man will have a much more significant impact on plants that he walks on than a 20-pound dog will have on any that it walks on. If there is little difference in the impacts, then the EIR cannot justify banning off-leash dogs from natural areas. Further, the NAP EIR considers only the closures of 15% of total off-leash space when determining impacts on remaining DPAs

03 and recreation. Because the NAP plan puts 80% of off-leash space at risk of closure in the future, the NAP EIR must also consider the impacts of this much larger closure on remaining DPAs and on recreation.

04 The NAP EIR assumes that because there will still be relatively large off-leash areas in McLaren Park and on Bernal Hill, that few people will be forced to drive to other DPAs to walk their dogs, with few resulting impacts on air pollution, traffic congestion, and global warming from the added car trips after the 15% closures take place. However, the EIR does not adequately consider the topography of the remaining off-leash spaces in these parks. If much of the remaining area is steep, people will not be able to use the area, and more people will be forced to drive to other DPAs. This must be analyzed in the NAP EIR. The NAP EIR does not consider the impact of people driving to other parks if 80% of off-leash space is closed. This analysis must be done.

05 I would, however, endorse the Maintenance Alternative in the EIR. Under this alternative, Rec and Park would continue current management plans at the natural areas, but would not convert any more non-native habitat to native habitat. The current distribution of native and non-native plants would be preserved. Fewer trees would need to be cut down, and there would be no closures of or reductions in any off-leash areas. No trails would be closed, but no new trails would be created. The NAP EIR identifies this alternative as the Environmentally Superior alternative, because it has fewer unmitigated impacts on the environment than the other alternatives considered in the EIR. Implementing the Maintenance Alternative would result in less damage to the existing environment in natural areas, yet would preserve existing native species, and is the only alternative that is sustainable over the long term.

Thank you for taking my comments in review of the NAP EIR.

Sincerely,

Thompson Chambers, MPH



Chase-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:28 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Please keep a lot of off leash areas for dogs in SF Parks

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:28 AM ——



Greg Chase
<greg@gregchase.com>
Sent by: gchase@gmail.com

10/28/2011 10:08 PM

To bill.wycko@sfgov.org
cc
Subject Please keep a lot of off leash areas for dogs in SF Parks

Dear Bill,

I'm not a resident of SF, but a frequent visitor. I don't quite understand why SF is looking to drastically restrict off leash access for dogs in the park lands. SF has some wonderful extremely open lands that have been preserved. To consider these "natural" areas is a bit over stating the reality. They are open space, but have long since been transformed from wilderness as a result of the urbanization around the area. You could consider this to be a shame, but actually its part of the history of the city. I don't believe anyone in New York City is hoping to return natural habitat back to central park.

01

I think some restriction to offleash dog access is reasonable. For example, if you have an athletic field, its annoying to have offleash dogs to start chasing balls when a soccer team is playing - and of course, nobody wants to step in dog poop in a picnic area.

If SF Parks wants to make ON leash access to dogs a general policy, then please set aside generous, fenced, off lease areas. People who use dog park areas tend to be frequent users of the park, and even become a sub community. If you foster this sense of community among the users of off lease dog areas, you'll find the community will police and pick up after itself. This is my observation as a participant in a few informal dog play areas.

Best regards,
Greg Chase & Eva and Oban
San Jose, CA

Chasnoff-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:14 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Do Not Eliminate Off Leash park space in San Francisco

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:14 AM ----



Debra Chasnoff
<debrachasnoff@gmail.com>
10/31/2011 12:31 AM

To bill.wycko@sfgov.org
cc
Subject Do Not Eliminate Off Leash park space in San Francisco

01 I am writing to express my utter dismay that the city would consider eliminating our ability to bring dogs to several of the city's parks. I walk my dog many times a week at Bernal Hill. It is full of people walking their dogs, and one of the only nearby areas where dogs can run off leash. With all the problems facing our city, I think it is insane to make it harder for dogs, which there are more of than children in San Francisco, to have an opportunity to run and excercise, not to mention the enormous physical and mental health benefits to their owners of that excercise as well. Part of why I felt okay about raising a dog in the city is that I thought I could count on there being off leash facitilites near my home where both I and my dog could get excercise. Your potential actions threaten that and I see no good justification for prioritizing some return of some plants over the use of the parks by residents and their pets.

Debra Chasnoff
863 Elizabeth Street, San Francisco, 94114

Child-1



Jeanie Poling/CTYPLN/SFGOV
10/31/2011 09:46 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Sharp Park

----- Forwarded by Jeanie Poling/CTYPLN/SFGOV on 10/31/2011 09:48 AM -----



katrina child <katchild@hotmail.com>
10/31/2011 08:43 AM

To <jeanie.poling@sfgov.org>
cc
Subject Sharp Park

Hi Jeanie,

01 I'm writing to urge you to separate out Sharp park from the Natural Areas plan. Thank you for taking our comments into consideration.

Yours,
Katrina Child
1073 Treat

Chirico-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:15 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Oppose the NAP takeover

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:16 AM ----



john chirico <jlitnin@sbcglobal.net>
10/30/2011 10:31 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Oppose the NAP takeover

Hello,

I am writing to oppose the planned takeover of more city park space by the natural area program.
As a San Francisco resident, tax payer, small business owner, and dog owner, I strongly feel that the public park
01 best served by having public access to people, including the dog owners.

I have volunteered many hours working with the Rec and Park personell for conservation. The NAP already has
that the needed manpower can maintain.

I consider myself to be a conservationist and nature lover.
What the NAP is planning could be very detrimental to the general public, park users, and dog owners in San Fr
150,000 dogs in the city, we need to protect what few resources and land use that we have. I oppose the NAP s a
precious space, not for the goal of conservation, but to reintroduce extinct plant species, at the expense of trees,
users, and dog owners.

Please use common sense and good judgement. The NAP aims to control and destroy all that currently exists (in
replace everything with plants that can not survive without constant maintenance and man power.

02 I support the Maintenance Alternative as being the "environmentally superior" option (Rec and Park s own word

Please protect precious public park space for the people of San Francisco, instead of some overbearing and very
experiment by the NAP.
Thanks.

John Chirico

Sent from Yahoo! Mail on Android

Cook-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:14 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP activity

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:15 PM ——



Elizabeth Cook
<blissfullycrazye@gmail.com>

10/31/2011 02:51 PM

To bill.wycko@sfgov.org
cc
Subject NAP activity

Dear Mr. Wycko,

01 I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expande invasive areas of activity.

02 The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created.
This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.
Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

03 San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.

04 Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

05 Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

06 We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.
I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

07 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

Cook-1

07 (Cont.) I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You
Sincerely,
Elizabeth Cook
323.683.0083

--
Sometimes your only available mode of transportation is a leap of faith.

Corvan-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: PLEASE DON'T RESTRICT OFF LEASH DOG WALKING AREAS
Date: 10/04/2011 09:31 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 09:31 AM -----

marianna corvan
<mariannacorvan@yahoo.com>

10/03/2011 07:00 PM

Please respond to
marianna corvan <mariannacorvan@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject PLEASE DON'T RESTRICT OFF LEASH DOG WALKING AREAS

Dear Mr. Wycko:

01 I am a long time resident of San Francisco. I am writing to express my deep concern about the proposed cuts to off-leash dog walking areas in the City. If of- leash areas are restricted it will mean more dogs, squeezed in to less space. This could lead to increased aggression and will negatively impact the environment.

One of the things I love most about San Francisco is how dog friendly it is. Dogs are an integral part of many families in the City. They help ensure that families get out and exercise, and provide much valued company for many elderly residents. **Dogs give us so much, please don't take away their space.**

Thank you for your attention to this email.

Sincerely,
Marianna Corvan
Bernal Heights

Coxon-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Subject: Fw: Maintenance Alternative

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:48 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:22 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Maintenance Alternative

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:23 PM -----

Michele Coxon <michele@stillpointonthecoast.com>
10/31/2011 08:49 PM

To: bill.wycko@sfgov.org
cc:
Subject: Maintenance Alternative

Coxon-1

01 I am writing to lend my support to Maintenance Alternative for our city parks and GGNRA open lands for use by all citizens and also those with canine companions. I live in Pacifica which is surrounded by open land mostly GGNRA land and the restoration processes by the Park Conservancy, et al. These urban areas need to be kept available for recreational use by the people who live in the neighborhoods and in these towns and cities. The wildlife also inhabiting these areas have coexisted with the human inhabitants for decades and would continue to successfully coexist if not for human intervention. I have never understood the intent to make these areas like Fort Funsten and Mori Point exclusively native plant restoration areas to the exclusion of all other recreational activity enjoyed by the citizens of San Francisco and San Mateo counties and beyond. It would seem that having healthy, available and safe recreation for people and their dogs should have precedence over plants that are thriving in many other locations around the area that are not used by people and dogs. Why can't we have a few places to go where dogs can run and be dogs? It makes for a much healthier community for both the dogs and their handlers.

The GGNRA General Plan also eliminates public usage of vital open space areas enjoyed by people of the community for many decades. All of a sudden, everything is being "managed" and taken away for no apparently valid reason. We have lots of National Parks. Are people going to wander around this area left to natural occurrences more than they use it now? I know they won't. What is there to do out there? No golf course, no lagoon for throwing sticks, no trails to hike with our dogs, no enjoying this unique and beautiful coastline because everything will now be off limits. It would be enough to make me move away because all I love about this area would change. It feels like tyranny by the minority. There is hardly a soul in this community who feels strongly that the GGNRA should change these lands to an urban park instead of recreational open space for urban dwellers.

Michele Coxon
Pacifica



ATTACHMENTS

Significant Natural Resource Areas Management Plan (Volume V)

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT
CASE NO. **2005.0912E**

STATE CLEARINGHOUSE NO. 2009042102

SAN FRANCISCO PLANNING DEPARTMENT

	Draft EIR Publication Date:	**AUGUST 31, 2011**
	Draft EIR Public Hearing Date:	**OCTOBER 6, 2011**
	Draft EIR Public Comment Period:	**AUGUST 31, 2011, to OCTOBER 17, 2011, and APRIL 27, 2012, TO JUNE 11, 2012**
	Final EIR Certification Hearing Date:	**DECEMBER 15, 2016**

ATTACHMENTS

Significant Natural Resource Areas Management Plan (Volume V)

CITY AND COUNTY OF SAN FRANCISCO
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	Final EIR Certification Hearing Date:	**DECEMBER 15, 2016**

SAN FRANCISCO PLANNING DEPARTMENT

ENVIRONMENTAL PLANNING DIVISION | SAN FRANCISCO PLANNING DEPARTMENT

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Attachment B Draft EIR Comment Letters
Attachment C Draft EIR Public Hearing Transcript

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Attachment B Draft EIR Comment Letters

Creely-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:50 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: public comments on The Natural Areas plan

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:50 AM ----



elizabeth creely <elizabethcreely@yahoo.com>
10/31/2011 09:59 AM
Please respond to elizabeth creely <elizabethcreely@yahoo.com>

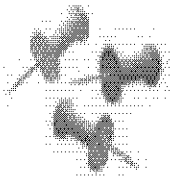
To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject public comments on The Natural Areas plan

Dear Bill,

01 As a twenty year resident of San Francisco I wanted to voice my support for the Natural Areas Plan. They conform to my sense of what is needed and possible in San Francisco. I support the moment to restore the Sharp Park golf course.

Thank you
Elizabeth Creely

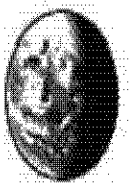
Crouch-1



Bill Wycko/CTYPLN/SFGOV
10/24/2011 01:28 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: EIR for

— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/24/2011 01:28 PM —



Dyer Crouch
<dyercrouch@yahoo.com>
10/24/2011 01:27 PM
Please respond to
Dyer Crouch
<dyercrouch@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject EIR for

Mr. Wycko -

Thank you so much for working towards a reasonable and balanced EIR on SF parkland.

I am a pet owner & am being bombed by emails from pet owners and groups (mostly SF Dog) who are
01 trying to stir dog owners up without helping people understand what is being done & why.

You guys have a tough job, thanks for sticking with it. Unfortunately most of the input I am sure you are getting is the result of groups like SF Dog getting people stirred up.

Take Care -
D. Crouch
A pet owner who has grown up with dogs in the family & knowing that people calling themselves "responsible pet owners" are frequently not.

D'Antonio-1

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RECEIVED
OCT 17 20
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

RE: Natural Areas Program:

Dear Bill:

01 **I have lived in San Francisco for all of my 61 years and have always been a responsible dog owner. I live right next to McLaren park where I can let my "well behaved" dogs run free for a little bit each day. I am very respectful of those that are afraid of dogs and put their leashes on. The neighborhood I live in (Ina Ct.) has a person with two huge pit bulls and they are stuck on a 6 x 6 deck at all times. In all the years I have lived here I have only seen them out for a walk once and that's pretty pitiful to do to dogs. Having said that, she is the same person that calls the cops on my dogs if I try to play ball with them in the cul-de-sac, therefore their only play time is in the park. Time & money would be better spent on something "important" and not leashing up our dogs. I live in the last house and the lot next to me is completely vacant. This city has gotten to be so dreadful with all the rules and regulations. Please don't make me leash my dogs for the 15 minutes they get to be free.**

Sincerely,

Georgia D'Antonio

Corinne Barreca

98 Ina Ct.

San Francisco, CA 94112

(415) 845-3942

Delacroix-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Subject: Fw: it's not too late to stop this lunacy

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:48 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:21 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: it's not too late to stop this lunacy

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:22 PM -----

Pierre Delacroix <subgumdummy@yahoo.com>
10/31/2011 10:27 PM
Please respond to Pierre Delacroix <subgumdummy@yahoo.com>

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: it's not too late to stop this lunacy

1

Delacroix-1

Dear Mr. Wycko,

01 I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

02 The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes.
Before our city was built. Before our lush parks were created.
This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

03 San Francisco is a bird watcher's paradise. The hawks and owls that nest in Monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.
Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

04 Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our park lands) to return these acres back into sand, with only coastal scrub plants.

05 I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

06 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You

Sincerely,
Pierre Delacroix

2

Demetrious-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 01:19 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR thank you!

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 01:20 PM ----



Amad Demetrious
<amed13@gmail.com>
10/31/2011 01:11 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR thank you!

Mr. Bill Wycko,

Thank you for reviewing my comments on the NAP EIR.

I support the maximum recreation alternative because I believe that natural areas are important public spaces in our urban fabric. They promote, relaxation, rejuvenation, and recreation and offer a unique connection with the natural world.

01 I can speak for myself and say that I would not do well or thrive in such a densely urban setting without access to our precious natural spaces. Our natural areas mean the world to me. In modern architecture, the importance of bringing the natural into the urban is becoming recognized as increasingly important as the scale of urbanization grows worldwide.

02 I can understand, then, the urgency in maintaining a level of integrity to these areas in the urban milieu. The effects of human activity and traffic is doubtless a prominent issue. In that regard, what concerns me is the closure of dog play areas. I am not convinced this is the best option. One reason why is that so many DPA's are in or adjacent to natural areas, and I'm afraid it would set a precedent which would be overly restrictive to the dog/human population.

03 I feel that better information/ signage/education about what areas should not be disturbed and what areas dogs should not be allowed to congregate or play extensively on would mitigate the effect of dogs on the land. To that end, I believe erosion and similar effects are more pronounced with human activity, and I feel that channeling the traffic with more regularly maintained trails is a good way to change the causes of negative effects on the land. There grows

04 from that a greater, more frequent presence and adjustments are more easily made at a smaller scale to foster the positive outcomes in natural areas health and maintenance before bad outcomes have caused critical damage.

Dog owners and walkers have a keen appreciation for the land, and the government is uniquely poised the communicate with this population and engage in a mutually beneficial relationship with them to help watch the park, and foster awareness and knowledge on how to treat the land. People who shepherd a dog or groups of dogs do keep the parks safer. I have seen this repeatedly seen that at McLaren Park, where I go every day and have been for years. People are less likely to act out or throw litter when other users are there to witness. Users with dogs are also regular users and have the added investment of being familiar and bonded to the land.

I favor this approach to the more heavy-handed isolation of people and dogs from natural areas.

Demetrious-1

I would like to offer my email as a way to contact some of the dog community and get the word out between the government working to maintain the natural integrity of the park and the dog users of the park because I know a lot of people. who want to be involved. When community is talking, I think when people hear about an area that needs to recover from erosion, for example, they are likely to alter their behavior to support rehabilitation if there is proper signage AND evidence of community investment in the area, such as community plantings, cleanups, maintenance. I can help bring users with dogs to participate in plantings and volunteer to help with maintenance when you have such events. These are people who are also regular users and would support, and in essence by their presence be enforcement of signage.

I hope I have been able to convey my vision somewhat clearly and that you share at least a bit of my belief in it. McLaren Park with my dogs means the world to me and I would much rather spend my energy rallying to support your efforts in maintenance while bolstering the community than fighting with the government about access.

I encourage people to invest their concern and work and time in the land and contribute to heightening respect of the resources. I know for a fact there is ample interest among the heaviest users of McLaren Park and Bernal Heights.

03 (Cont) Please consider closure of DPAS carefully and consider alternative options with signage and community involvement in maintenance and rehabilitation. I believe with insufficient government resources to provide ideal land maintenance and management, these ideas make solid sense. Again, anything I can do to help, just ask. amed13@gmail.com I am hoping to attend the Nov 12 planting at McLaren Park and starting the dialogue with other users about pitching in as a way to respect our stake in the matter of the land.

Warm regards,
Amad Demetrious
502 Southhill Blvd. 94014

A myriad bubbles were floating on the surface of a stream. "What are you?" I cried to them as they drifted by. "I am a bubble, of course, "nearly a myriad bubbles answered; and there was surprise and indignation in their voices as they passed. But, here and there, a lonely bubble answered, "We are this stream," and there was neither surprise nor indignation in their voices, but just a quiet certitude.
-Ask the awakened by Wei Wu Wei

Devine-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:23 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAO EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:23 AM -----



al indelicato
<alanddeirdre@hotmail.com>
10/30/2011 08:09 AM

To <bill.wycko@sfgov.org>
cc
Subject NAO EIR

Dear Mr. Wycko,
I am a resident of San Francisco & have used many parks in SF & in the GGNRA for over 35 years now. I am a regular daily user of Mountain Lake Park, Golden Gate Park and the Presidio. My family has made weekly trips to Hawk Hill long before the GGRO came into effect & love Rodeo Beach and Lagoon & the many trails in the Marin Headlands.

Your recommended closures and limits on off leash dog areas is unfair & unwarranted in this economic struggle. These areas are large enough to have both natural areas for dogs to run in and places where natural habitats and endangered species can keep a foothold. Try putting some attention to the needs of the elderly, children & homeless. There are so many more important issues that really impact the quality of life of our citizens.

01

As a founder of Greenpeace SF, a lifelong member of Sierra Club, Audubon Society, Nature Conservatory, CA NAtive Plant Society and many others, I have a good understanding & appreciation for the needed balance between use, & destruction of ecosystems. Please do not take away these places in our Bay Area where families and furry friends can run free, feel the sunshine on their faces, get exercise & feel proud that our government officials can understand and support what it means to go take a walk in the park.

Thank you for reflecting your human side in this decision,
Deirdre Carlin Devine

DeWitt-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:19 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SF City Parks dog walking plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:19 AM ——



Natalie DeWitt <natalie.dewitt49@gmail.com >
10/30/2011 07:26 PM

To bill.wycko@sfgov.org
cc
Subject SF City Parks dog walking plan

Dear Mr. Wycko,

02 I am writing about the plans to eliminate dog play areas that are adjacent to NAP areas. I strongly support the Maintenance Alternative, which maintains recreation in city parks at the same time as supporting the Natural Areas Program. I have two large dogs who need exercise (ie running off leash on a regular basis) and I need the exercise I get when taking them for walks in recreational dog play areas. I have been walking my one dog in Bernal Hill for years, and he

01 and I both love it. We are respectful of the plants and stay on the trails where they exist, and I feel like dogs are an important part of the area, so many people from San Francisco go there and seem really happy, enjoying the view, and letting their dogs get the exercise of running, which they cannot do on leashes.

I have a choice of many places to live in the country, as a PhD scientist with many career opportunities. My work is to create new industries and markets for California scientists, to make California economically stronger through establishing scientific initiatives, and to create infrastructure to find therapies for a variety of disease. I am working towards making California the focus in the world for regenerative medicine. I have chosen to live here, because I have always loved San Francisco because of the recreational opportunities. That is why I have chosen to make this my home. If these recreational opportunities for me and my dogs, who are like family to me, are taken away, it will rob me of the very reason I live in San Francisco. Other people like me, successful people who can live anywhere in the country, will feel the same. What is the point in living in a place where recreation is not provided to SF citizens and the dogs they love. I believe recreation is essential for urban dwellers and their pets to live healthy,

01 (Cont.) happy lives. Native plants are important, and I am myself a native plant lover, however I do not see restricting dog access as the solution to the problem of establishing native plants in San Francisco. Creative solutions can be found (ie the Maintenance Alternative) that will allow those of us who support the Parks and Recreation through our taxes to continue to enjoy the land we live in.

Please do not take away this most important part of my life.

Thank you for your consideration,

Natalie DeWitt

Donovan-1

To: Bill Wycko
Environmental Review officer
SF Planning Dept
1650 Mission St, Ste 400
SF CA 94103

Please excuse my writing - my printer is broken.

From: Catharine Donovan
397 Valley St
SF. CA 94131

RECEIVED
OCT 27 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Date: * 10/24/2011

Dear Sir

01 I am writing to express my opposition to the proposed SF Recreation + Park Department Natural Areas Program.

As a daily user of SF parks, their existence + health is terribly important to me. They improve the environmental health of San Francisco itself, but also the physical health of all who use them for exercise.

Responsible dog ownership is critical and should be enforced. In my experience SF dog owners are very responsible, and in addition will self-police other dog owners on the rare occasions they see some are not picking up after their dogs, or failing to curb them.

02 The EIR is lacking in many respects. It states that dogs "may" be impacting plants and wildlife yet provides no evidence to support this claim, and it fails to mention scientific studies provided to the planning dept that show little impact on plants + wildlife by dogs. The EIR mentions "observations" that ~~impact~~ indicate the

Donovan-1

02 (Cont.) impact of dogs, but nowhere has any data to back up these 'observations'. Lacking such scientific evidence it is an incomplete EIR.

03 If the proposed changes are implemented, the large existing population of dog owners will be forced into a greatly reduced number of parks, dramatically increasing the impact on those areas by sheer over-use of people + dogs. Keeping a larger number of open spaces accessible lessens the impact everywhere.

I use the following parks daily because they are within walking distance of my house:

- Billy Goat Hill
- Glen Canyon
- Bernal Heights
- Douglas St dog Park
- Upper Noe Rec Centre.

Being able to use these spaces also means I don't drive, waste fuel, clog the roads, + get exercise myself.

In addition I use McLaren Park, Ft Funston, Ocean Beach, Main Headlands, Sweeny Ridge + Montara Mts on weekends.

04 I implore you to keep these spaces available for all San Franciscans + their dogs.

Yours sincerely

Dotz-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 01:20 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR comment - don't close Bernal Hill Park to off leash dogs

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 01:20 PM ----



Larry Dotz <ldotz@sbcglobal.net>
10/31/2011 12:52 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR comment - don't close Bernal Hill Park to off leash dogs

Dear Sir:

01 I writing to register my profound objection to the closure of any part of Bernal Hill to off-leash dog recreation. I have been a homeowner living 2 blocks from Bernal Hill park since 1994 and have been a dog owner for all but 2 of those years. For all of those years I have been using the hill to exercise my dog and myself.

I am also a passionate environmentalist. I am constantly delighted to see the variety of native wildlife found on the hill and have seen no evidence that it is impacted by the presence of off leash dogs. I regularly witness the presence of ground mammals such as squirrels, raccoons and possum (its a beautiful walk at night). There is a thriving raptor community that hunts on the hill. We even had a coyote living on the hill one year. None of these species would be presnt if of leash dogs were a problem.

I appreciate the need to protect our native wild lands, but the continued closure of parkland to off leash dog exercise does not address the genuine human damage caused by pesticide use, urban crowding, off road biking, etc. Dogs have become a scapegoat. And should these closures go into effect who is going to enforce them? The city and county of San Francisco does not have the resources to manage the regulations already on the books. Why burden the government with additional, meaningless regulatory responsibility.

Respectfully,

Lawrence Dotz
Alabama St, Bernal Heights
San Fransisco

Dougherty-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:17 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:17 PM ——



Mary Dougherty <mary.dougherty@yahoo.com>
10/31/2011 01:32 PM

To bill.wycko@sfgov.org
cc stephenstw@mindspring.com
Subject

I live and vote in SF, am dog owner, and enjoy the public parks with my dog, neighbors and friends. I am a member of SFDOG. I fully support UC Professor Arthur Shapiro's analysis of the NAP EIR.

01 In addition, the NAP EIR offers no concrete evidence that dogs negatively impact plants or wildlife. Use of the term "may" in the report reveals the weakness and inadequacy of the report.

02 The NAP EIR's analysis of the impact on dog play areas is inadequate. The NAP EIR's definition of dogs as a "nuisance" discloses its bias against dogs and ignores the scientifically proven benefits that dogs bring to society and nature as an integral part of the environment. Dogs serve humans and nature in numerous, beneficial ways.

03 The NAP EIR fails to recognize the further restrictions on public access to areas planted with "native" and endangered species of plants.

04 Finally, the NAP EIR would have a negative impact on San Francisco's economy with the loss of jobs (e.g., professional dog walkers), more dogs being surrendered to the city shelter for lack of adequate venues for off-leash exercise, and loss of international status as a dog friendly tourist destination.

05 I fully support the Maintenance or Maximum Recreational Alternative and urge you to do the same.

Thank you.

Sincerely,
Mary Dougherty

Drechsler-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:50 PM
To: Bock, John
Subject: Fw: Comment on SF NAMP

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:51 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:28 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Comment on SF NAMP

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:29 PM -----

Richard Drechsler <r_drechsler@yahoo.com>
10/31/2011 04:55 PM

To: Bill.Wycko@sfgov.org
cc:
Subject: Comment on SF NAMP

1

Drechsler-1

Dear Mr. Wycko,

I am a resident of San Francisco, birder, nature tour guide, member of Audubon's
conservation committee and regular visitor to the areas that are the subject
of this environmental impact report.

01 I urge San Francisco's Planning Department to choose the "Maintenance Alternative"
when developing plans to manage San Francisco's Parks and open spaces.

I advise this for several practical reasons:

The EIS "Summary of Environmental Effects" (Pg. 3, Table 1) shows the "proposed
project" and the "Maximum Restoration Alternative" have significant impacts on 42%
(6 or 14) of the environmental categories being considered.

I interpret to mean that both city residents and wildlife will be most affected
by the conversion that the Planning department appears to be endorsing.

The main problem here is that nearly no one in the city, especially people who
enjoy these parks, are aware that a major landscape conversion is being
planned. This is the best kept secret in San Francisco.

Nearly no one will not know about this until they see their favorite tree toppled;
notice more wind and noise coming from over the hill; are blasted by sunlight
in their living room; or are denied access to their favorite trail or open space.

I visit all of the cities restoration projects each week. I find them to be unsuccessful.
Your intention to open new ground to sunlight will also promote the growth of plant
species that your management plan deems undesireable.

The Parks department will be forever weeding these areas at

2

Drechsler-1

great cost in
manpower and supplies. Authorities such as the GGNRA use short-lived
teams of volunteers to do this work for them. These volunteers realize that
they are fighting a losing battle.

Restoration areas such as Land's End, El Polin Spring, Crissy Field are
seldom spoken about anymore by birders or others looking for populations
of wildlife. Since the vast majority of the cities resident bird species feed,
roost and breed in trees, they leave, starve or are predated when their
habitat is destroyed.

I'll leave it up to others to defend the remaining species who will lose their
home, food, and security.

02 The plan to "Maximize Restoration" is dangerous and irrepairable. At very least you should make sure that our residents know about this radical plan and are prepared to deal with its consequences.

Sincerely yours,

Richard Drechsler
740 Rhode Island St.
San Francisco, CA 94107

(415)641-7076

Elkins-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: please table the Significant Natural Resource Areas Management EIR (Glen Canyon)
Date: 10/11/2011 05:05 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/11/2011 05:05 PM -----

Tod Elkins
<tod.elkins@gmail.com>

10/10/2011 08:22 AM

To bill.wycko@sfgov.org
cc
Subject please table the Significant Natural Resource Areas Management EIR (Glen Canyon)

To: Mr. Bill Wycko
San Francisco Planning Department

Re: Draft EIR, Significant Natural Resource Areas Management (Glen Canyon)

Dear Mr. Wycko:

I am a 24-year San Francisco resident, who now lives in a cul-de-sac directly off Glen Canyon. We walk the canyon every day with and without our dog, and have taken part over the years in cleanups in the canyon, along the creek and in Christopher Park. We also walk other sites like Land's End, Stern Grove, Fort Funston, Crissy Field and many others in the city, which have been improved in some ways over the years we've lived in the city. Our kids attended Silver Tree when they were little and played on the ballfields of Glen Park, attended birthday parties in the play area, played hoop in the community center. We enjoy the local fauna and flora in our canyon and elsewhere in the city, and appreciate the current state of Glen Canyon, with trails, a good variance of trees and scrub, red tail hawks, skunks and various critters, coyotes, the whole experience.

I'm writing to protest the planned "restoration ecology" plan and "native plant" efforts to be undertaken in Glen Canyon and elsewhere in the city. The canyon is a much-used resource, by walkers, hikers, runners, climbers, summer campers, parents with strollers, pet owners, students, a whole spectrum and cross-section of the population. Anecdotally, people have told me that they come from cross-town to walk in the area.

01

What is the thinking about pulling out all the well-established trees, scrub and other plants, in the name of re-establishing some old-fashioned starting point for local flora? Have you looked at old photos of the area? There's grass and some scrub on the hills. Today, there's grass, scrub and trees - plus community gardens. Who's determining the concept of "original" and "pristine"? What is the zero point? Is there

Elkins-1

science behind it, or politics? What is driving this bus?

01 (Cont.) I urge you: reconsider this policy. As a city that's always challenged fiscally - especially in Park and Rec - we don't have the extra money to undertake an effort that's not focused, on questionable scientific ground and, most importantly unpopular AND disruptive. If the funds are there and begging to be used, please find a place that can use real improvement that will directly affect people's actual use of the site.

Again, anecdotally, many folks in the Glen Canyon area, and from around other neighborhoods in the city, have expressed similar opinions to me. I hope that they are contacting you, as well.

Thank you for your consideration.

Sincerely,

Tod Elkins
25 Crags Court (3 doors from Glen Canyon)
San Francisco, CA 94131

Elliott-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:09 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Please remove Sharp Park from the Significant Natural Areas Resource Areas Management Plan

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:09 PM ----



Lisa Ruth Elliott
<lisaruth_e@yahoo.com>
10/31/2011 03:57 PM
Please respond to
Lisa Ruth Elliott
<lisaruth_e@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Please remove Sharp Park from the Significant Natural Areas Resource Areas Management Plan

01 I am concerned that the Significant Natural Areas Resource Areas Management Plan is being adversely affected by the special situation surrounding the Sharp Park Golf Course. I would like to urge you to please remove consideration of Sharp Park from the Plan and allow this smart, and ecologically sound Plan to go forward to preserve 31 other of the City's recreation and park areas. They are in dire need of improvement and not being bogged down by the lawsuits around Sharp park will allow these areas to get the attention they need.
Thank you for your time.

.....lisa ruth

==========
Ten Years That Shook the City: San Francisco 1968-1978 (an anthology I co-edited and co-produced) has FINALLY been released from City Lights Foundation Books [June 2011]! Get an Audio Walking Tour map for your own walk through history at local cafes and bookstores, and come hear the authors read from their work at events through September 2011. Ask me or visit shapingsf.org for info.
==========

Emanuel-1

October 24, 2011

RECEIVED
OCT 26 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103

Dear Mr. Wycko:

01 I am a 23-year resident of San Francisco and avid user of city parks, which I think are managed relatively well. I support the Maintenance Alternative for the Natural Areas Program because it is environmentally superior. However, any program implemented should not reduce or eliminate current recreation access in any way. Specifically, I object to the proposed reduction of dog play areas at McLaren Park, Bernal Hill and Lake Merced, especially in consideration of the proposal by the Golden Gate National
02 Recreation Area proposal to ban people with dogs at most of the recreation areas it manages in San Francisco. The SFNAP EIR does not adequately consider or measure the impacts the GGNRA's Dog
03 Management Plan will have on San Francisco city parks. Moreover, the SFNAP EIR does not provide
04 scientific evidence that dogs have an impact on plants and wildlife in natural areas. Therefore, it is my belief there is no justification for excluding people with off-leash dogs from natural areas.

05 It is troubling that there appears to be no representation of people with dogs in an advisory capacity for the NAP. There are many dog groups that are qualified and representative of diverse communities and geographies within the city that would serve well, similar to the other partner groups that participate in this city program.

Parks in San Francisco are too important to residents and visitors alike. And it is wrong to pursue any plan that reduces access to areas that accommodate people as well as dogs by practice, especially at established dog play areas. Thank you for considering these comments about the SFNAP EIR and planning.

Sincerely,

David Emanuel
43 Fairmount Street
San Francisco, CA 94131

cc: Christina Olague, Commission President
San Francisco Planning Commission

Emanuel-2



Bill Wycko/CTYPLN/SFGOV
10/27/2011 11:30 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: comments to SFNAP EIR

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 11:30 AM ——



Dave Emanuel
<demanuel415@gmail.com>
10/25/2011 08:55 PM

To bill.wycko@sfgov.org
cc c_olague@yahoo.com
Subject comments to SFNAP EIR

October 25, 2011

Mr. Bill Wycko

Environmental Review Officer

San Francisco Planning Dept.

1650 Mission St., Suite 400

San Francisco, CA 94103

Dear Mr. Wycko:

01 I am a 23-year resident of San Francisco and avid user of city parks, which I think are managed relatively well. I support the Maintenance Alternative for the Natural Areas Program because it is environmentally superior. However, any program implemented should not reduce or eliminate

02 current recreation access in any way. Specifically, I object to the proposed reduction of dog play areas at McLaren Park, Bernal Hill and Lake Merced, especially in consideration of the proposal by the Golden Gate National Recreation Area to ban people with dogs at most of the recreation areas it manages in San Francisco. The SFNAP EIR does not adequately consider or

03 measure the impacts the GGNRA's Dog Management Plan will have on San Francisco city parks. Moreover, the SFNAP EIR does not provide scientific evidence that dogs have an impact

04 on plants and wildlife in natural areas. Therefore, it is my belief there is no justification for excluding people with off-leash dogs from natural areas.

Emanuel-2

05 It is troubling that there appears to be no representation of people with dogs in an advisory capacity for the NAP. There are many dog groups that are qualified and representative of diverse communities and geographies within the city that would serve well, similar to the other partner groups that participate in this city program.

Parks in San Francisco are too important to residents and visitors alike. And it is wrong to pursue any plan that reduces access to areas that accommodate people as well as dogs by practice, especially at established dog play areas. Thank you for considering these comments about the SFNAP EIR and planning.

Sincerely,

David Emanuel

43 Fairmount Street

San Francisco, CA 94131

cc: Christina Olague, Commission President

San Francisco Planning Commission

Enzi-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:23 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: I support "maintenance alternative"

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:24 AM -----



Christopher Enzi
<x2frnz@hotmail.com>
10/29/2011 07:14 PM

To <bill.wycko@sfgov.org>
cc
Subject I support "maintenance alternative"

Hello Bill Wycko-

As a citizen who has chosen to live IN A CITY, I have no wish to have my access to public parks taken away from me.

01 The Natural Areas Program is a deluded, nonfunded attempt to privatize public parks which are funded through public money.

Please know that many of us do not see any value in these type of programs. Unless we are all going away and taking our cars and two centuries of urban planning with us, it seems more sensible for the parks to be maintained for the use and enjoyment of ALL of the people who pay for their upkeep and

02 maintenance. This includes children, runners, classes, sportspeople, dogs and their people, sunbathers, gardeners and bicyclists.

NAP is an attempt to undermine this great and successful social experiment by useless prohibitions on the citizens' enjoyment of what they have paid for. The benefits of this program are ill considered. Please do not continue down this garden path.

Thank you
Christopher ENZI
San Francisco Home owner
San Francisco small business owner
San Francisco dog owner
San Francisco tax payer in MANY ways
San Francisco Voter

Fasman-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:24 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Program Environmental Impact Review

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:25 AM ----



Michael Fasman <michaelfasman@yahoo.com >
10/29/2011 06:08 PM

To bill.wycko@sfgov.org
cc
Subject Natural Areas Program Environmental Impact Review

Bill Wycko, Environmental Review Officer
SF Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
bill.wycko@sfgov.org

To Mr Wycko:

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

02 I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco.

Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas.

San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city.

03 I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks.

Sincerely,
Michael Fasman
4489 24th St
SF 94114

Fitzer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:17 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: OFF LEASH

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:18 PM ----



Susie Friedman <justsusie@sbcglobal.net>
10/31/2011 01:37 PM

To Bill.wycko@sfgov.org
cc
Subject OFF LEASH

Please support the Save the Off-Leash walking Areas in the GGNRA.

Since our daughter graduated Lowell High School, we do not have a place to go to meet people and socialize. We have met many friends from our daily off leash dog walks at Ft. Funston. For us, it is our form of exercise, away to relieve the day's stress, our daily dose of fresh air. Our walks are as important to us as they are for our dogs. For me, it is a way to exercise and enjoy our beautiful city and the ocean air. I always take our out-of-town guests for a walk and show off our beautiful city and the Fort. Our guests are always amazed at how lucky we are to have this spot to go to walk and run our dog Wanda.

01 Please tell the GGNRA to stop pushing its extreme proposal that will negatively impact so many of us who live in the Bay Area with our wonderful pet dogs. Our dog is a rescue. We don't know her breed, but we do know that her daily run is very important for her and for us.

Why is the GGNRA insisting on this extreme proposal that would eliminate a main form of recreation that takes place at these recreation areas? Doesn't the GGNRA have an obligation to respect the legislation that created these areas by managing them as urban recreation areas, not as pristine wilderness areas?

I understand that Congress could resolve this conflict by codifying the GGNRA's original 1979 Pet Policy as a Section Seven Special Regulation, and mandating that all properties added to the GGNRA after 1979 maintain historical recreational access.

02 This GGNRA proposal will create dangerous situations of overcrowding and overburden city parks

There are very few spaces left for people to take their dogs. 1 in 3 Bay area residents has dogs, and thousands like myself and my husband go to GGNRA every single day.

03 I understand that the GGNRA has a recreation first mandate with long practiced mixed-use activities (surfing, hiking, dog walking, horseback riding, hang-gliding, kite surfing, jogging, biking, festivals and events)

People, dogs, wildlife and plants successfully co-exist in GGNRA - dogs have

Fitzer-1

03 (Cont.) little negative impact on natural resources and bird life.

04 For 10 years now, GGNRA has acted unilaterally and spent millions of dollars on a misguided plan that will require millions of dollars through the hiring of park rangers and police. I, for one, think this money would be more wisely spent on our schools.

01 (Cont. The GGNRA dog management proposal has nothing to do with safety or the environment- it's part of a pattern of GGNRA bureaucracy that denies more and more and people/activities access to parks.

05 Parts of Ft. Funston have already been shut off since we first started walking there in 1998. These closures have had a negative impact on the natural resources in the existing areas where we can walk. I not only think that Ft. Funston should remain an off-leash area, I also think the ares that were closed off should be opened up.

06 More and more I have been reading articles in various national newspapers about the important role animals, and dogs, in particular, play in the lives of people. This is certainly true for our dog and I suspect for all dog owners.

05 (Cont.) Lastly, I would like to say that many dog-less people come to Funston just to be with and play with dogs. just yesterday, while walking our dog at Funston, I met a dog-less Dad who took his 2 small kids Ft. Funston so that his kids could see and pet the dogs there. They couldn't have a dog where they lived and his kids were thrilled to be able to be able to run with and pet the dogs. It also gave the Dad a chance to teach his kids how to behave with dogs, to ask, "May I pet your dog ?" and "May I feed your dog this treat ?" etc.,

01 (Cont.) There so many more important issues that could use the time and money that is being spent on trying to close off-leash dog areas.
Before our city and country goes to the dogs . . . . leave well-enough alone and start focusing elsewhere.

Thanks for your attention to this matter.

Susan, Gene and Wanda Fitzer
San Francisco
94127

DSC_0001.jpeg
WANDA

Flasher-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:37 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: natural areas plan

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:38 PM ----



bob flasher <rangerdude333@hotmail.com>
10/31/2011 04:25 PM

To <bill.wycko@sfgov.org>
cc
Subject natural areas plan

Mr. Wycko,

01 The proposed master plan for SF's natural areas is a great start at managing these ecologically, recreationally and socially valuable open spaces. Please do everything in your power to ensure the survival and health of these parks. The GGNRA has found that when the community is involved in maintaining and restoring the park, the diverstiy of park users and frequency of visits increases. Parks are what transform a neighborhood into a community. The Natural Areas provide special opportunites for families to experience nature right in the city. This is especially important for families without the means to travel to national and state parks.

02 If the issues around Sharp Park are holding up approval of the plan, please separate the golf course from the rest so we can continue to maintain the other natural areas in a condition that promotes visitation. Thanks for this opportunity to provide feedback.

Bob Flasher
Lecturer @ SFSU
Recreation, Parks & Tourism

Fong-1



Bill Wycko/CTYPLN/SFGOV
10/20/2011 04:23 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Draft EIR - Comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/20/2011 04:24 PM -----



Edward Fong
<emfong@gmail.com>
10/17/2011 01:41 PM

To bill.wycko@sfgov.org
cc
Subject Draft EIR - Comments

Dear Sir,

I would like to comment on the Draft EIR for the Significant Natural Resource Areas Management Plan, CASE NO. 2005.1912E, STATE CLEARINGHOUSE NO. 2009042102.

01 While the conservation and preservation of native habitats, plants and species is very important, in my opinion the "Maximum Restoration Alternative" places too many restrictions on the current and future recreational needs of San Franciscans. I urge you to adopt a plan that more evenly balances preservation and recreation, either the "No Project Alternative," the "Maximum Recreation Alternative," or the "Maintenance Alternative."

Thank you for your time.

Sincerely,

Edward Fong

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

02 2) The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas).

03 3) The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

04 4) The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered.

05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Reed

Print Name: Reed Remsted

Address: 4316 25th St
SF, CA 94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Maxwell. T
Print Name: Maxwell Tuozzolo
Address: 660 Los Palmos
94127
(age 10)

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: L

Print Name: Shirley Wong

Address: 33 Kava Road
Alameda, CA 94502

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Carl Friedman

Print Name: CARL FRIEDMAN

Address: 4256 23 ST
SF. CA 94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Jeff Adachi

Address: 555 7th St
2nd Fl
SF, CA 94103

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Kevin O'Connor

Address: 600 Marieta Dr
San Francisco CA 94127

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Andrea Brennan

Address: 1967 9th Ave
San Francisco CA
94116

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: REILLY BRENNAN

Address: 1967 7th AVENUE
SF CA 94116

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: 

Print Name: Patricia Mankiller

Address: 2464 Belvedere
San Leandro, Ca 94577

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: J Cohen

Print Name: Jennifer Cohen

Address: Homeless

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Kay Hoskins

Print Name: Kay Hoskins

Address: 2130 Market #2
94114

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Diane Soderquist

Print Name: Diane Soderquist

Address: ~~R~~ 43 Los Padres Cir
Novato, CA 94947

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Signature: [signature]
Print Name: ANGELA PASCALE
Address: 650 MISSION ST.
SAN FRANSCEO CA
94105

Please consider the following extra points:

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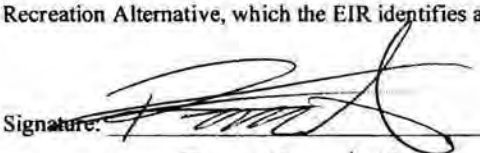
Signature: 

Print Name: Rogelio Alfaro

Address: 3954 Reston Ct.
S. SF CA 94080

Please consider the following extra points:

Form Letter-1

October 30, 2011

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SF Planning Dept.

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Signature: [signature]

Print Name: MELLY SAECHAO

Address: 3954 RESTON CT
SO SAN FRANCISCO, CA 94080

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Gina Poon

Print Name: GINA POON

Address: 3954 Reston Court
South SF CA 94080

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SF Planning Dept.

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Signature: _____

Print Name: TRICIA GARLOCK

Address: 212 STATES
SF CA
94114

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: 

Print Name: Yoko Shirakami

Address: 21 Corwin St
San Francisco CA 94114

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October 30, 2011

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Signature: [signature]

Print Name: Melana Orton

Address: 601 Alamba #102
San Francisco, CA
94110

Please consider the following extra points:

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SF Planning Dept.

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Signature: Susan Kulowitz

Print Name: Susan Kulowitz

Address: 558 Texas
S. F, CA 94107

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Angela Padilla
Print Name: Angela Padilla
Address: 3841 18th St
SF CA 94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Anna Song

Address: 743 Ironstone
Merced CA 95348

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SF Planning Dept.

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Signature: 

Print Name: Emmanuel Tamor

Address: 971 S. Van Ness Ave
SF, CA 94110

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SF Planning Dept.

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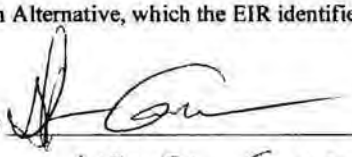
Signature: 

Print Name: ALFONSO GOMEZ

Address: 442 VERNON ST
SAN FRANCISCO CA 94132

Please consider the following extra points:

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SF Planning Dept.

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Signature: [signature]

Print Name: Haruka Kawamoto

Address: 166 - 10th Ave #2

SF CA 94118

Please consider the following extra points:

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: BRIAN THEBERGE

Address: 180 20th Ave. S.F. 94121

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Matt Kulis

Print Name: Matt Kulis

Address: 430 Roosevelt Way
SF CA 94114

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Signature: Jeff Lamport

Print Name: Jeff Lamport

Address: 430 Rousset
SF 94114

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Signature: MZamora

Print Name: Meghan Zamora

Address: 971 S. VAN Ness
SF, CA 94110

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Signature: [signature]

Print Name: Josh Mitts

Address: 954 Oak Street, SF, CA 94117

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Signature: [signature]

Print Name: Eva Yarcubor

Address: 534 15th Ave
SF, CA 94118

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Signature: [signature]

Print Name: Robert Sovel

Address: 21 Ridge Ave
M.V. CA

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Signature: Felicia Zeiger

Print Name: FELICIA ZEIGER

Address: San Francisco 94132

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SF Planning Dept.

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Signature: David Cloutman

Print Name: David Cloutman

Address: 245 Panorama Dr.
San Francisco, CA 94131

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SF Planning Dept.

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Signature: [signature]

Print Name: Eric Lloyd

Address: 1355 20th Av
SF 94122

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SF Planning Dept.

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Signature: Paul Dessureau

Print Name: Paul Dessureau

Address: 2570 21st Ave
SF CA 94116

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Katie Gluck

Print Name: KATIE GLUCK

Address: UPPER TERRACE
94117

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SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: E R Anderson

Print Name: E. R. ANDERSON

Address: 3270 21ST ST #303
SF CA 94110

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: Ruo Yue Song

Address: 16 Britton Ct
SF. CA 94134

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Scott Grant

Address: 16 Britton St.
San Francisco, CA 94134

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: [illegible] ORDAN ZA

Address: 554 Castro St

SF CA 94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Miranda Ruenneng

Print Name: Miranda Ruenneng

Address: 1043 Annapolis Dr
San Mateo, CA 94403

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Shirley Yuen

Print Name: SHIRLEY YUEN

Address: 2907 16TH AV

SF CA 94116

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Anna Remstedt

Print Name: Anna Remstedt

Address: 4316 25th St.
San Francisco, California
94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Rob A Seide
Print Name: ROB SEIDE
Address: 1464 Grove St #302
SF, CA 94117

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Carin Lindquist

Print Name: Carin Lindquist

Address: 4316 25th St
SF, CA 94114

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Signature: Gloria M Judd
Print Name: GLORIA M JUDD
Address: 1080 Page St #2
SF
94117

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Form Letter-1

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SF Planning Dept.

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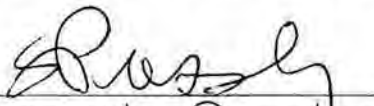
Signature: 

Print Name: Sheila Pressley

Address: 660 Los Palmos
SF CA 94127

Please consider the following extra points:

Form Letter-1

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SF Planning Dept.

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Signature: 

Print Name: O ABOUAB

Address: 1080 Page ST
SF CA 94117

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Jenny Niec

Print Name: Jenny Niec

Address: 2001 McAllister St.
San Francisco, CA
94118

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: M. Allison Moorman

Address: 176 Belvidere St #2
SF CA 94117

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Mei Mei Canty

Address: 44 McAllister st. #810 SF 94102

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Bridget Ivory

Address: 295 21st Ave. Apt 16
San Francisco, CA 94121

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: 

Print Name: Colvin Shiv

Address: 1602 Tucker St
Oakland CA 94603

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: Doreen DiSalvo

Address: 855 Pine St #5
SF, CA 94108

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Andre F Peharguo

Print Name: Andre F PEHARGOU

Address: 3840 Fulton St
SF CA 94118

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Kathleen Pehargou

Print Name: Kathleen Pehargou

Address: 3840 Fulton St
SF Ca 94118

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SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: X Gloria A Moreira
Print Name: Gloria A Moreira
Address: 321 Paul Avenue
San Francisco CA
94124

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Carolina Aparicio
Print Name: Carolina Aparicio
Address: 321 Paul Avenue
San Francisco CA
94124

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SF Planning Dept.

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Signature: Michelle Rabrra y Muñiz

Print Name: Michelle Rabrra y Muñiz

Address: 1760 Hyde St #20
SF 94109

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Emily Carpenter

Print Name: Emily Carpenter

Address: 123 17th St. Apt 108
Oakland, CA 94612

Please consider the following extra points:

Form Letter-1

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Shana Harris

Print Name: Shana Harris

Address: 3942 Ruby St
Oakland, CA 94609

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SF Planning Dept.

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Signature: _____

Print Name: JEFF FITZGERALD

Address: 1222 6th
SF 94122

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Signature: Camille

Print Name: Camille Durney

Address: 112 Del Vale Ave.
San Francisco 94127

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Signature: John F Hickey
Print Name: JOHN F Hickey.
Address: 2654 - 23 RD Ave
SFo. CA - 94116
6644809

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Signature: [signature]

Print Name: Kevin Schmidke

Address: 702 Foerster St.
San Francisco CA 94127

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Signature: P Jensen

Print Name: Patti Jensen

Address: 1238 5th Ave
SF CA 94122

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Signature: T Garber

Print Name: Ted Garber

Address: 895 Rockaway Beach Av
Pacifica CA 94044

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SF Planning Dept.

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Signature: DS

Print Name: DANICA SUSKIN

Address: 343 London St.
SF, CA 94112

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Signature: Stacey M. Gregg

Print Name: Stacey M. Gregg

Address: 2111 Dry Creek Rd.
San Jose, CA 95124

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SF Planning Dept.

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Signature: [signature]

Print Name: JOHN J. FLYNN

Address: 1963 TUCK
ST

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Alicia Love

Print Name: Alicia Love

Address: 2246 · 32nd Ave.
S.F., CA 94116

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Pat Sweeney RN MSN

Print Name: PAT Sweeney

Address: 1951 OAK St #2

SF CA 94117

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: EUGENE M KIMURA

Address: 1026 - 38th AVE.
SF CA 94121

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: DANNY STERN

Address: 152 HAMPTON AVE
SF CA 94131

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: DEREK DUREST

Print Name: DEREK DUREST

Address: 575 DUBOCE AVE
S.F., 94117

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Dayala Levenson

Address: 152 Hamerton Ave
SF CA 94131

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SF Planning Dept.

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Signature: [signature]

Print Name: Brian Benzeka

Address: 2170 20th Ave
SF CA 94116

Please consider the following extra points:

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SF Planning Dept.

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Signature: [signature]

Print Name: Angela Ho

Address: 1140 Chopin Terrace
Fremont, CA 94538

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SF Planning Dept.

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Signature: Brian Tan

Print Name: BRIAN TAN

Address: 554 ANZA ST.
Mountain View, CA 94041

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Signature: Delia Ginorio

Print Name: DELIA V GINORIO

Address: 413 MOSCOW
SF 94112

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Signature: 

Print Name: Harvey Jackson

Address: Pier 70 #11 #303
SF 94107

Please consider the following extra points:

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Signature: Jon-Edmond Abraham

Print Name: JON-EDMOND ABRAHAM

Address: 1080 EDDY ST., #403
SF, CA 94109

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Rebecca Li

Print Name: Rebecca S. Li

Address: 303C NIMITZ DR

SF, CA 94130

Please consider the following extra points:

Form Letter-1

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Melissa Oliva-Sullivan

Address: 594 33rd Ave
San Francisco, CA 94121

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Helen L Petzinger

Print Name: Helen L Petzinger

Address: 439 Avila Street
San Francisco, CA
94123

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Pauline Wong

Address: 1627 Funston Ave
SF, Ca 94122

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SF Planning Dept.

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Signature: Christine Lim

Print Name: Christine Lim

Address: 970 Duncan St. F107
San Francisco, CA 94131

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Warren Witter
Print Name: Warren Witter
Address: 601 Van Ness Ave. Apt. 127
San Francisco Ca.
94102

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Alice Yavorsky

Print Name: Alice Yavorsky

Address: 760 - 5th Ave.
SF, Ca. 94118

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Sylvia Pascal

Print Name: SYLVIA PASCAL

Address: 2117 Judah Street
SAN Francisco 94122

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]
Print Name: Linda Rochin
Address: 494 27th Ave
San Fran 94121

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Lauren Rossi

Print Name: Lauren ROSSI

Address: 1470-42nd ave
SF, CA 94122

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: E L

Print Name: EVAN WILDE

Address: 15530 EL GATO LN
LOS GATOS, CA 95032

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Susie Li Koshiyama

Print Name: SUSIE LI KOSHIYAMA

Address: 15530 EL GATO LN
LOS GATOS, CA 95032

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Signature: LaPriel Rossi

Print Name: LaPriel Rossi

Address: 1470 - 42ave
SF CA 94122

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Signature: [signature]

Print Name: DAISY AZUMA

Address: 2201 OCEAN AVE
S.F, CA 94127

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Signature: [signature]

Print Name: Ina Carson

Address: 425 Shrader
SF CA 94117

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Signature: [signature]

Print Name: KATHERINE LING

Address: 305 WILLOWCREEK LANE
MARTINEZ
CA 94553

Please consider the following extra points:

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SF Planning Dept.

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Signature: [signature]

Print Name: Jennifer Shao

Address: 2138 Quesada Ave

San Francisco, CA 94124.

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Ana Gomez

Address: 291 Alta Vista Way
Daly City, CA 94014

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Cristina Llop

Address: 1455 Palou Ave
SF, CA 94124

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: María Pineda

Print Name: María Pineda

Address: 151 Crescent Ave
San Francisco CA
94110

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: 

Print Name: JAMES B CORWIN

Address: 42 URANUS
SF, CA

Please consider the following extra points:

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Patty Corwin

Print Name: Patty Corwin

Address: 42 Uranus

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: NORM CUNNINGHAM

Address: 565 ELLIS ST

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Judy K Dons

Print Name: JUDY K. DONS

Address: 1372 24TH AVE
San Francisco, CA 94122

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Megan Frances

Address: Stanyan St
SF CA
94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Cat Gutierrez

Print Name: Cat Gutierrez

Address: 151 Crescent Ave.
SF, CA 94110

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Sandra Day

Print Name: SANDRA DAY

Address: 756 Stewart
Daly City, CA 94015

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Karen Han

Address: 958 Plymouth Ave
SF CA 94112

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]
Print Name: SANDRA SHUMERT
Address: 3981 - 24th St #1
SF CA 94114

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Vi Huynh

Address: 1567 28th Ave
SF, CA 94122
Vhuynhsfsu@yahoo.com

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Signature: [signature]

Print Name: Jcary Hahn

Address: 500 P South Hill Blvd
Daly City, CA 94014

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Signature: Ajay. S

Print Name: ASH SUNDARAM

Address: 15905 OAKRIDGE ROAD,
MORGAN HILL,
CA - 95037

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Signature: _____

Print Name: TAYLOR HUYETT

Address: 3958 Stoneridge Dr.
Pleasanton CA 94588

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Signature: Karen K-Peterson

Print Name: KAREN K - PETERSON

Address: 194 Upland Ave
SF CA 94131

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SF Planning Dept.

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Signature: June Wilson

Print Name: JUNE WILSON

Address: 267 Ulloa St
SF CA 94127

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: William Hannon

Print Name: WILLIAM HANNON

Address: 267 ULLOA
SAN FRANCISCO CA.

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Karen Brungardt

Address: 2255 47th Ave
SF CA 94116

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Pam del Rio

Address: 2554 Harrison St
San Francisco, Ca
94110

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SF Planning Dept.

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Signature: [signature]
Print Name: Margaret Dolan
Address: 767 Corbett
#3
SF, CA 94131

Please consider the following extra points:

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SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: Jeffrey Gee

Address: 500 D South Hill Blvd
Daly City CA

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: _____

Print Name: Shella Liman

Address: 125 Cambon dr # 3M
SF, CA 94132

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Alyssa Royce

Print Name: Alyssa Royce

Address: ~~830 Cayuga~~
125 Buckingham Way #301
SF, CA 94132

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [illegible]

Print Name: Jeannine Yep

Address: 853 greenridge dr #4
daly city Ca 94014

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: 

Print Name: Sasha van Dyk

Address: 2 Gladys Street SF 94110

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: R. Osolkowski

Print Name: R. Osolkowski

Address: 1930 Grove St
SF CA 94117

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: J. Williams

Print Name: J. Williams

Address: 35 Robinson
SF 94112

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Jane Bechtold

Address: 652 16th ave
SF CA 94118

Please consider the following extra points:

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Stella Charbadeshi

Address: 1128 Pine St

San Francisco, 94109

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Signature: [signature]

Print Name: KEVIN EDWARDS

Address: 39 BELCHER ST.
SF CA 94114

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]
Print Name: Charles R Chavez
Address: 1 Church St. #206
S.F. CA
94114

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Chris Anderson

Address: 12 Visitacion Ave.
Brisbane, CA 94005

Please consider the following extra points:

Form Letter-1

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Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Michael Herrington

Address: 178 Haight St
SF CA 94102

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Carl Rodrigues

Print Name: CARLOS RODRIGUES

Address: 1025 Jackson Street, #11

San Francisco, CA 94133

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Diana McCormick

Print Name: Diana McCormick

Address: 3485 Mary Evening
Las Vegas NV 89129

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Michael J Novak
Print Name: Michael J Novak
Address: 2201 Morgan St
SF CA 94122

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Kirby Gunts

Print Name: Kirby Gunts

Address: 75 Landers St.
S.F. CA 94114

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Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Kathleen Murphy
Print Name: KATHLEEN A. MURPHY
Address: 2201 - MORAGA ST.
SF CA 94122

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Norma Nieves

Print Name: Norma Nieves

Address: 5580 Old Redwood Hwy
Penngrove CA
94951

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Grace Walker

Address: 3555 A 17th St
SF, CA 94110

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Alexandra CHARPUYER

Address: 2101 California Street
Apt 4
San Francisco.

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: Ana Contreras

Address: 133 Jules Ave
S.F. Ca 94112

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Janie Ouyang
Print Name: Janie Ouyang
Address: 20 Wood ST
SF CA 94118

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: SHERYL O'WYNNG

Address: 20 WOOD ST
SF CA 94118

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: [signature]

Print Name: VICTOR LAW

Address: 630 PRESIDIO AVE
SF 94115

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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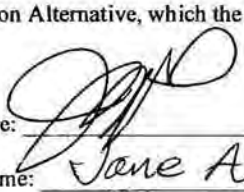
Signature: 

Print Name: Jane Alexander

Address: 1635 7th Ave
SF CA 94122

Please consider the following extra points:

Form Letter-1

October 30, 2011

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SF Planning Dept.

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Signature: J. L. Napoli

Print Name: JOAN L. NAPOLI

Address: 2452 POLK ST.
SF, CA 94109

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Kimberly Yee

Print Name: Kimberly Yee

Address: 837 Skyline Dr
Daly City, CA 94015

Please consider the following extra points:

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October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Chelsea Pemberton

Print Name: Chelsea Pemberton

Address: 621 Cole Street
San Francisco, CA
94117

Please consider the following extra points:

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Douglas Acres

Print Name: Douglas Acres

Address: 1234 [redacted] Bayside Dr
Ste C
SF 94130

Please consider the following extra points:

06 Ft. Funston for dogs & people!

Form Letter-1

Quick Comments on NAP EIR

It's always best to include personal comments about your experiences in natural areas in SF city parks. However, if time is short, here are a few quick points you can make to show the Planning Department that the NAP EIR is inadequate and that additional work must be done.

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05 5) Support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

For more information on these points, and to see additional points that you can add to your comment, go to: http://www.sfdog.org.

Comments are due at the end of business (5 pm) on **Monday, October 31, 2011.**

Email your comment to:
bill.wycko@sfgov.org

Or deliver them in person to:
Bill Wycko, Environmental Review Officer
SF Planning Dept
1650 Mission St, Suite 400
San Francisco, CA 94103

07

Spencer Arcieri
Age: 11 years old
Email: SpencerArcieri@gmail.com (no capitals)
reason: I think dogs should be of leash because they should have the right to they have feelings and thoughts like us.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Nikki Acuna

Address: 2201 Ocean Ave
SF, Ca. 94127

Please consider the following extra points:

08 I can't throw a ball with my dog on a leash!! And I'm responsible enough to pick up after her!! Much like other dog owners!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Carol Bakker

Print Name: CAROL BAKKER

Address: 411½ 30th St
SF CA
94131

Please consider the following extra points:

09 Please keep our city dog friendly.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Linda K. Barnes
Print Name: Linda K. Barnes
Address: 99 Westbrook Ave
Daly City, CA 94015

Please consider the following extra points:

10 I walk at Pine Lake with my dog. Please keep it open

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Robin Buckley
Print Name: Robin Buckley
Address: 2546 39th Ave
SF CA 94116

Please consider the following extra points:

11 When you (GGNRA) were asking for my suport, you were saying that you would protect my open space areas from development. that you (GGNRA) would protect my right too continue to recreate in the way's that I have since my birth. Dog walking is my only source of recreation/ excersize. You (GGNRA) are adding to my mistrust of my government. Stop The Lies!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Terry Burkes

Print Name: Terry Burkes

Address: San Francisco, CA

Please consider the following extra points:

12 • Well exercised dogs are less stressed & better behaved in public. This is also better for public safety.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Lynette Stighore
Print Name: Lynette CA Stighore
Address: 60 Coleridge St
SF CA 94110

Please consider the following extra points:

13 I am NOT for off leash NOT
Fair TO Our Dogs of SF CA

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: 

Print Name: Amy Chow

Address: 389 Monterey Rd
Pacifica, CA 94044

Please consider the following extra points:

14 Dogs need open space also!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Ivy Chen

Address: 1137 Fairmont Dr.
San Bruno, CA 94066

Please consider the following extra points:

15 I use city park, & would like them to stay off-leash

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: MARY JANE CALABRESO

Address: 225 Anderson
SF CA 94110

Please consider the following extra points:

16 Overall, dog owners are considerate keeping their pets on the paths & streets.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Amy Clark

Print Name: Amy C. Clark

Address: 1404 Van Dyke Ave.
SF CA 94124

Please consider the following extra points:

17 Dogs off leash are better socialized!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Michael Cohen

Address: 6 Lockslay Ave
San Francisco CA 94102

Please consider the following extra points:

18 We need off leash areas for our dog to play!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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Signature: Gayle Dansky
Print Name: Gayle Dansky
Address: 204 Alta Vista Rd
Mill Valley CA
94941

Please consider the following extra points:

19 I come to SF parks. The parks need to remain open to dogs and people for recreation.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: C DeBoer

Address: 2155 Hayes St
SF, CA 94117

Please consider the following extra points:

20 have kids, dogs, a mortgage need dog walks too!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Pimy Deciardo

Address: 150 Haven Dr.
Daly City CA 94014

Please consider the following extra points:

21 I walk in city parks. Taking away access for my dog & I impacts my ability to have the health benefits & quality of life living in this area. This is a huge social outlet for me.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: C

Print Name: Corinne Dowling

Address: 48 Mirabel Ave.
SF CA 94110

Please consider the following extra points:

22 As founder/advisor of Give a Dog a Bone (www.gdab.org) and guardian of three well-behaved, trained dogs I know first hand how exercise positively impacts dog behavior; and conversely the lack of exercise creates frustrated dogs with high probability of losing good social skills I wholeheartedly support the Maximum Recreation Alternative. Thank-you, C

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Jeff Fanning

Print Name: _____

Address: _____

_____

_____

Please consider the following extra points:

McGlaren Park & Ingleside

23

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Joe R. [illegible]

Address: 37 Sussex St.
94131

Please consider the following extra points:

24 ~~Keep T~~ Keep Glen Park
Dog Friendly.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: JOANNE FUNCKE

Address: 565 4th LANE
SSF CA 94080

Please consider the following extra points:

25 I WALK AT PINE LAKE WITH MY DOGS OFF LEASH. CHIHUAHUA MEETUP ALSO THERE

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Joell Hallowell

Print Name: Joell Hallowell

Address: 212 States St.
SF CA 94114

Please consider the following extra points:

26 Dogs make people happy.
Happy people are better citizens

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Arlene Handzel RN.

Print Name: ARLENE HANDZEL

Address: 2107 BEDFORD
SAN FRANCISCO, CA 94115

Please consider the following extra points:

27 I AM NOT A DOG OWNER BECAUSE OF MY LIFESTYLE RESTRICTIONS, BUT I KNOW WELL THE CONTRIBUTIONS THAT DOGS MAKE TO OWNERS - LOTS of HEALTH & HAPPINESS BENEFITS!! WHAT A BARGAIN!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Lee Heidhues

Print Name: Lee Heidhues

Address: 566 40th Avenue
SAN FRANCISCO CA
94121-2523

Please consider the following extra points:

28 MOST DOGS ARE NOT disruptive. To curtail their activities, ie keeping them on the leash actually creates more behavioral problems with canines...

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Mary Kennedy

Print Name: Mary Kennedy

Address: 555 San Bruno Ave
SF, CA. 94107

Please consider the following extra points:

29 SF dog owners are caring & for the most part, [redacted] responsible - don't punish a few - dogs & cats are part of the fabric of our city

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Yuchen

Print Name: Yuchen Ku

Address: 554 Anza St.
Mountain View, CA 94041

Please consider the following extra points:

30 As much as people with kids, people w/ dogs should be able to enjoy the parks w/ their pets as well.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]
Print Name: Gillian Ladd
Address: 245 Panorama Dr
SF CA 94131

Please consider the following extra points:

31 These proposed closures will negatively impact my life. I might have to move away from SF, if implemented.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: RICARDO LAGOS

Address: 216 Shrader St
San Francisco CA 94117

Please consider the following extra points:

32 * Please Keep Golden Gate Park oak woodlands safe for dogs and legal off leash.

→ ~~Ideo make use of~~

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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Signature: Evelyn Lee

Print Name: EVELYN LEE

Address: 170 Beulah St #1
SF CA 94117

Please consider the following extra points:

33 Please Don't Take it Away!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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Signature: [signature]

Print Name: Jenny Leung

Address: 1780 Bancroft Ave
SF CA 94124

Please consider the following extra points:

34 Our pet needed to exercise and live happy life.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Triston McLaughlin

Address: 220 Clinton
SF. Ca
94116

Please consider the following extra points:

35 Keep the parks for everyone its what makes them special!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: Sonja Ohldag

Address: 115 Santa Clara St.
Brisbane, CA 94005

Please consider the following extra points:

36 most important to me is the Crissy Field!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: George E. Paphi

Print Name: George E. Paphi, Jr.

Address: 252 A Sanchez St
SF, CA 94114

Please consider the following extra points:

37 As a disabled person I am concerned with the loss of accessible opportunities for me and my dog.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: Derek Parks

Address: 6 Lockeley Ave #10J
SF CA 94122

Please consider the following extra points:

38 pls keep off leash available.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Julianne Reidy

Print Name: Julianne Reidy

Address: 586 Bright ST.
San Francisco, CA 94132

Please consider the following extra points:

39 We need open spaces for BOTH dogs and people to spend time. DON'T take the parks away from the animals & people.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: JUDY RICHARDSON

Address: 940 NELSON AVE
PACIFICA, CA
94044

Please consider the following extra points:

40 KEEP OFF LEASH AVAILABLE *PLEASE*!!!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: [signature]

Print Name: MAIA SCOTT

Address: 555 John Muir Dr #410
SF 94132

Please consider the following extra points:

41 We all need our freedom – even those working.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Marly M. Singer

Print Name: MARLEY M. SINGER

Address: 177 BELGRAVE AVE
SF 94117

Please consider the following extra points:

42 EVERY DAY I SEE MANY DOGS AT CROSSY FIELD, WALKING + ENJOYING THEIR DOGS AND HAVE NEVER SEEN ANY CONFLICT, DAMAGE, ETC.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]

Print Name: Paula Storti

Address: 417A Washington Blvd
Presidio
SF 94129

Please consider the following extra points:

43 CHILDREN ARE A GREATER NEGATIVE IMPACT TO THE BEACH (MOM'S + STROLLERS + CHILD PLAY) THAN DOGS.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Strauss + High Tops
Print Name: Zoe Strauss
Address: 428 28th St.
SF. CA 94131

Please consider the following extra points:

44 Plants and dogs can co-exist. One of the reasons we chose to purchase a house in SF and create a life here is because it is a very dog friendly city. Losing the spaces will change that for us!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Teresa Swift

Print Name: Teresa Swift

Address: 1234 5th Ave
SF CA 94122

Please consider the following extra points:

45 Dogs need to run on a daily basis to stay healthy. Dog runs get muddy & too frequently filled with big dogs who could hurt small dogs.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: [signature]
Print Name: NATALIE TONDEUR
Address: 3150 RIVERA ST.
SF CA. 94116

Please consider the following extra points:

46 Impact of humans, garbage, etc. of humans in GGNRA lands

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

I would like to note the following problems with the NAP EIR:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Ryan T

Print Name: Ryan Tuozzolo

Address: 660 Los Palmos

94127 (12 yrs old)

Please consider the following extra points:

47 For our generation, keep dog areas open

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

I would like to note the following problems with the NAP EIR:

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Sunny Walters
Print Name: Sunny Walters
Address: 220 Guintara St
94116 SF

Please consider the following extra points:

48 Parks keep us healthy! More green - less greed!

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Sandra Waszak

Print Name: SANDRA WASZAK

Address: 446 15th Ave
SF CA 94122

Please consider the following extra points:

49 Dogs are better dogs with off leash time.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Susan Wheeler

Print Name: Susan Wheeler

Address: 280 Moncada Way
San Francisco, CA 94127

Please consider the following extra points:

50 I am concerned that feral cats in managed colonies that live in city areas designated as NAP not be removed or harmed. T-N-R™ (Trap-Neuter-Return-Manage) has been a very successful program in vastly lowering the number of cats in the city's parks

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Shirley Wing

Print Name: Shirley Wing

Address: 152 Collins
SF CA 94118

Please consider the following extra points: There are more dogs than kids!

51

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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05 5) I support the Maintenance or Maximum Recreation Alternative, which the EIR identifies as being environmentally superior alternatives.

Signature: Christy

Print Name: CHRISTINA WONG

Address: 1201 POST ST.
ALAMEDA, CA 94501

Please consider the following extra points:

52 I am a responsible dog owner & pick up/clean up after my dog. I appreciate the environment as much as my dog & if it weren't for off-leash parks, we would not have a place to run & exercise freely. Please, keep parks off leash & I will keep it clean. Thank you - C.W.

Form Letter-1

October 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.

RE: NAP EIR

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Signature: Debbie Yuu
Print Name: Debbie Yuu
Address: 1274 8th Ave

Please consider the following extra points:

53 KEEP THEM OPEN!

Fox-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:49 PM
To: Bock, John
Subject: Fw: Natural Areas Program EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:50 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:26 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Natural Areas Program EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:27 PM -----

Project Coyote <info@projectcoyote.org>
10/31/2011 04:59 PM

To: <bill.wycko@sfgov.org>
cc:
Subject: Re: Natural Areas Program EIR

1

Fox-1

Re: Natural Areas Program EIR

Dear Mr. Wycko,

01 I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes.
Before our city was built. Before our lush parks were created.
This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

02 Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.
03 Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

04 We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

05 I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

06 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank you for considering my comments and concerns on this important issue.

Sincerely,

Camilla H. Fox

P.O. Box 5007
Larkspur, CA 94977
ph: 415.945.3232
chfox@earthlink.net

2

Freedman-1

RECEIVED
JUN 11 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

June 10, 2012

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Natural Area Plan Draft Environmental Impact Report for Mount Davidson

Dear Mr. Wycko,

01 I am absolutely appalled that the City is seriously considering removing 1,600 mature and healthy trees on Mount Davidson and replacing them with native shrubs which will require regular applications of hazardous pesticides. This is madness. Has the City no better use for taxpayer dollars during tough times than cutting down perfectly healthy trees to take us back to 1776? I often hike on Mount Davidson, & I am often struck by how magical the mountain is with the fog passing through the tall trees and a light drizzle falling only on parts of the mountain. It's almost like a rain forest. To destroy all this beauty of nature to go back into the past will ruin one of the unique treasures of

02

Freedman-1

San Francisco Please help to stop the radical environmentalists from destroying Mount Davidson.

Sincerely,
Aubrey Freedman (homeowner in Miraloma Park)
347 Los Palmos Drive
San Francisco, CA 94127
(415) 333-0345

Furney-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Monday, November 07, 2011 11:10 AM
To: Bock, John
Subject: Fw: Glen Park Restoration

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/07/2011 11:10 AM -----

Chelsea Fordham/CTYPLN/SFGOV
11/07/2011 10:13 AM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Glen Park Restoration

Chelsea E. Fordham
Environmental Planning
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA, 94103
(415)575-9071
chelsea.fordham@sfgov.org

----- Forwarded by Chelsea Fordham/CTYPLN/SFGOV on 11/07/2011 10:14 AM -----

Bill Wycko/CTYPLN/SFGOV
11/07/2011 09:23 AM

To: Chelsea Fordham/CTYPLN/SFGOV@SFGOV
cc:

1

Furney-1

Subject
Fw: Glen Park Restoration

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/07/2011 09:23 AM -----

Gary Furney
<gwfxyz@yahoo.com
>
11/04/2011 09:16
PM

To
"bill.wycko@sfgov.org"
<bill.wycko@sfgov.org>
cc

Subject
Glen Park Restoration

Please respond to
Gary Furney
<gwfxyz@yahoo.com
>

01 I so not support a habitat restoration in Glen Park leads to the destruction of the habitat for the coyote(s) that currently live there.

I would support a habitat restoration in Glen Park that creates a healthy habitat for the coyotes.

Gary F.
Noe Valley

Gaar-1

Greg Gaar
440 Hazelwood Avenue
San Francisco, CA 94127

RECEIVED
OCT - 7 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
Suite 400
San Francisco, CA 94103

Planning Department Case No. 2005.1912E
State Clearing House No. 2009042102

Dear Mr. Wycko,

I would like to preface my critique of the DEIR by pointing out that it seems to be a basic contradiction to require an Environmental Impact Report on a project that proposes restoring San Francisco's natural environment. It's unfortunate that the DEIR cannot discuss the overwhelming environmental benefits that would result in fully implementing the Natural Areas Management Plan.

The Natural Areas Program has only nine gardeners to manage 32 parks covering over 1100 acres. Without additional staffing or funding the ability of NAP to successfully achieve the goals in the Natural Areas Management Plan is doubtful. In the meantime the weeds are cumulatively spreading and displacing the native plant communities which the plan proposes to preserve.

I will specifically address two significant natural resource areas that I have worked on as a volunteer:

Corona Heights

The proposed action item in the Natural Areas Management Plan to remove 16 invasive Monterey Pine trees is a positive first step in the goal to restore the native grassland of Corona Heights. More trees would need to be removed (specifically adjacent to Museum Way) if the Maximum Restoration Alternative is adopted.

01

If the Natural Areas Management Plan or the Maximum Restoration Alternative are not adopted and implemented then the DEIR should address the specific negative environmental impacts that would occur to the biological resources of Corona Heights.

Gaar-1

01 (Cont.) The DEIR should list the plants, insects, reptiles and birds that could be lost if the native plant community is further degraded by the growth of the trees and the spread of the invasive exotic plants that the non-native trees promote.

Tank Hill

The scores of non-native trees located on the summit are the major threat to Tank Hill's biological resources. The failure of the Natural Areas Management Plan to propose the removal of these trees and the failure of the DEIR to address the long-term environmental impacts of retaining the trees need to be addressed in the final EIR.

02 The eucalyptus and acacia trees will continue to grow thereby cumulatively expanding the shade, leaf litter, fog drip and altering the chemical composition of the soil. These impacts encourage the spread of numerous highly invasive exotic plants (*Erharta erecta, Oxalis pes-caprae, Rumex acetosella* etc).

All of these negative environmental impacts will continue to reduce Tank Hill's native plant community and the wildlife that depend on that community.

Also, the trees are rapidly spreading to the perpendicular cliff above Twin Peaks Boulevard. The tree roots are breaking apart the chert rock which will continue to destabilized the cliff causing more landslides which destroys habitat and exposes the city to lawsuits. The DEIR fails to discuss these impacts.

What is Recreation?

03 The Maximum Recreation Alternative fails to discuss sustainable, nature enhancing recreation. If the priorities of the Maximum Recreation Alternative are defined as dog walking, bicycling or hiking-jogging then other forms of "green recreation" such as bird watching, botanizing, insect watching and habitat restoration are denied or reduced. With support for the Maximum Restoration Alternative more people will engage in nature loving recreation. Habitat restoration is the perfect form of recreation because volunteers sweat-off excess body weight, socialize with friends, neighbors and city gardeners and improve the biological health of our natural areas.

04 Since I have twenty years of habitat restoration experience

Gaar-1

04
(Cont.)

in San Francisco and since I founded and operate a San Francisco Native Plant Nursery in Golden Gate Park you might say that I am biased in stating that the Maximum Restoration Alternative is the best option for repairing the damage that has been inflicted on San Francisco's native plant communities. As the biological systems that support the diversity of life continue to deteriorate, our species is beginning to realize that we need to repair the damage now, not later.

San Francisco is a microcosm of what is occurring throughout the planet. San Francisco should be at the forefront at restoring our natural heritage.

Sincerely,

Greg Gaar

Gachowski-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:17 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off-Leash Dog Walking

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:17 AM ----



strachowski@comcast.net
10/30/2011 10:05 PM

To bill.wycko@sfgov.org
cc
Subject Off-Leash Dog Walking

Greetings,

I am a San Francisco resident who walks her dogs in many off leash areas in the city. Since my day often takes me to different areas of the city I use several of the parks to walk my dogs off leash, such as Crissy Field, Pine Lake, Golden Gate Park and Bernal Hil. No only do I enjoy the exercise for myself and for my dogs, but also the beauty of the surroundings. This is why I have supported the Sierra Club.

01 To hear that the areas to walk dogs off leash are planned to be reduced leads me to wonder if the plan was really thought through to the impact it would have. I would like to know if the it was taken into consideration that people who walk their dogs off leash actually use a park more than people who do not walk a dog off leash? On any given day, no matter the weather, you will find a person walking their dog off leash, whereas a person who is walking for exercise will opt to walk at a mall or on a treadmill. So by restricting off leash dog walking you really are restricting an individuals right to exercise.

02 The impact of an off leash animal is no different than that of a wild animal (which we do have even in San Francisco). And how can you really determine that such erosion or impact is due to an off leash animal? And do you really think by restricting off leash dog walking that it will just go away? Have you thought about the impact on the little areas left for people to walk their dog off leash? We will not go away, nor will we stop walking our dogs off leash. By limiting the areas in which we do so only begs for more erosion problems due to the high usage of the limited areas available.

Sincerely,
Michele Gachowski

Garber-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:53 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:53 AM -----



Ted Garber
<tdx9997@gmail.com>
10/31/2011 11:48 AM

To Bill.wycko@sfgov.org
cc
Subject NAP EIR

Ted Garber
895 Rockaway Beach Ave.
Pacifica, CA 94044

Bill Wycko, Environmental Review Officer
SF Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103
Bill.wycko@sfgov.org

10/31/11

Sir:

01 I recently became aware of the San Francisco Recreation and Park Department Natural Areas Program Environmental Impact Report. I live in Pacifica and the proposal to cut at least 15,000 trees in Pacifica on the Sharp Park property as one alternative in the NAP EIR is an abomination. The EIR contains no scientific studies on the potential benefits of removing trees. It likewise does not adequately acknowledge the problems of removing the trees; i.e. loss of habitat for adapted wildlife in Sharp Park, loss of a carbon sink as trees remove CO2 from air, erosion, run off of soils, run off of pesticides used to kill non-native species, pollutinion Red Eared Frog habitat on Sharp Park Property by pesticide and soil run off, infill of Laguna Salada on Sharp Park by soil run off, etc. In some instances the negative effects are referred to as "Non-significant".

02 This proposed environmental assault by SF Recreation and Parks is the result of an unfortunate effort by people with a knee-jerk response to the idea that nonnative plants are intrinsically bad for public lands. This is not based upon objective research but rather upon prejudice. The net negative environmental impact upon public lands will

Natural communities evolve. The idea that a place needs to be "restored" to a snapshot point in time ignores the complexity of an evolving environment and only acknowledges that the megafauna of that point in time as being the important thing to be considered in public land management.

Garber-1

03 I visit Laguna Salada at Sharp Park frequently. The cattails at Laguna Salada provide important shelter for migratory birds from predators. Removal of cattails ass proposed would result in the loss of shelter and nesting sites for birds.

04 I also take my dog to McClaren Park and Sutro Mountain and I would mourn the loss of public areas that I can take my dog.

Recreation should be a priority for the SF Recreation and Park Department and not removal of public lands from recreational opportunities. The proposed loss of walking trails, off-leash and on leash dog areas in the NAP EIR, coupled with the GGNRA's proposed reduction of trails and dog-friendly trails, drastically reduces recreation areas for everyone in the Bay Area, both with and without dogs.

05 It is true for this EIR, as it was for the GGNRA DEIR that there are very few scientific studies on the effect of dogs on wildlife. Some studies, in fact, show that the presence of dogs increases the presence of wildlife.

01 (Cont) No healthy trees should be removed from public lands. Recreation areas for people and people with dogs should be increased.

Sincerely,
Ted Garber

Garbutt-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: DPAs
Date: 10/05/2011 09:08 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:08 AM -----

Gerard Garbutt
<gerard.g@sbcglobal.net>

10/04/2011 07:43 PM

To bill.wycko@sfgov.org
cc
Subject DPAs

Hi Bill

01 I am writing to show my approval of the proposed reduction of DPAs in city parks. I find myself regularly pestered and often harassed by aggressive dogs. The less I see of them the better.

Gerard Garbutt
261 Amherst Ave.
Kensington, CA 94708
510-527 9765
gerard.g@sbcglobal.net

Garnett-1

07Oct2011

RECEIVED
OCT
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

To: Bill Wycko, Environmental Review Officer, Planning Department,
1650 Mission Street, San Francisco, CA 94103

Re: Off-leash areas like Fort Funston

To whom it may concern:

There are few places left in the world where one can feel at one with nature. I take my son (he is almost 2 years old) and my 2 dogs for walks at Fort Funston almost daily and it means the world to me. To watch my son watch the ocean, the other dogs, the birds, the trees, the sunset or sunrise is always a magical time. Other dog owners I run into are always pleasant and mindful people. The land seems to be kept clean and people and dog friendly at all times. I can't imagine if we didn't have the ability to walk freely through this area. The world is big and I know of nowhere else in the world where I enjoy myself more. My husband and I love it there so much, with our dogs walking by our side unhindered, freely meeting and greeting other dogs and taking in the beautiful surroundings. We even considered for a minute having our wedding there we love it so much. I am sad to hear that there are people that wish to change this and I believe that they don't understand how important and how vital off leash recreation is for the well-being of dogs and their families. My family is so much happier and alive when we can walk our dogs at places like Fort Funston and Stern Grove. Off-leash recreation has my full support. Please let me know if I can provide any additional information.

01

Thank you,

E Garnett

Elizabeth Garnett

920 Bradley Dr.

Daly City, CA 94015

415-722-0070

Gavin-1



Gregory Gavin
<gg@gregorygavin.com>
10/25/2011 10:48 AM

To jessica.range@sfgov.org
cc Daniel Meyerowitz <Daniel@outburst.dk>, Marty Linder <colleenirwin@hotmail.com>, Nic Griffen <nicolagriffin57@hotmail.com>, Bambi Meines
bcc
Subject Bernal Hill EIR Plan - factual mistake

Dear Jessica Range, San Francisco Department of Planning,

I've lived near the top of Bernal Hill for 21 years.*

I'm also a dog owner (a reasonably minded one) who enjoys the hill daily.

01 For this reason I've been continually annoyed by the incorrect conclusion by the "Significant Areas" people that dogs are a major factor in the erosion of Bernal Hill.

The violence committed against the hill occurred some 50 years ago when the paved road which surrounds the hill was built. All along the peripheral road, on the uphill side, the slope was changed for approx. 30 degrees to approx. 70 degrees to accommodate the roadbed as it was carved into the hill. No mitigation, such as concrete retaining walls etc. was installed to hold back the erosion that naturally wanted to reclaim the road below.

Because the road bed was carved out of the hillside made of very soft rock (called chert) the hill has been eroding rapidly above the road to restore a more stable gradual slope. This erosion is happening largely from below, next the road, and will continue until a stable slope is achieved. In geology this is called the "angle or repose". In fact, dog walking trails above road that run *parallel* to the slope, because the compact the earth, may even be slowing down the erosion process. The only way to retard the erosion in any serious way is to built a massive retaining wall along the uphill side of the road.

Bernal hill is a totally unique ***endangered social environment*** where people interact in person with friends and strangers and animals instead of the ubiquitous electronic devices, phones, headphones etc. Its a truly public space in a world where the whole notion of "public" is disappearing rapidly. The value of this to our city is incalculable.

If you are going to restrict the social and recreational environment on Bernal Hill (I actually think you will *never* stop people from enjoying dogs on the hill no matter what is implemented - the space just too loved) at least do it for honest reasons. The erosion argument is bogus.

Thanks for your consideration.

Gavin-1

Gregory Gavin

* I also made very popular (locally) film called "Bernaltown" that hinges on youth super heroes who save the hill from development.

Riveropolis: *Bringing Water & Imagination to Schools, Museums & Public Places*
www.riveropolis.com
www.gregorygavin.com
gg@gregorygavin.com
San Francisco • 415-824-4408

Gerrie-1



Jeanie Poling/CTYPLN/SFGOV
10/31/2011 10:29 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments on the Significant Natural Resource Areas Management Plan

---- Forwarded by Jeanie Poling/CTYPLN/SFGOV on 10/31/2011 10:31 AM ----



Philip Gerrie <glassgerrie@gmail.com>
10/31/2011 10:28 AM

To jeanie.poling@sfgov.org
cc
Subject Comments on the Significant Natural Resource Areas Management Plan

Hello Jeanie,

My name is Philip Gerrie. I am a resident of SF for over 40 years.

I urge the Planning to adopt the SNRAMP DEIR. The report was to analyze the environmental impacts of the NAP. It has done that mostly very well.

01 It has laid out a compromised approach to Rec & Parks natural areas land management. It is not enough enough to achieve sustainability at all sites but is doable.

This is a compromised plan and is not extreme or radical.

02 This plan should include community stewardship of recreational use of NAP land

03 If the environmental superior alternatives are recreation and maintenance, and not restoration, the analysis is flawed.

04 The true impacts of the maximum restoration alternative cannot be adequately evaluated since it is only two pages long therefor no definitive conclusions about the impacts of recreation nor of biological benefits since there is no depth to the alternative.

Overall, I am in favor of the SNRAMP DEIR.

Thank you, Philip Gerrie
4341 26th st SF CA 94131

Ghosh-1

Bock, John

From: Jessica Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:48 PM
To: Bock, John
Subject: Fw: I am writing in opposition to Significant Natural Resource Areas Management Plan 2005.1912E

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:49 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:24 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: I am writing in opposition to Significant Natural Resource Areas Management Plan 2005.1912E

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:25 PM -----

samir@ghosh.com
10/31/2011 06:45 PM

To: bill.wycko@sfgov.org
cc:
Subject: I am writing in opposition to Significant Natural Resource Areas Management Plan 2005.1912E

1

Ghosh-1

Mr Wychko,

01 We have far more pressing matters than changing our vegetation back in time. The costs alone makes this plan impractical. Spend this money improving recreation and safety. We have parks with insufficient water, poor landscaping, unsafe railings, signage, handicap access, etc.

Also, before you pursue this, please read book Anticancer (anitcancerbook.com). Not only could it save your life, but if it stops this plan from using pesticides or herbicides, it will like save many many lives.

Destroying thousands of trees seems wasteful, whether indigenous or not.

We need more trails and recreation areas, not fewer.

02 The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

03 The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas).

04 The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

05 The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered.

06 Support the Maintenance Alternative and the Maximum Recreation Alternative.
The NAP EIR identifies them as "environmentally superior."

Samir Ghosh
762 Clipper St
SF, CA 94114

2

Gleichenhaus-1

RECEIVED
OCT 25 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

D. PETER GLEICHENHAUS

1324 Portola Drive
San Francisco CA 94127

October 24, 2011

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission St., #400
San Francisco, CA. 94103

Phil Ginsberg
Director, Department of Recreation and Parks
501 Stanyan
Golden Gate Park
San Francisco CA 94117

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear Bill and Phil,

01 I support designation of Sharp Park as a historical resource. Having lived in San Francisco since 1985 I know a little about the golfing community. Deputy Commander at the Presidio of San Francisco in the 80's and President of the Lake Merced Golf Club more recently, I am aware of some of the challenges inherent in maintaining, operating and providing a course here.

In my view, for our citizenry and their children, we need to retain access to as many recreational facilities as possible. The probability of creating more golf courses is very low, probably non existent. Therefore, the arguments about Sharp Park merit special attention.

In our city, Sharp Park Golf Course provides an asset available to everyone who plays golf. The fact that abandonment of such an amazing and historically important golf facility is being considered boggles ones mind.

1

Gleichenhaus-1

I hope that the short sightedness of some individuals concerned about the environment is not allowed to blur the view of more enlightened public officials. Reducing the footprint or significantly changing the Mackenzie designed course should be eliminated from consideration.

02

Like many other San Franciscan's and others who play golf, I implore you to support retention of Sharp Park in its current configuration. The course merits preservation as a historical resource.

Respectfully,

D. Peter Gleichenhaus
Colonel, US Army (Retired)

Glikshtern-1



Bill Wycko/CTYPLN/SFGOV
05/29/2012 08:48 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Draft Environmental Impact Report for Natural Areas Management Plan

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/29/2012 08:48 AM----



spgk@comcast.net
05/26/2012 10:19 PM

To bill.wycko@sfgov.org
cc "Avalos, John" <John.Avalos@sfgov.org>, "Elsbernd, Sean" <Sean.Elsbernd@sfgov.org>, "Chiu, David" <David.Chiu@sfgov.org>, "Chu, Carmen" <Carmen.Chu@sfgov.org>, "Cohen, Malia" <malia.cohen@sfgov.org>, "Mar, Eric" <Eric.L.Mar@sfgov.org>, "Kim, Jane" <jane.kim@sfgov.org>, "Olague, Christina" <Christina.Olague@sfgov.org>, "Campos, David" <David.Campos@sfgov.org>, "Farrell, Mark" <mark.farrell@sfgov.org>, "Lee, Ed" <mayoredwinlee@sfgov.org>, "Wiener, Scott" <scott.wiener@sfgov.org>
Subject Draft Environmental Impact Report for Natural Areas Management Plan

Dear Mr. Wycko,

01 The plan is criminal. Cutting healthy trees and using herbicides should be illegal. How can anybody possibly conclude that the plan would have no significant negative impact on wind and shadow, hydrology and water quality, and forest resources is a mystery.

Ideally I'd like the NAP eliminated all together.

02 But since it's not likely to happen: MAINTAINCE ALTERNATIVE is the only acceptable alternative - at least, hopefully, no additional (plenty has been done already) harm will be done.

Anastasia Glikshtern

Gomez-1

RECEIVED
JUN 11 20[illegible]
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Oswald L. Gomez
Carol L. Borden-Gomez
221 Juanita Way
San Francisco, California 94127
Phone (415) 731-5889

ossie_gomez@comcast.net cbordengomez@comcast.net

June 9, 2012

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Mr. Wycko,
We live at 221 Juanita Way, our backyard is adjacent to Mt. Davidson. We are very fortunate to be living in the City, but so close to nature. The wealth of plants, birds, and other animals in our area is wonderful, one of the reasons we chose to purchase our home here.

01 Whatever action is taken on Mt Davidson will impact the rest of our lives, as we plan to live in our home until death. We are not in favor of the plan for Mt. Davidson as outlined by the Natural Areas Program. We are unhappy with many aspects, but will focus on three core issues in this letter.

1. Potential for erosion/flooding

During winter months, it is common for water to flow like small creeks down the mountain. Everyone we've talked to on our side of the street has had problems with water coming into homes or garages. We are very concerned about the potential for damage to our homes from erosion caused by the proposed removal of so many trees near our property. Who will be responsible for this damage?

02 Page 459 of the DEIR notes comments to the report regarding "Geology and Soils". Erosion effects are mentioned several times - and for good reason. Some smart person suggests "The need for a forester to evaluate the erosion impacts from cutting trees down." But the thoughtful comments are deemed "to have either no impact or less than a significant impact". Perhaps less than significant to the report writer, but in fact quite significant to residents like us in close proximity to Mt. Davidson.

Page 465 of the DEIR offers "a summary of the 1995 management plan's general policies and management actions (SFRPD 1995)." Below header "Geotechnical/Soils" on page 466 is this bullet point:
"Cooperate with adjacent property owners to minimize erosion and runoff issues." This leads to our second issue.

Gomez-1

2. Lack of communication by NAP

We read the Miraloma Park monthly newsletter, the Westside Observer local paper, along with the SF Chronicle, etc. But only recently did we become aware of the NAP plan for drastic tree removal in our backyard. They have not communicated their plans to our neighborhood. As homeowners whose property is adjacent to Mt. Davidson Park, we should have received personal notification of such drastic measures. If a home or business in our area plans major changes, they are required to notify residents within specific parameters. Why doesn't NAP have to notify us of their intentions to destroy our backyard? 03

3. Cost

It is difficult to understand the logic of this reality: Throughout our City, young trees are being planted by our City workers in median strips, etc. as part of beautifying San Francisco. At the same time, plans are underway to remove thousands of healthy full grown trees in our parks. How does this make fiscal sense, especially during our current economic climate? City Departments are 04

Our Request

- Take another look at this plan, obtain viewpoints from geology/erosion experts outside of SF Park and Rec, and definitely outside of NAP. They are too invested in this plan moving forward to be open to alternatives. One might say - they can't see the forest for the trees! 05
- Listen to what San Franciscans want. We fight deforestation in Brazil, do we want it to happen right here at home? We don't think so. Limit tree removal to diseased and hazardous trees. 06
- Consider the cost of implementing this extensive tree removal plan during this time of fiscal crisis. This is not a prudent use of taxpayer funds. 04 (Cont.)

Thank you for your consideration of our comments. We look forward to an open and honest review of the DEIR, and hope that common sense will prevail.

Sincerely,

Oswald L. Gomez

Carol L. Borden-Gomez

Gordon-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:18 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comment: Natural Areas Program Environmental Impact Review

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:19 AM -----



Kelly Gordon <kgordon566@yahoo.com>
10/30/2011 07:28 PM
Please respond to Kelly Gordon <kgordon566@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Comment: Natural Areas Program Environmental Impact Review

Oct. 30, 2011

Bill Wycko, Environmental Review Officer
SF Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
bill.wycko@sfgov.org

Dear Mr. Wycko,

01 I'm writing to oppose the expansion of the Natural Areas Program and to voice my support for the maintenance alternative described in the Environmental Impact Review.

02 I am a dogowner and dogwalker, and I use the off-leash dogwalking areas in Bernal Hill and McLaren Park on a daily basis. I recognize the importance of native plant preservation, but I don't feel that it's appropriate to prioritize these projects in urban parks at the expense of these tremendously popular off-leash dogwalking areas. I feel that the first and foremost mission of urban parks should be to promote recreational opportunities for the citizens of San Francisco, and, since so many of us enjoy exercising with our dogs, off-leash dogwalking areas should at the very least be maintained in their current state. Additionally, given that citizens of San Francisco currently have no means of proposing new off-leash areas in parks, the reduction of current dog recreation areas would increase use of remaining areas, possibly to the point of negatively impacting them.

01 (Cont) Please strongly consider implementing the maintenance alternative in the Environmental Impact Review. I very much appreciate your consideration of this issue.

Sincerely,
Kelly M. Gordon

Gottesman-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Subject: Fw: Save the dog play areas!

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

---- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:49 PM ----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:22 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Save the dog play areas!

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:23 PM ----

judithrachelleg@gmail.com
10/31/2011 08:37 PM
Please respond to judithrachelleg@gmail.com

To: bill.wycko@sfgov.org
cc:
Subject: Save the dog play areas!

Gottesman-1

01 I support the Maintenance Alternative to allow dogs to play freely in parks while being environmentally sound.

Thanks!
Judith Gottesman, MSW
Sent on the Sprint® Now Network from my BlackBerry®

2

Gravanis-1

74 Mizpah Street
San Francisco, CA 94131

October 31, 2011

Bill Wycko, Environmental Review Officer
Department of City Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Draft Environmental Impact Report for the Significant Natural Resource Areas Management Plan Project (2005.1912E)

Dear Mr. Wycko:

For the most part, I find that the DEIR does an adequate assessment of the environmental impacts of the San Francisco portion of the proposed project. There are a number of items that I would like to see addressed before the Final EIR is released.

01 Environmentally Superior Alternative (p. 524) – The arguments presented for the selection of the Recreation and Maintenance Alternatives as superior to the proposed project and the Maximum Restoration Alternative are not convincing. A reduction in recreational access is not a negative environmental impact, and even if it were the claims of reduced recreational access are exaggerated. Enforcement of the leash law is not a loss of access. Restricting the use of bicycles is not a loss of access. (In fact, some trails will get greater use if walkers don't fear encountering bikes.) Reducing the number of trails in favor of better design and maintenance can **improve** public access for a greater diversity of park users (as well as reducing maintenance costs and damage from erosion). Also, the Maximum Restoration Alternative could result in greater opportunities for recreational activities such as wildlife observation and hands-on stewardship. Please re-visit the designation of the environmentally superior alternative, especially in the light of a more fully fleshed-out Maximum Restoration Alternative.

02 Laguna Salada -- Please consider carefully the pros and cons of including the Sharp Park natural area in San Mateo County in the same environmental analysis as the natural areas within San Francisco County. Because Sharp Park is so complex and controversial, and the potential environmental impacts of whatever occurs there are so different from those of the in-city areas, it would make more sense to conduct two separate analyses. I realize that some people claim that doing two separate environmental assessments could constitute piecemealing, but I fail to see how there would be significant cumulative impacts that would require the two proposals to be analyzed together. If the analyses cannot be separated, I hope that a thorough explanation of the reasoning will be provided that carefully considers the intent of CEQA.

Gravanis-1

Glossary – I'm glad that the DEIR includes a glossary, but I hope it will be improved to make the contents of the document more accessible to the reader. Some examples:

Urban forest—A significant stand of nonindigenous trees.

Is that what is really meant by the term? If so, where it says, "GR- 15b—Maintain a stocking rate that will perpetuate the urban forest and promote forest health," does it mean that we're not allowed to plant native trees in the "urban forests" (because they'd no longer be urban forests)? And what do the terms "forest" and "forested" mean? They are used several times, but not defined in the glossary. The entire document would be so much more professional and credible if the terms "urban forest" and "forest" were not used at all. San Francisco has a number of indigenous habitat types that should be defined and described, but forest is not one of them. A forest is a complex ecosystem, not merely a stand of trees. Calling a plantation a forest perpetuates eco-illiteracy and calls into question the scientific orientation of the DEIR.

03

Missing from the Glossary – There's a puzzling omission of habitat types. The only one listed in the glossary is "wetland." "Scrub" is in the glossary, but as a vegetative form, not as a kind of habitat or biotic community. "Riparian" is in there, but not as a type of wetland. It would be helpful to see the habitat types listed in Table 10 defined in the Glossary. Also puzzling is that throughout the document, "grassland" is preceded by "native" but the other habitat types are not. Please explain.

04

Predators - Putting the feral cat problem under the heading "Predators" seems like an odd choice. While feral cats are indeed predators, that's not what makes them a problem. Natural predator-prey relationships are a good thing, part of the systems and processes that we are trying to protect and restore; the problem with feral cats is that they are predators that are not indigenous to our local ecosystems.

05

GR- 7c—Undertake control of non- cat predators only where they are concentrated in such a manner that they are having a substantial effect on native wildlife populations.

Why is there no differentiation between native and non-native predators? While native predators do sometimes need to be controlled, largely due to disproportionate population growth caused by human activity, the approaches to control should be different.

- GR-7b—Develop outreach materials to educate neighbors and users of Natural Areas about feral cats;

Also needed are measures to educate the public about not feeding, intentionally or otherwise, any animals, predator or not, native or not.

p.41 During project activities, all trash that could attract predators would be properly contained, removed from the work site, and disposed of regularly.

06

Gravanis-1

06 (Cont.)

Following project completion, all trash and construction debris would be removed from work areas.
All trash that could attract any species, predator or not, should be contained and removed immediately.
Thank you for considering my comments.

Sincerely,

Ruth Gravanis

Greenberg-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:09 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Public Comments Regarding Dog Play Areas

——Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:09 PM ——



Sharon Greenberg <sharon.greenberg@sunlink.com>
10/31/2011 03:53 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Public Comments Regarding Dog Play Areas

Hello-

01 I wanted to submit my comments regarding the elimination of close to 80% of dog play areas. I live in San Francisco and am a responsible dog owner. It makes it increasingly difficult to remain a responsible dog owner if the city continues to eliminate dog play areas. I believe most dog owners agree that our pets are like parts of our family and residents of San Francisco love living here. Please keep our dog play areas available so we can continue to love both our family pets and living in San Francisco.

I understand the desire to keep the habitat natural and not have dogs ruin that. In fact I support it. But eliminating the dog play areas is not the way to do it. I bet if you ask the dog owner community that uses these dog play areas they will be more than willing to help encourage the growth of natural plants in any way possible. Whether it be enforcing the boundaries of the dog play areas or contributing to the cause financially. Please help us keep our dog play areas available to us.

Sharon Greenberg | Director of Project Management | SunLink Corporation
v: 415.306.9826 | **f**: 415.925.9636
e: sharon.greenberg@sunlink.com | **w**: http://www.sunlink.com

Griggs-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: dogs and park land (please read)
Date: 10/05/2011 09:45 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:45 AM -----

"Michael Griggs" <mgriggs@avenidas.org>

10/05/2011 09:24 AM

To <bill.wycko@sfgov.org>
cc
Subject dogs and park land (please read)

Hello Bill,

I just want to weigh in on this issue. First of all I love dogs and have been an owner in the past.
Someday I hope to have one again, when my home is not run by cats. On the matter though:
I have been a beach runner for a number of years now in San Francisco. I have also been
bitten by unleashed dogs three times, and harassed by them more times then I can count.
I ask: is this the way it should be? What is the answer? I don't know. I understand the reason
that people take dogs to the beach. If I had one I'd want to do the same. But the owners
must take responsibility for their dogs and keep them under control. My last bite was from
a large Rhodesian Ridgeback dog probably weighing 90lbs. I had three puncture wounds
and a large bruise from the bite. The owner came running up just after and got her dog under
control. She was profusely apologetic. Did her apologies help? In truth, no. This was at
the Ft. Funston area.

01

My point is twofold. I don't want to bitten ever again, and I believe something must change.

The main problem is one of **enforcement** however. Dogs are already regulated by the rule-
either on leash or under voice control of owner. Obviously this is often not the case.

Griggs-1

01
(Cont.)

It may require simply having officers or rangers on the ground watching over the beaches and
parks in a more substantial manner. In all cases of my dog encounters, there has **never** been
anyone of authority nearby. I now carry pepper spray with me and will use it.
I know of no other solution for the time being.
Sincerely
M. Griggs

Grim-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:46 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP plans for SF parks

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:46 AM -----



Dema Grim
<godemago@yahoo.com>
10/31/2011 10:44 AM
Please respond to
Dema Grim
<godemago@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject NAP plans for SF parks

Dear Bill,

01 As a San Francisco resident and dog owner for 16 years I'm appalled at the proposed changes to off leash dog play areas in SF parks based on NAPs EIR. They don't seem to have any hard facts that dogs, indeed, cause erosion and harm to natural areas. In my own experiences at Fort Funston I've seen massive dune damage done by teenagers and their parents "sledding" down the dunes. With a growing number of families adding dogs to their households any reduction of outdoor off-leash play areas would be negatively impactful on the spaces that do remain.

I regularly use Glen Diamond park, Bernal Hill, Holly Park, MacLaren Park and Fort Funston to walk with my dogs and often observe dog owners picking up trash and performing plant maintenance. The negative impact of reducing available off leash play areas would be detrimental for EVERYONE...

best,
dema

DEMA
415.206.0500
1038 valencia st
san francisco, ca
94110
rock on with your frock on!
http://www.godemago.com

http://dogsindanger.com

Haire-1

Janet Haire
4475 17th Street
San Francisco CA 94114
415.860.1942

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NOV 18 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

November 17, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural Resource Areas, etc. DEIR No. 2005.1912E

Dear San Francisco Planning Department,

I am a 12 year resident of the city of San Francisco, an avid golfer, a lover of the history of the great game of golf, and 'bow down' to Dr. Alister MacKenzie, arguably the greatest golf course architect that the world has ever known.

I am also the proud owner of a San Francisco resident golf card (#9034274), and consider myself unbelievably fortunate that one of the municipal courses at which I can make a tee time is the treasured Sharp Park.

That the city has this absolute jewel in its golf repertoire is an unbelievable gift that golfing populations across the globe would die for. That is loved by a diverse population of golfers, young, old, retired, black, white, male, female, and allows access to this scenic treasure for such modest fees, is truly magical.

01 Please, I beseech you, help us preserve this city treasure and support our efforts to keep Sharp Park intact.

Sincerely,

Janet Haire

1

Haire-1

cc: Congresswoman Jackie Speier
Hon. Ed Lee, Mayor, City and County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
David Chiu, President, San Francisco
Board of Supervisors
Carole Groom, President, San Mateo County
Board of Supervisors
Philip Ginsburg, General Manager,
San Francisco Recreation and Park Department
Charles Edwin Chase, AIA, President,
San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

Address List:

Congresswoman Jackie Speier
Attn: Brian Perkins, Senior Advisor
400 So. El Camino Real, #750
San Mateo, CA. 94402
Brian.perkins@mail.house.gov

Honorable Ed Lee
Mayor, City and County of San Francisco
City Hall
1 Dr. Carlton B. Goodlett Pl.
San Francisco, CA. 94102
San Francisco Board of Supervisors
ed.lee@sfgov.org

Honorable Mary Ann Nihart
Mayor, City of Pacifica
170 Santa Maria Ave.
Pacifica, Ca. 94404
nihartm@ci.pacifica.ca.us

David Chiu, President
San Francisco Board of Supervisors
City Hall
1 Dr. Carlton B. Goodlett Pl.
San Francisco, CA. 94102
David.Chiu@sfgov.org

2

Haire-1

Carole Groom, President
San Mateo County Board of Supervisors
400 County Center
Redwood City, CA. 94063
cgroom@co.sanmateo.ca.us

Philip Ginsburg, General Manager
San Francisco Recreation and Parks Department
McLaren Lodge-Golden Gate Park
501 Stanyan St.
San Francisco, CA 94117
pginsburg@sbcglobal.net
recpark.commission@sfgov.org

Charles Edwin Chase, AIA, President
San Francisco Historic Preservation Commission
c/o Linda Avery, Commission Secretary
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
Linda.avery@sfgov.org

San Francisco Public Golf Alliance
Attn: Richard Harris
1370 Masonic Ave.
San Francisco, CA. 94117
Richard@erskinetulley.com

Hammer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:42 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: stop the plan to reduce dog areas

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:42 AM ----



Milo Hammer <milohighschool@yahoo.com>
10/31/2011 11:41 AM
Please respond to Milo Hammer <milohighschool@yahoo.com>

To "Bill.wycko@sfgov.org" <Bill.wycko@sfgov.org>
cc
Subject stop the plan to reduce dog areas

01

Hi
I am a dog owner and a dog lover, as are thousands and thousands of others in SF. The plan by the Natural Areas Program Plan is seriously flawed and must be stopped. There is no proof that dogs are destroying the natural areas. Don't allow these anti-dog people to ruin it for thousands of people and their dogs. We need to be able to continue taking our dogs to Ft. Funston, and Bernal Hill, and McLaren Park and all the other off-leash areas. Dogs are an important part of our society. Please listen to the dog owners. Thank you.
Milo

Hartnett-1

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OCT 28 2011

CITY & COUNTY OF S.F.

PLANNING DEPARTMENT

10/26/2011

01 As a resident of SF,and owner of a dog,I think of SF as a dog friendly city. Your wanting to restrict off leash areas is ridiculous.You should be looking to increase off leash areas.

I take my dog to Douglas Park for 1 hour every pm.It is good for me and my dog.

I oppose any restrictions to off leash areas.

WILLIAM E HARTNETT
54 FAIR OAKS ST
SAN FRANCISCO,CA 94110
EM whartn@pacbell.net

Hasbrouck-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dog play areas
Date: 10/04/2011 11:06 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 11:07 AM -----

"Edward Hasbrouck" <edward@hasbrouck.org>

10/04/2011 12:03 PM

To bill.wycko@sfgov.org
cc
Subject Dog play areas

Please enter these comments in your docket of public responses to the draft environmental impact review regarding "dog play areas" on Bernal Hill and in other parks in the city.

01 I strongly urge you to make elimination of off-lease "dog play areas" the preferred alternative or, as the next-best alternative, to reduce the amount of public space dedicated to this use as much as possible.

Off-leash dogs pose a danger that (1) deprives other members of the public of use of these areas, and (2) cannot be mitigated by training of dogs or other rules.

Dog owners cannot be relied on to know with certainty how *their* dogs will behave. Dogs can and do behave in ways that surprise their "owners".

I have routinely been menaced and sometimes chased by dogs whose owners told me, "S/he's only being friendly". Even if the dog intended chasing or lunging at me to be a "friendly" act, its effect was to endanger me.

I have routinely had people tell me they were surprised at the behavior of their dog, or that "S/he doesn't usually act like this". All of which just goes to show how fallible dog owners' beliefs and expectations can be.

Dogs instinctively chase large animal-sized objects, which leads even otherwise well-behaved dogs to surprise their owners by chasing bicycles.

Dogs are by nature pack animals, and behave differently in packs than as individuals. This makes it impassible for any dog owner to predict how their dog will behave the first time they are let loos in pack, off leash.

Some people may say, "*My* dog wouldn't do that." This might be true, but *some* dogs (it's impossible to predict which) will act like that.

A rational pedestrian or bicyclist *must* assume -- because there is no way to know otherwise -- that *any* dog might, without warning, lunge at them. The only way to stay safe around dogs is for them to be leashed, so that those who don't wish to risk being attacked or chased can stay out of reach beyond the length of the lease.

An off-leash dog area is *inherently* dangerous. The *only* way for pedestrians and bicyclists to stay safe is to stay away from such areas entirely. In operating such an area the City and County is creating and knowingly tolerating a dangerous public nuisance.

01 (Cont.) San Francisco is one of the densest cities, with the least public space per capita, in the country. Choosing to dedicate space to off-leash dog play, when that denies the use of that space to other would-be users, is an inappropriate use of public land and resources.

The City and County needs to consider the needs of people first, and pets second. There may be fewer play areas for dogs in the city than dog-

Hasbrouck-1

01 (Cont.)

owners would like, but dogs don't belong in the city, people do, and there are certainly too few outdoor play areas for people!

Please, give me back the opportunity to enjoy Bernal Hill without risk of dog assault by eliminating (or reducing as much as possible) the off-leash dog play areas there and throughout San Francisco.

Edward Hasbrouck
1130 Treat Ave.
San Francisco, CA 94110
415-824-8562

Edward Hasbrouck
<edward@hasbrouck.org>
<http://hasbrouck.org>
<http://twitter.com/ehasbrouck>
+1-415-824-0214

5th edition of "The Practical Nomad: How to Travel Around the World" in bookstores worldwide in October 2011, available now for pre-order: http://hasbrouck.org/PN

Hatch-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:10 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:11 AM -----



Alex & Emily
<alexemily_@hotmail.com>
10/31/2011 08:14 AM

To <bill.wycko@sfgov.org>
cc
Subject Natural Areas Plan

Dear Mr. Wycko

01 Please do whatever you can to save what is left of San Francisco's natural areas. If that means separating out the golf course at Sharps Park that may be what has to be done. But, the important thing is to leave some open space which can be used by the wildlife which is still left in our city. It will improve the environment the animals and the people who live there.

Thank you

A native San Franciscan
Caroline Hatch

people take different roads seeking fulfillment & happiness. just because they're not on your road doesn't mean they've gotten lost.
-cesare di bonesana beccaria-

Hayes-1

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NOV 0 1 2016
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

Dear Mr. Wycko, Environmental Review Officer,

As an educator and person raising a family in San Francisco, it is very important that you help this plan pass…I teach local kids and take my family into San Francisco's Natural Areas almost everyday! We need this plan to have as a base line to protect the beautiful wildlife and open spaces we still have for all to enjoy!

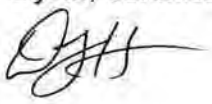
01 The Draft Environmental Impact Report for SNRAMP has received a more than adequate and therefore accurate and complete review of the plan. It has considered the total range of potential impacts to our City's open space and uses and how to manage them for sustainability!

02 Furthermore, it is consistent with the direction for sustainable management of San Francisco's open spaces as detailed already through the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan.

Please help pass the Draft Environmental Impact Report for the Significant Natural Resource Areas Management Plan!

Sincerely,

Dylan, Veronica and Isa Hayes ☺



Hecht-1

October 28, 2011

Public Comment on Draft Environmental Impact Report for the Significant Natural Resources Areas Management Plan

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Million St., Suite 400
San Francisco, CA 94103

Dear Mr Mycko,
I write regarding the Public Comment on Draft Environmental Impact Report for the Significant Natural Resources Areas Management Plan.

01 For the past decade my business, Second Nature Design, has been dedicated to sustainable landscape design. My emphasis is habitat restoration and rehabilitation, one urban garden at a time. During my longtime work with Friends of the Urban Forest I helped establish the Ongoing Tree Care Program, organizing and participating in the hands-on care of many of our tens of thousands of street trees throughout the San Francisco area. I am a huge proponent of native plants, particularly trees. However, destroying our existing mature Urban Forest whether in our parklands or on the streets under the rubric "restoration ecology" is absurd.

02 The Natural Areas Program's (NAP) plan would decimate our existing Urban Forest, including such a unique ecotope as Sutro Woods. The NAP plan relies on false thinking, is a waste of scarce resource, and is an aesthetic abomination. It is true as the plan's proponents state San Francisco once had no Urban Forest. But

Hecht-1

it is also true as proponents ignore that San Francisco once had no miles of roadways, concrete paving and buildings, an electrical grid and a dense population driving automobiles. The proponents of the plan never answer the question "What will sequester the off-gassing of these elements other than our Urban Forest's trees?"

02 (Cont.)

The answer is obvious to me and to others who work with sustainable landscaping: we need our existing trees to sustain the environment in which we live. Additionally, visit one of the many treeless San Francisco neighborhoods to understand the dismal, lifeless future of a treeless San Francisco.

03

Another important consideration of the NAP "cleansing" program is the pollution it would create. How will the trees now growing, adding pleasant ambiance, softening the hard concrete be removed but with polluting equipment? How will the silent sequesters of carbon be transported once fallen but via polluting vehicles? And where will all the growing trees once felled go but to the already over -taxed landfill?

04

I agree whole heartedly with Professor Arthur Shapiro's evaluation, "The creation of small, easily managed, and educational simulacra of presumed pre-European vegetation on San Francisco public lands is a thoroughly worthwhile and, to me, desirable project. …The proposed wholesale habitat conversion advocated here does serious *harm*, both locally (in terms of community enjoyment of public resources) and globally (in terms of carbon balance-urban forests sequester lots of carbon; artificial grasslands do not). At both levels, wholesale tree removal, except for reasons of public safety, is sheer folly."

Thank you for your attention this tremendously germane topic and for considering a green future for all forms of significant habitat in San Francisco.

Sincerely,
Alma Hecht, APLD/ISA

Heldman-1



Bill Wycko/CTYPLN/SFGOV
06/06/2012 09:44 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/06/2012 09:44 AM ——



Mary Heldman
<maryheld@pacbell.net>
06/05/2012 11:36 PM

To "bill wycko" <bill.wycko@sfgov.org>, "Scott Wiener"@smtp107.sbc.mail.ne1.yahoo.com, scott.wiener@sfgov.org
cc "John Avalos" <John.Avalos@sfgov.org>, "Sean Elsbernd" <Sean.Elsbernd@sfgov.org>, "David Chiu" <David.Chiu@sfgov.org>, "Carmen Chu" <Carmen.Chu@sfgov.org>, "Malia Cohen" <malia.cohen@sfgov.org>, "Eric Mar" <Eric.L.Mar@sfgov.org>, "Jane Kim" <jane.kim@sfgov.org>, "Christina Olague" <Christina.Olague@sfgov.org>, "David Campos" <David.Campos@sfgov.org>, "Mark Farrell" <mark.farrell@sfgov.org>, "Ed Lee" <mayoredwinlee@sfgov.org>
Subject

Dear Mr. Wycko,

01 I'm opposed to cutting down healthy trees and the use of pesticides. The plan would have a significantly negative impact with respect to wind, shade, hydrology water quality, and forest resources.

02 In addition, the "non-native" argument seems to me to be arbitrary. One can choose whatever date he/she wants to characterize a specific kind of vegetation as "native." There may well have been other times in the past, before the introduction of the eucalyptus, where then "native" plants were out-competed by some other new vegetation.

03 I favor the Maintenance Alternative.

Sincerely,

Mary Heldman, 94115

Hershkowitz-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dogs in the Park
Date: 10/04/2011 02:34 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 02:35 PM -----

"Daniel A. Hershkowitz" <mrdantastic@yahoo.com>

10/04/2011 02:33 PM

Please respond to mrdantastic@yahoo.com

To bill.wycko@sfgov.org
cc john lucania <johndabomb@ymail.com>
Subject Dogs in the Park

Bill:

01 I understand this is a "hot-button" issue for so many folks on both sides. I understand both arguments and seek a healthy compromise. Your leadership is crucial. First, don't forget the montre of all responsible politicians -- if it is not broke, don't fix it. Second, if there are serious issues and concerns requiring some action, let's think of ways to address specific problems, including perhaps: 1) better fencing of our parks; 2) City-provided doggie poop bags; and 3) Park and Rec lead clean-up days in which the dog owners could be put to work to keep the parks in nice condition.

San Francisco is a dog town. Dog owners keep property prices high. Let's not screw that up.

DANIEL HERSHKOWITZ, Esq.
Broker/Owner
SCHOLARSHIP HOMES & REAL ESTATE
Tel: 415 577-9065
Fax: 415 449-3654
WWW.MRDANTASTIC.COM

977 Duncan Street
San Francisco, CA 94131

Hess-1



Bill Wycko/CTYPLN/SFGOV
05/29/2012 08:50 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: sfforestnews@gmail.com

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/29/2012 08:50 AM ----



Claire Hess <chelsiehess@gmail.com>
05/27/2012 12:15 PM

To bill.wycko@sfgov.org
cc David Hess <hessdf@gmail.com>, David Young <mrdavidyoung@gmail.com>, dzisser@aol.com
Subject sfforestnews@gmail.com

Good morning Mr. Wycko. My mother, husband, son, brother and I would like to let you know that we strongly oppose NAP's plans to remove trees from Mt. Davidson. I was raised in the house on Robinhood Drive that my mother still lives in. It is 1 1/2 blocks from our beautiful Mt. Davidson. My life was so much more complete growing up in the city having the gorgeous Mountain to explore, blackberries to pick and Easter Sunrise services to attend.

01 I still spend much time walking our dog on Mt. Davidson and it is a real highlight of our visits to San Francisco.

We oppose NAP's plans for the following reasons:

(1) Mt. Davidson is a beautiful, cathedral like area providing serene relief for city dwellers and their dogs. NAP's plans will destroy this meditative place and rob dog walkers and humans of much of the access.

02 (2) The trees have been there for over 100 years. It is not on a sprinkler or drip irrigation system because the trees create their own mini-atmosphere of fog and keep the area moist for vegetation and animals. NAP's claims that it isn't "natural" are ill-founded because not only does it survive on its' own but it also provides a significant habitat for animals and birds. We do not believe an area must be "original natural" to merit survival.

03 (3) Some of the animals and birds I have spotted that would lose this important habitat include hawks, owls, coyotes, hummingbirds, skunks, rabbits, opossum, red-winged blackbirds, ravens and crows. What a terrible thing it would be to destroy their home.

04 (4) My understanding is cutting the trees down would increase fire danger as there would no longer be enough trees to create their own moist atmosphere.

05 (5) In our conversations with Greg Gaar of NAP he was not provided an answer to our question regarding whether tree stumps will be removed immediately if at all. Leaving behind

Hess-1

05 (Cont.) stumps would certainly blight the area.

06 (6) According to the SF Forest Alliance, the most toxic herbicides would continue to be used.

07 (7) Per the SF Forest Alliance taxpayer funds will be diverted to pay for this destruction and blight.

08 Overall this magical and serene area must be protected for the public benefit and enjoyment and for the protection of this priceless natural habitat.

Please help the SF Forest Alliance to stop this tragedy.

Thank you for your attention to this most pressing matter.

Sincerely,

Claire Hess, David Hess, David Young, Helen Zisser and David Zisser.

Our respective Zip Codes are Reno Nevada 89509, Washington D.C. 20009, San Francisco 94127 and San Francisco 94115.

Hochschild-1



Bill Wycko/CTYPLN/SFGOV
10/27/2011 11:24 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Save off leash areas

— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 11:24 AM —



Frances Hochschild <fhochschild@yahoo.com>
10/26/2011 09:22 PM
Please respond to Frances Hochschild <fhochschild@post.harvard.edu>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Save off leash areas

01 As a lifelong San Francisco resident with both a young child and a dog, I'm writing in support of maintaining the current off-leash areas. While it's wonderful that areas are being restored, let's allow all San Franciscans the opportunity to enjoy our parks. There are already very limited areas allowing dogs off-leash so would be great if they could be maintained at current levels. My mother, Christie Hochschild joins me in voicing our support for off-leash areas as well.

Thank you
Frances Hochschild
Christie Hochschild
Isabella Hochschild
2517 Broadway St
San Francisco, CA 94115

Holzman-1

SAN FRANCISCO STATE UNIVERSITY

BARBARA A. HOLZMAN, PHD
DEPARTMENT OF GEOGRAPHY AND HUMAN ENVIRONMENTAL STUDIES
1600 Holloway Avenue
San Francisco, CA 94132
Tel: 415/338-7506

October 25, 2011

RECEIVED
OCT 28 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Bill Wycko,
Environmental Review Officer,
San Francisco Planning Department,
1650 Mission Street, Suite 400,
San Francisco, CA 94103.

Re: DEIR for SNRAMP

Dear Mr. Wycko,

01 I have reviewed the Draft Environmental Impact Report for SNRAMP and wanted to make a few comments. I am the Director of the Environmental Studies program and professor of Biogeography at SFSU and have been involved in research and education at SFSU in the natural areas of San Francisco for many years. I think the natural areas are critical to the health of San Francisco and its citizens and urge you to go forward with certifying the EIR and allow SF Recreation and Parks, Natural Areas Program to continue to manage these critical natural areas within the city by implementing the SFNAP Management plan.

02 I feel that the Draft EIR is adequate, accurate and complete and urge you to certify the document without further delay. The Natural Areas Program's mission is to maintain and enhance natural areas in San Francisco and the plan and creators of the Natural Areas Management Plan spent a great deal of time in discussions with the scientific community and citizens of San Francisco to create a plan that best served the citizenry and the critical need of maintaining and enhancing natural areas. The EIR reviewing this management plan considers a broad range of potential impacts to our City's resources and proposes mitigation measures to address impacts where possible to lessen any perceived impacts and recognizes that some impacts may be unavoidable.

03 I believe the EIR accurately depicts the majority of potential impacts that could occur with plan implementation as less than significant and in need of no significant changes to the plan. The management plan in creating the recommended actions considered alternatives and attempted to achieve the greatest good with the least amount of negative impact and I believe this was accomplished and the DEIR attests to that. The initial management plan was based on detailed studies and scientific experts and is consistent with several directives, including the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan.

04 The Significant Natural Resource Areas Management Plan (SNRAMP) is an innovative management plan to safeguard our City's Natural Areas. Its implementation will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. The plan provides clear direction to the City on how to prioritize management and restoration of our Natural Areas and is the most cost effective method for

Holzman-1

04 (Cont.) managing our resources and protecting these areas for future generations.

05 There are two potential impacts addressed in the DEIR that I think may deserve some consideration. Those two areas of impact were Sharp Park Golf Course historical resources and lessening recreation opportunities. The impacts anticipated to Sharp Park Golf Course in reference to historical resources seem well worth the preservation and restoration of the endangered species present at the location. Clearly in this case, the global benefits of biodiversity outweigh any "historical" impacts particularly since those impacts to historical resources temporally minute compared to the evolutionary history of these endangered species such management would benefit.

06 The potential cumulative impacts discussed re: Impact RE-7: does not address the potential for an increase in passive recreation; i.e., the ability of citizens to appreciate the natural landscape and wildlife that would improve with the plan, or the lessening of dog-people/children conflicts in areas where dogs off leash would be curtailed. I would suggest the overall recreation opportunities when passive recreation is included would be increased if the plan was implemented.

01 (Cont) In sum although the potential for impacts of that addressed above may be unavoidable I think that the benefits far outweigh the impacts and that the project should continue as planned.

The SNRAMP goals are incredibly valuable to the city as well as globally and can create opportunities for collaboration with community groups and SF institutions such as San Francisco State University. I have had many students who have done research projects in the Natural Areas and I use the Natural Areas often in my classes for field trips, volunteer experiences or opportunities for students to encounter the last remnants of San Francisco's former biodiversity. I look forward to moving forward and getting our students and scientists involved with the implementation phases of the plan.

07 San Francisco has a responsibility locally, regionally, and globally to protect and enhance the native remnants of this unique city. As reported in the EIR, the Maximum Restoration Alternative is the Environmentally Superior Alternative and should be pursued.

Thank you for your attention.

Sincerely,

Barbara Holzman

Barbara Holzman, PhD
email: bholzman@sfsu.edu

Hooker-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:11 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Program Environmental Impact Review

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:12 AM ----



steve hooker <stvhooker3@gmail.com>
10/31/2011 07:26 AM

To bill.wycko@sfgov.org
cc
Subject Natural Areas Program Environmental Impact Review

Oct. 29, 2011

Bill Wycko, Environmental Review Officer

SF Planning Department

1650 Mission Street. Suite 400

San Francisco, CA 94103

bill.wycko@sfgov.org

To Mr Wycko:

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

02 I am a dog owner, like so many other San Francisco residents. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco.

Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to

Hooker-1

02 (Cont.) propose new dog play areas.

San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city.

03 The NAP program is based on non science, and the logic behind it is wrong as well. It would have us give up our recreational areas so that the beautiful, old trees can be eliminated in favor of grasses and plants that "should be there in the minds of the plans proponents, at some arbitrary point in time, back before we planted anything of our own choosing. It also uses toxic pesticides and chemicals to deal with the stumps. Add to that that the fact that there is never enough money or man-power to maintain these resoration "science" projects, and what you have is a nightmare scenario for our beloved parks. I have been going to those parks for decades. This is not what they need. Someone needs to put a stop to the NAP program. If not, they need to tell us citizens of SF what's so good about it. It wastes our money and destroys our trees. It locks us out of our parks.

04 I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks.

Sincerely,

Sreve Hooker

--

HHH
HOOKER-HEAD HOUNDS
WHERE HAPPY IS OUR MIDDLE NAME

Horn-1

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

TRANSACT
BUSINESS CONSULTING

October 26, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department,

01 I am writing to endorse the decision to designate Sharp Park Golf Course as an "historical resource."

While I am not a resident of San Francisco, I am an avid golfer who has played numerous public and private golf courses in the Bay Area, including Sharp Park.

I am the founder of Transact Business Consulting, and chief operating officer of ProLynx LLC a biotechnology start up in the Bay Area. I am currently a director at Lake Merced Golf Club and I am the co-chair of the 2012 U.S. Girls' Jr. Championship to be held at Lake Merced next July. I have been a coach for the First Tee of San Francisco at Harding Park and previously at Golden Gate (when Harding was closed for the President's cup).

02 Golf is a tremendous sport that provides exercise, enjoyment of the outdoors and underscores sportsmanship, integrity and related values. Sharp Park is a unique asset of San Francisco. The course is known by golfers around the world and has been enjoyed by local golfers because of its unique ocean side location.

Horn-1

01 (Cont)

Sharp Park is a fine representation of the mastery of course architect Dr. Alister MacKenzie. The course today boasts many of the aspects of course design espoused by Dr. MacKenzie, perhaps the greatest course architect in history, when it was created nearly 80 years ago. Over the years, like all things, the course has lost some of its luster but the underlying beauty remains. Given appropriate tender, loving care this course, which remains a gem available to all golfers, will shine again. In this day and age when people are working extra hard for their money and more and more enjoyable activities are getting further out of reach, it is important for us to keep this type of recreational facility open for the enjoyment of low/modest income golfers.

02 (Cont)

01 (Cont)

I am gratified that the City and County of San Francisco support Sharp Park Golf Course as a public resource worthy of preservation. For all these reasons, as well as those expressed in the San Francisco Public Golf Alliances's letter dated September 20, 2011, I am proud to support the designation of Sharp Park Golf Course as an historic resource under the California Environmental Quality Act.

Respectfully submitted,

Margaret A. Horn

Margaret A. Horn, J.D.

cc: Congresswoman Jackie Speier
Hon. Ed Lee, Mayor, City and County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
David Chiu, President, San Francisco
Board of Supervisors
Carole Groom, President, San Mateo County
Board of Supervisors
Philip Ginsburg, General Manager,
San Francisco Recreation and Park Department
Charles Edwin Chase, AIA, President,
San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

2

Hovland-1

NAP Comment—Madeline Hovland

1

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

October 27, 2011

Mr. Bill Wycko
San Francisco Planning Department

Re: DRAFT EIR, NATURAL AREAS PROGRAM

Dear Mr. Wycko:

01 I am strongly opposed to the destruction of non-native trees and other non-native vegetation in an attempt to restore native habitat. There is no scientific evidence to support the idea that native plant restoration is environmentally superior to a habitat that includes a diversity of tree and plant species, whether they are native or introduced to this part of California. Also, many plants and trees that thrived before the Europeans arrived here are no longer suitable for this climate and require a lot of watering and weeding (i.e. gardening) to create conditions that might make them grow as long as a great deal of energy (and water) are put into maintaining them. As the climate continues to change, native plants and trees will become even less likely to survive, no matter how much TLC is given them.

In a time when our economy is faltering, and every dollar is important, it is critical that money not be wasted on programs that are of no benefit to humans. Peter Kareiva, chief scientist of the Nature Conservancy, in the spring issue of Nature Conservancy magazine, wrote, "Nature must be managed for people." Attempting to restore the landscapes of some long-ago era is as much a "losing game," as attempting to protect nature from people. To read Mr. Kareiva's important article online, please see: http://www.nature.org/newsfeatures/magazine/beyond-man-vs-nature.xml

I will address in this comment primarily issues of flammability since I am a member of the Hills Conservation Network (HCN), an Oakland non-profit organization that is dedicated to fire prevention, especially fire-risk mitigation of flammable vegetation in Oakland's North Hills. Our grassroots organization is comprised mostly of survivors of the 1991 Oakland-Berkeley Hills fire. One of our founding members lost not only his home but his disabled mother in that fire.

There were many reasons why that tragic fire spread so quickly and caused so much damage to both property and lives. We who began HCN know that advocates of native plant restoration in the East Bay used the fire to scapegoat the non-native trees, hoping to remove hundreds of thousands of non-native trees and non-native vegetation in this area by fanning residents' fear of another fire.

We responded to the claims of the nativists by thoroughly researching the subject of native plant restoration. We now publish a newsletter that informs our readers on the results of our research. Because we are a group of fire survivors who still live in the area that burned in the 1991 fire, we care perhaps more than anyone else about fire safety.

02 The most important statement I can make to you is that there is absolutely no evidence to support the idea that native plants are, by their nature, more resistant to fire than non-natives. It is the characteristics of a plant or tree that make it more or less flammable. For example, it is true that oily leaves make the non-native blue-gum eucalyptus flammable if fire reaches the crown of the tree. Yet, according to the USDA, blue gum leaves are classed as "intermediate in their resistance to combustion, and juvenile leaves are highly resistant to flaming."

Hovland-1

http://www.fas.fed.us/database/feis/plants/tree/eucglo/all.html

If a tree is well-maintained, with understory removed and branches cut that grow less than 6-8 feet from the ground, there is very little risk of fire reaching the crown of a tall tree.

Moreover, the trunk of a eucalyptus tree, especially the trunks of older eucs, are not easy to burn; the trunks of oaks (of the same diameter) burn much more quickly. In fact, many blue gum eucalyptus trees in the North Hills survived the 1991 fire. I know this from my own observation and experience. The fire stopped, up the street from my house on Alvarado Road, at three giant eucalyptus trees that the flames did not even singe. The fire did burn to the ground all of the vegetation, including several coast live oaks, across the street from my house.

What about those oily leaves? The oils in leaves of blue gum eucalyptus trees range from less than 1.5 to over 3.5%. http://www.ansci.cornell.edu/plants/medicinal/eucalyp.html/
Our research has shown that the leaves of native bay trees contain more oil (7.5%) than the leaves of a blue gum eucalyptus. That is twice the amount of oil in leaves of blue gum eucalyptus!
http://www.paleotechnics.com/Articles/Bayarticle.html

Bay trees in their scrub form, often growing as understory to oak trees, are highly flammable because the oily leaves (and oily branches) grow close to the ground, which is often covered in tall grass that dries out at the height of the fire season.

02 (Cont.)

On page 396 the EIR notes the "high fire hazard rating of aging French broom and eucalyptus." It is amazing to me that the EIR considers French broom and eucalyptus to be similar in fire hazard risk since they are totally different species with completely different characteristics. French broom, like native coyote bush, is highly flammable; in fact, coyote bush, like most native chaparral species, especially manzanitas, chamise, buck brush scrub oaks, and mountain mahogany, are more flammable than French broom because they contain more dead wood than French broom, and their leaves are small and oily. According to Napafirewise.org, chaparral species grow in dense stands that "create impenetrable fields that burn with intense heat and are very difficult to suppress or control.. chaparral species are the hardest to manage and to keep fire safe."

According to the Hills Emergency Forum, all brush communities, which include chaparral, can reach flames in excess of 69 feet. Grassland fires (made up of native and/or non-native grasses) can reach flame lengths of 12-38 feet. There is no scientific evidence (only wishful thinking) to support the idea that native grasses are more resistant to fire than non-native grass. The way to prevent ignition through a carelessly thrown cigarette or a spark from a catalytic converter is to keep the grass short (and watered if possible, especially in the fire season).

What about flame lengths in a eucalyptus grove? The EIR does not mention that flame lengths in a eucalyptus grove range from 6-21 feet, depending on the depth of litter under the trees. Eucs are in fact the only tree species where the depth of the litter under the tree is considered in estimating flame length even though several other tree species produce litter that is drier (more conducive to ignition) than the moist litter under eucalyptus trees. If the euc litter is regularly picked up, flame lengths are even lower.

It is astounding to me that that the EIR constantly employs the use of the words "highly flammable" with "eucalyptus trees," as if repeating that epithet will convince readers of its truth. As I have written

Hovland-1

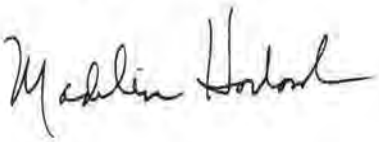
02 (Cont.)

above, eucalyptus trees have been scapegoated and vilified to suit the agenda of nativists. There is no reason to believe that native trees are resistant to fire. In prehistoric times, the Native Americans set fire to meadows of native grass and hills of native chaparral with scrub oaks and bays. In those days before non-native trees had been introduced, Native Americans had no trouble setting these fires on a regular basis for hunting and harvesting purposes.

There is no scientific evidence for the claim that native plants and trees are less flammable than non-natives. The characteristics of some plants and trees make them easier to ignite and quicker than burn than others, but whether they are native or non-native has nothing to so with how flammable they are. Fire does not discriminate between native and non-native vegetation. It is the advocates of native plant restoration who discriminate because they are determined to advance their own irrational agenda.

Please do not expand the Natural Areas Program. It is a waste of taxpayer money to promote and support a program that is essentially unscientific and anti-evolution.

Sincerely yours,



Madeline Hovland
781 Alvarado Road, Berkely, CA 94705

Hu-1

Range, Jessica

From: Bill Wycko
Sent: Monday, June 11, 2012 12:40 PM
To: Jessica Range
Subject: Fw: RPD Natural Areas Program DEIR comment

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 12:40 PM -----

khu
<brainz_ca@yahoo.com> Tobill.wycko@sfgov.org

06/11/2012 11:27 AM cc

SubjectRPD Natural Areas Program DEIR comment

June 11, 2012

To: Bill Wycko

Environmental Review Officer

SF Planning Dept.

Email: *bill.wycko@sfgov.org*

FAX: 415 558-6409

Re: Comment on RPD Natural Areas Program DEIR

01

I was reluctant to submit comment because I fear my comment will be dismissed being from a "one of the dog people." However, if comments are being tallied pro and con, **I want my letter to be tallied as a critic of the NAP DEIR.**

(In the early 2000's people who walked with their dogs in the parks were some of the first park visitors to become aware of the actions and plans of the natural areas program. Dog walkers were the "canary in the coalmine," in alerting the public to the trail closures and the need for public oversight of the Natural Areas Program. Since then, some supporters of the NAP have tended to dismiss any criticism of the NAP if it came from a dog owner.)

Yes, I am concerned about the loss of recreational access in SF parks. But that is only one of many concerns. I am also concerned about NAP's violations of existing regulations protecting wildlife and the use of herbicides, NAP actions that are contrary to scientific evidence (or lack supporting scientific evidence), as well as numerous other NAP actions detailed in comments submitted by others.

I fully support the detailed DEIR comment earlier submitted by the SF Forest Alliance, as well as the comment submitted by Dr. Arthur Shapiro, UC Davis professor of ecology. The

1

Hu-1

DEIR needs to respond to these criticisms and to be thorough revised. (Note: I could include detailed comments, probably already expressed by the SF Forest Alliance and Dr. Shapiro, but that would be redundant and a waste of your time (i.e. my tax dollars) as well as my time. However, if detailed comment is necessary to be counted as substantive comment, let me know and I will submit a longer comment.)

Sincerely,

Karin Hu

334 San Leandro Way, SF 94127

brainz_ca@yahoo.com

2

Huebsch-1

RECEIVED
OCT 13 2
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
MEA

Dear Mr. Wyco,

I have copied the article written by Professor Shapiro of UC Davis. I totally support his position.

01 I am a resident of Bernal Heights. I frequently take my dog to run on the Bernal Hill. My dog does not dig or disturb the natural environment. I would be terribly sad and upset if this area was closed to dogs. My upset and sadness would be for several reasons. There needs to be open space for dogs in San Francisco. The neighborhood (dog owners and non-dog owners) use the Bernal Hill park a great deal. The habitat that exists is "natural" and supports the current use. GGNRA and SF Parks focus on habitat restoration is wrong. Given the limited budgets that all government agencies must live with, it seems wrong to expend funds on unneeded habitat restoration. Better use of the funds would be on general park restoration. Precita Park and Holly Park are great examples for using funds to restore parks. The result is that neighbors use the parks and feel a greater alliance to their neighborhoods, making them safer and more livable for all.

02 I request that you drop your plan to close the parks to dogs for habitat restoration. There are many, many dog owners in San Francisco. I believe that dog owners will vote their interests and there is no reason to assume that the SF Planning Department is beyond the influence of the will of the voters.

Best wishes,

Nina Huebsch

Nina Huebsch, 144 Nevada Street, SF, CA 94110

Mr. Bill Wycko

San Francisco Planning Department

Re: DRAFT EIR, NATURAL AREAS PROGRAM

Dear Mr. Wycko:

Consistent with the policy of the University of California, I wish to state at the outset that the opinions stated in this letter are my own and should not be construed as being those of the Regents, the University of California, or any administrative entity thereof. My affiliation is presented for purposes of identification only. However, my academic qualifications are relevant to what I am about to say. I am a professional ecologist (B.A. University of Pennsylvania, Ph.D. Cornell University) and have been on the faculty of U.C. Davis since 1971, where I have taught General Ecology, Evolutionary Ecology, Community Ecology, Philosophy of Biology, Biogeography, Tropical Ecology, Paleoecology, Global Change, Chemical Ecology, and Principles of Systematics. I have trained some 15 Ph.D.s, many of whom are now tenured faculty at institutions including the University of Massachusetts, University of Tennessee, University of Nevada-Reno, Texas State University, and Long Beach State University, and some of whom are now in government agencies or in private consulting or industry. I am an or the author of some 350 scientific publications and reviews. The point is that I do have the *bona fides* to say what I am about to say.

At a time when public funds are exceedingly scarce and strict prioritization is mandatory, I am frankly appalled that San Francisco is considering major expenditures directed toward so-called "restoration ecology." "Restoration ecology" is a euphemism for a kind of gardening informed by an almost cultish veneration of the "native" and abhorrence of the naturalized, which is commonly characterized as "invasive." Let me make this clear: *neither "restoration" nor conservation can be mandated by science—only informed by it.* The decision of what actions to take may be motivated by many things, including politics, esthetics, economics and even religion, but it cannot be science-driven.

Huebsch-1

In the case of "restoration ecology," the goal is the creation of a simulacrum of what is believed to have been present at some (essentially arbitrary) point in the past. I say a simulacrum, because almost always there are no studies of what was actually there from a functional standpoint; usually there are no studies at all beyond the merely (and superficially) descriptive. Whatever the reason for desiring to create such a simulacrum, it must be recognized that it is just as much a garden as any home rock garden and will almost never be capable of being self-sustaining without constant maintenance; it is *not going to be a "natural," self-regulating ecosystem.* The reason for that is that the ground rules today are not those that obtained when the prototype is thought to have existed. The context has changed; the climate has changed; the pool of potential colonizing species has changed, often drastically. Attempts to "restore" prairie in the upper Midwest in the face of European Blackthorn invasion have proven Sisyphean. And they are the norm, not the exception.

The creation of small, easily managed, and educational simulacra of presumed pre-European vegetation on San Francisco public lands is a thoroughly worthwhile and, to me, desirable project. *Wholesale habitat conversion is not.*

A significant reaction against the excesses of the "native plant movement" is setting up within the profession of ecology, and there has been a recent spate of articles arguing that hostility to "invasives" has gone too far—that many exotic species are providing valuable ecological services and that, as in cases I have studied and published on, in the altered context of our so-called "Anthropocene Epoch" such services are not merely valuable but *essential.* This is a letter, not a monograph, but I would be glad to expand on this point if asked to do so.

I am an evolutionary ecologist, housed in a Department of Evolution and Ecology. The two should be joined at the proverbial hip. Existing ecological communities are freeze-frames from a very long movie. They have not existed for eternity, and many have existed only a few thousand years. There is nothing intrinsically sacred about interspecific associations. *Ecological change is the norm, not the exception.* Species and communities come and go. The ideology (or is it faith?) that informs "restoration ecology" basically seeks to deny evolution and prohibit change. But change will happen in any case, and it is foolish to squander scarce resources in pursuit of what are ideological, not scientific, goals with no practical benefit to anyone and only psychological "benefits" to their adherents.

If that were the only argument, perhaps it could be rebutted effectively. But the proposed wholesale habitat conversion advocated here does serious *harm,* both locally (in terms of community enjoyment of public resources) and globally (in terms of carbon balance-urban forests sequester lots of carbon; artificial grasslands do not). At both levels, wholesale tree removal, except for reasons of public safety, is sheer folly. Aging, decrepit, unstable Monterey Pines and Monterey Cypresses are unquestionably a potential hazard. Removing them for that reason is a very different matter from removing them to actualize someone's dream of a pristine San Francisco (that probably never existed).

Sociologists and social psychologists talk about the "idealization of the underclass," the "noble savage" concept, and other terms referring to the guilt-driven self-hatred that infects many members of society. Feeling the moral onus of consumption and luxury, people idolize that which they conceive as pure and untainted. That may be a helpful personal catharsis. It is not a basis for public policy.

Many years ago I co-hosted John Harper, a distinguished British plant ecologist, on his visit to Davis. We took him on a field trip up I-80. On the way up several students began apologizing for the extent to which the Valley and foothill landscapes were dominated by naturalized exotic weeds, mainly Mediterranean annual grasses. Finally Harper couldn't take it any more. "Why do you insist on treating this as a calamity, rather than a vast evolutionary opportunity?" he asked. Those of us who know the detailed history of vegetation for the past few million years—particularly since the end of Pleistocene glaciation—understand this. "Restoration ecology" is plowing the sea.

Get real.

Sincerely,

Arthur M. Shapiro

Distinguished Professor of Evolution and Ecology

Hull-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:19 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Dog Park Area closure and reduction in size

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:20 AM ----



Prudence Hull
<prudence.hull@gmail.com>
10/30/2011 06:44 PM

To bill.wycko@sfgov.org
cc civirmail+r.3.316.b6b81b2d82f5431a@sfpeople.net
Subject Dog Park Area closure and reduction in size

Hi Bill Wycko,

I have lived in San Francisco for 35 years, raising three children and four dogs. We have walked thousands of afternoons in Glen Park Canyon, McLaren Park, Bernal Hill, Fort Funston, Ocean Beach and Crissie Fields. I walked with my kids and dogs in the belief that this was a healthy activity for all of us, and I have been rewarded with well-socialized dogs and responsible young adults. I am the mother of a successful San Francisco family.

01 I am dismayed to learn that these dog walking areas are being considered for closure or reduction in size. Why would any urban city seek to discourage the health of its families?

02 I am very dismayed to learn that the city has used Garlon in Glen Park Canyon. Glen Canyon is used by dogs and young children at Glen Ridge Childcare and Silver Tree Day Camp. I have suffered the loss of one dog, at the age of 5 years, from kidney failure. Both my daughters suffered from kidney disease at a young age, although there is no prior history of kidney disease in my family or my husband's family.

03 The NAP environmental impact report makes allegations of dog damages with no substantiating scientific study. Are these the same people who freely approve the use of Garlon in areas heavily used by dogs and small children?
I feel this shows a disregard for scientific evidence and study. I feel this shows that this organization is untrustworthy and does not deserve our public support.

Sincerely,
Prudence Hull

Illig-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 01:18 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR comment

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 01:19 PM ----



Jim Illig
<jillig@openhand.org>
10/31/2011 12:03 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject NAP EIR comment

01 I strongly object to the closure of any part of Bernal Hill to off-leash dog recreation. I have owned a home in North Bernal Heights for 17 years and I am up this hill with my dog at least once a day. This hill is a unique urban park that is shared by hundreds of neighbors with and without dogs every day, and the natural areas have not been affected by the recreational use of these SF residents. I disagree with the findings of the EIR regarding this park and I urge the Planning Commission to reject any plans to restrict or close areas to recreational use by residents and their companion animals.

Jim Illig
Project Open Hand
(415) 447-2426

Ingle-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:13 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

——Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:13 PM——



"Kay Ingle" <kingle@berkeley.edu>
10/31/2011 03:18 PM

To <bill.wycko@sfgov.org>
cc
Subject NAP EIR

Dear Mr. Wycko,
I am a dedicated environmentalist and have been a member of Nature Conservancy, Greenpeace, Wilderness Society, and other environmental organizations for many years. Yet I see no reason to ban off leash dog walking in the dog play areas at Lake Merced, McLaren Park, Bernal Hill areas. In the years I have been enjoying these areas with my dogs, I have never seen any problems caused by dogs.

01 The NAP EIR repeatedly says: Dogs **MAY** be impacting protected plant species or wildlife (pp. 297, 298, 305, 306, 472, 473, 502, 517), yet offers no evidence these impacts are actually occurring or ever have occurred. Unsubstantiated claims cannot be made in an EIR. After each of these examples, the EIR then goes on to say: Dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue." EIRs must be based on observed impacts, not things that "may" happen. The analysis in the EIR based on this speculation is incorrect and inadequate. To deny many people the joy of walking their dogs off leash because of unsubstantiated data is poor administration
to say the least.

Kay Ingle

Ingram-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 09:38 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NO on NaP

History: This message has been forwarded.

—Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 09:38 AM—



Terry Ingram
<terry.ingram@gmail.com>
05/16/2012 08:40 AM

To bill.wycko@sfgov.org
cc
Subject NO on NaP

Mr. Wycko:
Please reconsider and DO NOT let NAP destroy our parks in a misguided attempt to turn back the evolutionary clock and re-create an idealized "better" environment from a time before European settlers arrived, a time when San Francisco was mostly sand dunes and rocks, with few trees. Our city faces strict prioritization of scarce resources that when allocated to parks should be to keep them safe and accessible, not create fenced-off gardens in the process destroying what we already have. This so-called "wholesale habitat conversion" would require tens of millions of dollars in taxpayer funding and unprecedented broad-scale volunteer hours for modest gains, if any.

01

Thank you for your consideration.
Cheers,
Terry Ingram
Outer Sunset and daily GG Park user

Jake-1



"Krist Jake"
<krist@redcap.com>
10/31/2011 02:46 PM

To <bill.wycko@sfgov.org>, <Jessica.Range@sfgov.org>, <pic@sfgov.org>
cc <info@sfdog.org>
bcc
Subject 2005.1912E - Significant Natural Resource Areas Management Plan (NRAMP)

Dear San Francisco Planning Department,

This email contains comments on Case 2005.1912E. While these comments are generally patterned on those proffered by SFDOG.org, I have revised them and, in some cases, extended them. So please read my comments carefully.

I've depended on SFDOG.org because, as a typical resident of SF, I don't have time to read and digest 562 page documents (not counting the appendices). However, even without scrutinizing the entire document, by using the "find" functionality of my browser, I discovered nothing in the way of discussion of crime or crime rates that could be related to changes in park designations, and virtually nothing related to financial matters such as budgeting for making changes in the parks or related maintenance.

Since crime and budgets are clearly part of the environment in which parks exist, failure to discuss crime and budgets, it seems to me, are major failings in the EIR.

My detailed comments:

01 1) The NARMP EIR doesn't offer evidence to support its claims that dogs have an impact on plants and wildlife in natural areas. The NARMP EIR doesn't take into account scientific studies that show off-leash dogs have little impact on plants and wildlife, including nesting birds when declaring that dogs have negative impacts. The NARMP EIR states that dogs MAY be impacting protected plant species or wildlife, but offers no scientific evidence these possible impacts are actually occurring or ever have occurred. In a number of places, the NARMP EIR says that someone's observation is that dogs impact erosion, or cause plant damage, etc., yet the EIR offers no supporting information on these "observations." EIRs should obviously be based on solid, scientific data, not on someone's anecdotal "observations." Further, if there are negative impacts by usage, the NARMP EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs.

02 2) The NARMP EIR acknowledges that the NARMP plans to close 15% of the DPAs in city parks immediately, when added to the GGNRA's desire to cut off-leash access by 90%, will have a disastrous cumulative impact on remaining off-leash areas in city parks and on recreation - however, the EIR does not analyze what that cumulative impact will be. This is a huge deficiency in the NARMP EIR!

03 3) The NARMP EIR refers to dogs as "nuisances," an extremely biased position that fails to consider any positive aspects of dog walking, including the physical and mental health benefits to having a dog, which has been rigorously studied and proven.

04 4) The NARMP EIR does not adequately analyze mitigations should any impacts from dogs be proven other than closing the DPA, even though less draconian measures could be developed.

05 5) The NARMP EIR states that impacts to land use planning can be considered significant if they have a "substantial impact on the existing character of the vicinity." (p. 176) In all of its analysis of impacts on the existing character of the vicinity, the NARMP EIR never considers the impact on the character of the community of people who walk with their dogs in the DPAs and portions of DPAs that NARMP wants to close. In many cases, this

Jake-1

05 (Cont.) community of humans and dogs and their interactions, defines the "existing character" of the park. Dog walkers are perhaps the most diverse group of park users. To explain, if you watch dog walkers in SF city parks, you will see kids and seniors, people with disabilities, gay and straight, every ethnic and religious group, and every socioeconomic class walking, talking and laughing together, all united by their common love of dogs. People who walk in the same park at the same time every day know their fellow dog walkers. These friendships extend outside the park into the neighborhoods, helping create the sense of belonging to a community that is so important in today's impersonal urban society. Closures and reductions in DPAs (especially if 80% of the total off-leash space in city parks are closed) will have a significant negative impact on these social communities. DPA closures will destroy these communities. Because the NARMP EIR did not consider these impacts on community of those who live near and walk in parks, it is inadequate.

06 6) More generally, the NARMP EIR does not adequately consider the impacts on the social fabric (environment) of San Francisco if one-quarter of its city parklands are closed to residents. Since the term "crime" is not found in the EIR, it evidently does not consider the effects of closing parks on changes in the park usage including more usage for criminal behavior such as drugs, camping out, and crimes against other citizens.

07 7) The NARMP EIR does not adequately analyze the impacts on recreation of NARMP plans to plant sensitive plant species (those that are listed as either endangered or threatened) throughout its natural areas.

08 8) Where NARMP controls the entire park, the NARMP EIR does not adequately consider impacts on the specifics of recreation and land use. No other recreational use is possible in those parks. In an additional 10 parks, NARMP controls over 50% of the land. Only four of the 32 parks with natural areas have less than 50% of their land controlled by the NARMP. A majority of land under NARMP control citywide (57%) will have significant restrictions to access by all people (not just people with dogs); that is the amount of land designated as MA-1 and MA-2. In 8 parks, all of the land in the natural area are designated as MA-1 and MA-2, with resulting significant restrictions on access to everyone. In some cases, this denial of access will be in the only park within easy walking distance in the neighborhood. The NARMP EIR must consider this large-scale denial of access when analyzing the Project Alternative.

09 9) The NARMP EIR does not adequately consider the negative impacts on aesthetics and land use of poor maintenance in natural areas. As a search in the entire EIR for relevant words (finance, financial, budget) provides only a few results, it is evident there is no rigorous financial analysis of anything. This failure to consider costs of usage changes can lead to serious adverse environmental impacts.

10 10) The NARMP plans call for cutting down almost 20,000 trees because they are not native does not adequately consider the long-term impacts on climate change, global warming, and the quality of fresh air in San Francisco. It would be costly and, simply, dumb. Open up your eyes! There are a lot of non-native inhabitants everywhere you look – in the Bay, on land, and in the air. Get used to it!

11 11) The NARMP EIR does not adequately consider the fact that the climate in San Francisco has changed (and continues to change) from the time several hundred years ago that the NARMP plan is trying to re-create.

Krist Jake
(415)385-0100

Johns-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 09:38 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 09:39 AM----



Belinda Johns
<belindajohns1@gmail.com>
05/16/2012 08:11 AM

To bill.wycko@sfgov.org
cc
Subject NAP

01 I live on Mt. Davidson and absolutely oppose the plan to deforest the mountain (as well as other forests in SF). The only notice I received of this plan was from my local community
02 association. And that was only 4 weeks ago. Where was the public notice of this plan published?

The plan is appalling and absolutely defies reason. I have talked to someone who works in Golden Gate Park and received more details, and have also read a report that concludes the argument in favor of the plan is specious.

But here are my primary concerns: 1. toxic spraying to assure these "non-native" plants and trees don't regrow - really? How does that improve an environment that is already suffering
04 from a shortage of bees and birds because of environmental poisons? 2. And has anyone studied the habitat issues? What happens to our hawks, turkey buzzards, and other birds that rely on that forest for life? And what happens to the coyotes, skunks, racoons, and other animals that rely on
05 that forest for life? 3. And what about the risk of land/mud/rockslide after the trees are removed? 4. And what about the climate change it will cause? Whole neighborhoods are
06 buffered from the wind from the west because of the forests.

07 If toxic spraying is part of the plan, has the city notified the state and federal EPA?

I would also like to know where the $$ is going to come from. The Parks budget is already stretched and our parks are suffering as a result. So the city wants to divert more funds from that budget to rip out "non-native" flora? Honestly, this "non-native" flora has been here for over 100 years - I am really not sure it's so "non-native" now and it is a great improvement over sand
08 dunes. Does the NAP extend to ripping out everything in Golden Gate Park as well and turning that beautiful stretch of land back into its "native" state? That would be sand dunes again.

I will do everything I can to defeat this plan.

Belinda Johns

Johnson-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:13 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: public comment on dog play areas

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:13 AM ----



Mandy Johnson <mandy_johnson16@hotmail.com>
10/31/2011 07:00 AM

To <bill.wycko@sfgov.org>
cc Scott Bradley <scottyb27@hotmail.com>, Tom Tillinghast <ttilli7558@aol.com>
Subject public comment on dog play areas

Dear Mr. Wycko,

01 I am writing to express my alarm that the SF Recreation and Parks Department may eliminate large swaths of off-leash dog play areas in city parks. I am particularly alarmed at plans to restrict off-leash activity in Bernal Hill Park -- a beautiful space that I have lived next to and used daily for 12 years.

When my husband and I bought our home in Bernal Heights in 1999, we did not yet have children or dogs -- but we saw proximity to the park as a major benefit to moving here. We started taking nightly walks in the park after work, meeting our neighbors -- many of whom were accompanied by cheerful canine companions -- and becoming part of the community. Before long, we were going to the park twice a day with a dog of our own ... and then with our daughter, too. In over a decade of walking the park, we have not gotten bored of the sweeping vistas, the funky little single-track trails, and the people and dogs we meet there every day. Walking our dog in the park is not just good exercise and socialization for him, it is good exercise and socialization for my husband, our 9-year old daughter, and me -- and it will be for the new baby boy we're expecting in late November.

What strikes me most about the proposal to restrict dog play areas is the pointless destructiveness of it. By any measure, Bernal Hill Park is a terrific success story. Despite the fact RPD has next to no presence in the park (in 12 years, I have literally never seen an RPD employee there. Never. Not once.), it is clean, safe, and widely used by a variety of people. On any given walk, at nearly any time of day, I see families with children, families with dogs, families (like mine) with both, runners, hikers, hipsters, and -- in the past 2 years or so -- tourists and sightseers. All of us enjoying the park together, striking up interesting conversations, and looking out for one another. It is a wonderful, community park; it embodies so much of what I love about San Francisco in general, and about Bernal Heights in particular. Bernal Hill Park, as it is today, is a shining example of a public amenity that really works. Why on earth would RPD want to destroy that?

01 (Cont.) Bernal Hill Park without off-leash dog areas will lose most of the "eyes and ears" the dog-walking community provides -- the eyes and ears that keep it a safe and clean place for recreation. What is now a vibrant park could very well turn into a meeting spot for vandals, petty hoodlums, and homeless encampments. That sounds speculative on my part, I suppose ... but, then again, that's pretty much what the park turns into on 4th of July, when the dog people are pushed out and the partiers move in. My family and I spend the week following the holiday cleaning up broken beer bottles, old fireworks, and piles of trash left behind by the revellers. My speculation is, at least, grounded in actual experience as a park user. The unsubstantiated arguments presented in the EIR about how dogs "may" impact plants and

Johnson-1

wildlife strike me as far more speculative.

There are many people more qualified than me to speak to the science (or lack thereof) behind the EIR. I am an active environmentalist and outdoor enthusiast, but I am not a scientist. I am, however, a successful businessperson, and I can speak to the wrongheadedness of the proposed off-leash dog restrictions from a business perspective. Because my daughter attends RPD summer programs, I am on an email list that regularly updates me on RPD issues -- particularly, the draconian budget cuts the department has had to endure the last few years. The emails have communicated, time and again, the severe funding restrictions within which RPD is forced to operate, and the painful budgetary choices its management must make. Why on earth, in these constrained budgetary times, would RPD divert resources from its other critical programming to implement unpopular, unwanted restrictions on off-leash dog recreation? I object to the policy of restricting dog play areas, on the merits, regardless of RPD's fiscal situation. But when I consider the opportunity costs involved in RPD taking this on, I am truly shocked. What programs will RPD sacrifice in order to ruin Bernal Hill Park for me and my family, and thousands of other law-abiding recreational users?

01 (Cont.)

As a dog owner, I honestly feel under siege. Between RPD's desire to put plants above people and GGNRA's desire to virtually eliminate dog recreation from its parkland in 3 counties, I am beginning to wonder why we dog owners seem to have a bullseye painted on our backs. Is the future of San Francisco dog ownership going to be confined to depressing outings to tiny, concrete dog runs or covert, illegal trips to open space? Will my family lose one of the amenities we most treasure about city living? I have no idea why RPD would want to make the city less friendly to families and less friendly to recreation. But if the department chooses to go down this path, I pledge my unrelenting opposition, every step of the way. I'm not giving up Bernal Hill Park without a fight.

02

regards,
Amanda Johnson
164 Bonview St.
San Francisco, CA 94110

Johnston-1

RECEIVED
JUN 08 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT

Carolyn Johnston
106 Dorchester Way
San Francisco. CA 94127

June 7. 2012

Mr. Bill Wycko
Environmental Review Office
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco. CA 94103

Re: Draft EIR, Natural Areas Program

Dear Mr. Wycko.

I have lived near Mount Davidson since 1986. My husband and I chose to move to this neighborhood largely because of Mount Davidson. It towers over the neighborhood, and its tall trees make the entire area look greener and lovelier. We love the fact that there is a green mountain visible from our home, our yard, our street, and as we're walking home after taking MUNI home from work.

Mount Davidson's proximity to us is also important because we are avid hikers. We go to Mount Davidson very often – with our dog, our children, extended family, and out of town guests. It is the only place we can hike in the woods that is within walking distance of our house. Once we walk up the stairs, we can forget we are in the city and enjoy the experience of being in the woods – birds chirping, no sound of cars, and no view of civilization. It's also a nice place to go on a windy day because the trees help block the wind. Because we go to Mount Davidson so much, we drive less and are in better shape.

We are horrified by the proposal to remove healthy trees on Mount Davidson. It would make views of the mountain substantially uglier, and would significantly worsen the recreational use of the mountain. I would not enjoy hiking up there if I didn't get the experience of being in a dense forest.

01

The DEIR is misleading because it does not acknowledge that the impact of removing 1600 of Mount Davidson's trees on recreation and aesthetics would be significant and adverse.

Very truly yours.

Carolyn Johnston

Joyce-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: close the Dog Park Area's
Date: 10/04/2011 10:26 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 10:26 AM -----

ann joyce
<annjoycesf@hotmail.com>

10/04/2011 10:24 AM

To <bill.wycko@sfgov.org>
cc
Subject close the Dog Park Area's

I have a dog but never go to these parks because of the people who bring their dogs to the parks. The dog walkers who bring in a brood of 15 dogs and don't watch them are the worst offenders. Close these parks and they will be forced to actually WALK their dogs!

01 Please consider at least closing the un-fenced dog run areas. Both myself and my dog have been attacked when walking near a dog run area and the owners don't have control over their dogs - or worse, as in my case - the owners don't care if their dog attacks someone.

Thank you - I am a San Francisco Homeowner who pays taxes and votes.

Ann Joyce

Jungreis-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:13 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Opposition to "reversion" element of Natural Resource Areas Management Plan

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:14 PM ----



jason jungreis
<jasonjungreis@gmail.com>
10/31/2011 03:08 PM

To bill.wycko@sfgov.org
cc
Subject Opposition to "reversion" element of Natural Resource Areas Management Plan

Dear Mr. Wycko,

01 I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

02 The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created. This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

03 San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.

04 Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

05 Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

06 We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

07 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You

Sincerely,

Jason Jungreis
527 47th Avenue
San Francisco, CA 94121
415-750-0830

Kalafati-1



Bill Wycko/CTYPLN/SFGOV
06/20/2012 10:15 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Draft mpact Report for Natural Areas Management Plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/20/2012 10:15 AM ——



"Anton Kalafati" <akalafati@bsideconstruction.com>
06/19/2012 07:30 PM

To <bill.wycko@sfgov.org>
cc "'\"John Avalos'" <John.Avalos@sfgov.org>, "'Sean Elsbernd'" <Sean.Elsbernd@sfgov.org>, "'David Chiu'" <David.Chiu@sfgov.org>, "'Carmen Chu'" <Carmen.Chu@sfgov.org>, "'Malia Cohen'" <malia.cohen@sfgov.org>, "'Eric Mar'" <Eric.L.Mar@sfgov.org>, "'Jane Kim'" <jane.kim@sfgov.org>, "'Christina Olague'" <Christina.Olague@sfgov.org>, "'David Campos'" <David.Campos@sfgov.org>, "'Mark Farrell'" <mark.farrell@sfgov.org>, "'Ed Lee'" <mayoredwinlee@sfgov.org>, "'Scott Wiener'" <scott.wiener@sfgov.org>
Subject Draft mpact Report for Natural Areas Management Plan

Dear Mr. Wycko,

01 Im opposed to this any plan that involves cutting down health tree's I that a maintenance plan
02 should be the only good alternative.

Anton Kalafati
President

B-Side Inc
1940 Union st #9
Oakland CA 94607
Cell:415-699-1469
Office:510-451-7527
Fax:510-451-7517
www.bsideconstruction.com

Karpa-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:22 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Please preserve off-leash use

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:23 AM -----



"Michael Karpa" <mskarpa@comcast.net>
10/30/2011 08:11 AM

To <Bill.wycko@sfgov.org>
cc
Subject Please preserve off-leash use

01 My off-leash times with my dog are virtually the only times I ever use the GGNRA. Please let us keep the R in GGNRA.

Mike Karpa
San Francisco

Kass-1

Sidney Kass

25 Vista Verde Court, San Francisco CA 94131
415-333-9372
sidkass@hotmail.com

RECEIVED
JUN 07 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

June 2, 2012

Bill Wycko
Planning Department

Sir:

I urge you to follow the plan to thin out or remove many of the eucalyptus trees on Mt. Davidson.

I live within walking distance of Mt Davidson, and often walk in the open spaces. Only rarely do I venture into the eucalyptus forest because it is so messy and dangerous underfoot.

01

I would like to see open areas populated by native annuals, perennials, bushes, trees or even grasses.

I fear that the neighbors are misled into expecting dire results from your undoing of the past error of planting a "productive" eucalyptus forest.

Thank you.

Sincerely

Sidney Kass

Kathie-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: draft EIR Significant Natural Resource Areas Mgmt Plan
Date: 10/04/2011 02:32 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 02:32 PM -----

Kathie
<fogcitykathie@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject draft EIR Significant Natural Resource Areas Mgmt Plan

10/04/2011 02:31 PM

Please respond to
Kathie <fogcitykathie@yahoo.com>

01 I enthusiastically support limiting access of dogs in Natural Resource Areas so that these areas can be enjoyed by people who do not want dogs and dog mess all over their parks. Thank you.

Keating-1

JOHN B. KEATING
ATTORNEY AT LAW
POST OFFICE BOX 620622
2995 WOODSIDE ROAD, SUITE 350
WOODSIDE, CALIFORNIA 94062
E-MAIL JBKEATING@AOL.COM
FACSIMILE (650) 851-5912
(650) 851-5900

October 31, 2011

VIA E-MAIL: bill.wycko@sfgov.org

Mr. Bill Wycko
Environmental Review Officer
SF Planning Dept
1650 Mission St., Suite 400
San Francisco, CA 94103

Re: Natural Areas Program Public Comment

Dear Mr. Wycko:

I am a San Francisco native and long time resident and have followed the natural areas program development issues for about a decade now.

I am opposed to any expansion of the designated natural areas to the extent resulting in restriction of the types of public recreational access to the particular public park areas. Our City parks are a treasured resource adding greatly to the quality of life and well being of the citizenry. As such, any proposal likely to result in restriction of full access of the people to the parks should be reviewed with greatly heightened scrutiny and suspicion. 01

While development of native plant areas does seem generally laudable at first blush, such efforts are inappropriate for a municipal park if the result is fencing the people out of their parks.

The plan seems to confuse "native plant" restoration with "natural areas." Some areas have a current natural condition of a reasonable adaptive ecological system even if deviating from the identified preferred "native" plant base. I am concerned about short term negative impact to the current bird population as a result of the destruction required to convert the areas to the identified preferred native plant habitat. In particular, please take note of the loss of the great blue heron nesting areas caused by prior native plant area clear cutting. 02

Moreover, I think you should take a close look at the question of whether the staff DEIS report reflects a bias in that it appears based on a series of assumptions all of which favor the natural areas program, rather than a balanced approach where some assumptions end up favoring the program and other assumptions end up favoring recreational access. The DEIS should be a careful balanced analysis rather than an advocacy piece to justify a particular conclusion. 03

Sincerely,

John B. Keating

Keats-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:16 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Dog play areas in San Francisco - Citizen's statement

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:16 PM ----



Carma Keats
<carma.keats@gmail.com>
10/31/2011 02:17 PM

To Bill.Wycko@sfgov.org
cc
Subject Dog play areas in San Francisco - Citizen's statement

Although I will fight passionately (for the rest of my life, if necessary) for San Franciscans with dogs to have access to sufficient off leash play areas, in a way I can see a positive outcome if plans to restrict more areas to dogs are successful.

It might become the tipping point to create an enormous backlash against the City and City planners who seem to simply disregard the large percentage of homes where families, couples or individuals consider dogs not to be "nuisances" but, rather, members of the family. There are 160,000 dog family members in the City; more dogs than human children - and each dog may represent two or more voters.

01 Ten times the space allotted to dog play is already restricted for people with dogs; in other words, we have use of one-tenth the space. If you dare to take even more space away, people with dogs may rise up to demand true representation of our actual real demographics by City employees rather than tolerating the way some City employees seem to represent only the interests of a small minority who unrealistically want to simulate wilderness in the middle of a major urban center at the expense of local people and their dogs.

In a way, a backlash could even parallel the Occupy movement ... acting out of sheer practicality and need, I believe people might simply stop heeding City Planning or other guidelines and just occupy City parks with their dogs.

It seems to me that City planning ought to consider the actual, real life situation and demographics in the City rather than attempting to impose an imaginary City through plans for a City that does not now, and will never, exist in reality.

In my small corner of town, Dogpatch, I have 360 or more email addresses through which I contact dog families; you may have received emails already from many of them although the timing is unfortunate with so many people busy for Halloween. Nevertheless, each of these email addresses represent one or two (or even three) San Franciscans that may take further steps to demand true representation of our actual needs in the future or may simply occupy the City parks we love so much.

Keats-1

01 (Cont.) Although many of us pay taxes for public schools and do not begrudge a penny of it, all we need is open space for people and our canine family members. Our neighbor, Mayoral candidate Dennis Herrera, understands this need, and we thank him for his understanding and support.

Mr. Wycko, I also thank you in the hope that you will develop realistic consideration of our common future in San Francisco.

Carma Keats
Dogpatch Dogs

Keitelman-1

HPC meeting on 9-21-11
2005.1912E
(J. RANGE)

PRESERVING HISTORY, OR MAKING IT?

Next Monday, Pacifica's planning commission may make one of the Bay Area's most underused and environmentally harmful golf courses an historic landmark. But rather than preserving history, the commission may be making it: never before has Pacifica landmarked a property without first conducting a professional historical resource assessment and without the landowners consent. If it does so now, Pacifica would set a precedent for abusing the historic preservation law, and ultimately undermine it. Here's why.

Sharp Park Golf Course, owned and operated by San Francisco but located in Pacifica, is beset by numerous problems. So San Francisco recently started a planning process to reconsider the future of Sharp Park and provide a different suite of recreational amenities that would be more environmentally and financially sustainable.

But golf advocates are trying to do an end-run around this planning process, claiming Sharp Park should be landmarked because Alister MacKenzie designed it. But history is not on their side.

Mackenzie helped revolutionize golf architecture in the last century by insisting that courses "imitate the beauty of nature," rather than be in conflict with it. But MacKenzie ignored his own maxim when he designed Sharp Park. The project required dredging and filling this delicate coastal landscape for a staggering fourteen months in order to create enough dry land for an 18-hole golf course. And in perhaps his greatest ecological mistake, MacKenzie leveled a coastal barrier that provided Sharp Park with natural protection from the surging Pacific Ocean, replacing it with seven links so that golfers could view the sea.

01 The flaws in this design became evident almost immediately. Opening day of the golf course was delayed twice due to excess water on the course. Then a massive coastal storm surge, no longer held at bay by the natural barrier MacKenzie destroyed, inundated the course and severely damaged several of MacKenzie's signature beach-side holes. The subsequent routing of Highway 1 through Sharp Park destroyed another MacKenzie link, permanently bifurcating MacKenzie's original design.

San Francisco eventually decided to alter what remained of MacKenzie's layout. The City constructed a levee along the coastal edge of Sharp Park, in places 30 feet high, destroying the ocean views MacKenzie designed. And in 1972 Robert Muir Graves redesigned Sharp Park, moving several links into an upland canyon.

But rather than solving the flooding problem, the levee and redesign exacerbated it. The new design blocked the natural water seeps and outflows through Sharp Park to the ocean, and the course now floods annually during normal winter rains.

Currently San Francisco attempts to prevent the freshwater flooding of the golf course by pumping water through the levee, but this is killing the threatened California red-legged frog—also known as Twain's Frog, because it is the central character in Mark Twain's short story "The Celebrated Jumping Frog of Calaveras County." In addition, the operation of the golf course threatens the endangered San Francisco garter snake—considered the most beautiful serpent in North America—as mowing operations kill the snakes while they bask in the sun on the course's fairways. The United States Fish and Wildlife Service warned San Francisco in 2005 to stop

Keitelman-1

harming these species or face potential civil and criminal liabilities. The golf course managers responded by leaving standing water on the course for most of the year, causing further damage to the course.

01 (Cont.)

Consequently, there is simply no MacKenzie legacy at Sharp Park today. A San Francisco golf program employee wrote a history of San Francisco golf in 1978 and explained that MacKenzie's design "would never be the same" after the coastal storms decimated the course, and claimed the Robert Muir Graves redesign was like "taking a house with a beach view and turning it 180 degrees to face a mountain slope." Daniel Wexler, writing in his book "missing links," noted that MacKenzie's Sharp Park was "shortly lived" and "washed into oblivion by a coastal storm." He concluded that "no appreciable trace of [MacKenzie's] strategy remains in play" at Sharp Park today.

But there are cultural and historic artifacts on the land that can and should be preserved: Sharp Park was the home of a temporary internment camp during World War II, and Native American artifacts have been found throughout the area. The golf advocates' end-run would ensure that these histories go uninterpreted and remain inaccessible except to individuals with the ability and desire to pay around $40 for a round of golf: all other users are escorted from the course.

02

Moreover, in 2004 a survey of San Franciscans found that the number one recreational demand is for more hiking and biking trails: golf finished 16th out of 19 options in the same survey. Yet the city is currently forced to cut services at recreational centers and open spaces while it subsidizes the underused golf course at Sharp Park.

This is why residents of both Pacifica and San Francisco have come together to urge San Francisco to consider recreation alternatives at Sharp Park. Because this review is ongoing, San Francisco has not consented to the end-run proposed by golf advocates in Pacifica.

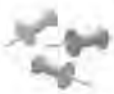
If Pacifica nonetheless landmarks Sharp Park without a factual basis for doing so, it will enable future abuse of the preservation ordinance, and improvements to all our community spaces could be beset with unjustified delay and expense. Pacifica must at a minimum conduct a professional historic resource assessment and work with the landowner before it takes such precedent-setting action.

Better yet, the planning commission can save funds, its reputation, and the landmark ordinance by accepting the hard facts: Sharp Park is no longer a genuine MacKenzie golf course nor is it a viable economic concern for the city of San Francisco.

Chris Carlsson, Director, FoundSF.org, a living archive of San Francisco history
Lawrence Cuevas, Landscape Architect
Derek Hoye, Golfer Against Sharp Park
Brent Plater, Director, Restore Sharp Park, www.restoresharppark.org
Isabel Wade, Neighborhood Parks Advocate

copy of a letter to editor - ~2010 when Pacifica attempted and abandoned making Sharp Park a historic resource
presented 9/21/2011 by Mary Keitelman
Pacifica, CA
mkeitelman@hotmail.com

Kelly-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:43 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off Lease Dog Space/EIR for NAP,...

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:44 AM ----



Kimberly Kelly <kimberly_kelly@hotmail.com >
10/31/2011 11:07 AM

To <bill.wycko@sfgov.org>
cc
Subject Off Lease Dog Space/EIR for NAP...

Dear Mr. Wycko-

I am a home owner and dog owner in San Francisco. I purposefully bought in Bernal Heights, because it was within walking distance from an off leash dog area (Bernal Hill). My dog Sammy & I walk there almost every day, and have for the last 8 years. Additionally, we often play at Crissy Field & at Fort Funston, or hike the Land's End Trail. I am also a member of the (newly consolidated/reorganized) San Francisco Parks Alliance.

In most areas where we play, users with dogs and users without dogs interact quite harmoniously and respectfully, sometimes informally dividing the space (e.g. at Crissy Field, dogs are generally northwest of the jetty/bridge, beachgoers with kids go on the SE side) and it works quite well. In Bernal, dog owners often get together to physically care for the hill—picking up garbage, watching out for misuse, working with vetted organizations to weed/restore native plants, etc.

I am concerned about the potential loss of off-leash space. Preserving park space is well-intentioned, but I personally believe that preserving the space means preserving it for use—mostly by the people who live in the area (vs. for native plants that have long disappeared—what's next: are we going to return Golden Gate park into Sand Dunes?).

I have a well-behaved and happy dog because he gets plenty of exercise--on leash exercise would not be enough for my retriever. And, I am a happy and engaged citizen of my community in big part because of my dog.

Here are some of my specific concerns:

01

- The NAP EIR repeatedly says: Dogs MAY impact plants or wildlife, yet offers no evidence these impacts are actually occurring or have ever occurred. Unsubstantiated claims cannot be made in an EIR. The NAP EIR goes on to say: If allowed to be in a natural area, dogs MAY continue to impact plants or wildlife. If there's no proof of an impact, then that impact cannot "continue."

Kelly-1

01 (Cont.) Analysis in the EIR based on this speculation is incorrect and inadequate.

02 The EIR does not differentiate between impacts caused by people with dogs and impacts caused by people without dogs. For example, a 200-pound man will have a much more significant impact on plants that he walks on than a 20-pound dog will have on any that it walks on. If there is little difference in the impacts, then the EIR cannot justify banning off-leash dogs fr! om natural areas.

03 The NAP EIR considers only the closures of 15% of total off-leash space when determining impacts on remaining DPAs and recreation. Because the NAP plan puts 80% of off-leash space at risk of closure in the future, the NAP EIR must also consider the impacts of this much larger closure on remaining DPAs and on recreation.

04 The NAP EIR does not consider the impact of people driving to other parks if 80% of off-leash space is closed. This analysis must be done.

05 The NAP EIR refers to dogs as "nuisances." It does not consider the positive aspects of dog walking, including the physical and mental health benefits to people who walk with their dogs. These must be included in the analysis of different alternatives. People walk in McLaren Park and on Bernal HIll because they are large enough to take long walks with your dog. Most other DPAs are much smaller and do not offer the same walking experience. The NAP EIR assumes all DPAs are interchangeable. They are not. This must be corrected.

06 The NAP EIR does not adequately analyze mitigations short of closing DPAs if any impacts can be proven.

07 The NAP EIR does not adequately consider the long-term impacts on climate change and global warming that will result from changing areas with non-native trees into native grasslands. Trees are much better at sequestering carbon than grasslands are, and the long-term impact of cutting down trees and replacing them with grasslands must be considered.

08 The NAP EIR does not adequately consider the fact that the climate in SF has changed (and continues to change) from the time several hundred years ago that the NAP plan is trying to re-create. Native plants suitable to the earlier climate may no longer be suited to today's (or tomorrow's) climate. The environmental consequences of trying to force the old habitat into today's (and tomorrow's) climate, e.g., increased need for herbicides, should be analyzed more thoroughly.

Thank you for considering my comments.

Kimberly Kelly-->Consulting
Finance, Accounting & Project Management
415-279-9231

Kenealy-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Attachments: 111031 GGAS SNRAMP DEIR Comments _final_1.pdf; SNRAMP DEIR Comments.doc; CBD comments on Natural Areas 10-31-11.pdf; NAP EIR - Belgrave neighbors - D. Lapins.doc; CBD comments on Natural Areas 10-31-11.pdf; NAP letter.pdf; Notes from FWS meeting.pdf; Final WEI coments on DEIR.pdf; NAP_EIR_2011.pdf

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409
www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:47 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:21 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Let dogs run a bit in San Francisco

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:21 PM -----

Pat Kenealy <pkenealy1@yahoo.com>
10/31/2011 11:10 PM

To: bill.wycko@sfgov.org
cc:
Subject: Let dogs run a bit in San Francisco

1

Kenealy-1

Bill Wycko, Environmental Review Officer
SF Planning Dept.

1650 Mission St., Suite 400

San Francisco, CA 94103

Dear Mr. Wycko,

Please do what you can to preserve or expand off-leash dog walking space in San Francisco parks.

01

I don't own a dog, but my children and I like seeing dogs roaming freely in our parks and support the rights of our dog-owning neighbors to enjoy our parks while letting dogs be dogs.

Let's not make more rules in this City, let's live and let live.

Sincerely,

2

Kenealy-1

Patrick Kenealy

2464 Broadway

San Francisco, CA 94115
----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:47 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:21 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: SF Natural Areas Plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:22 PM -----

celeste langille <cclangille@earthlink.net>
10/31/2011 11:09 PM

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: SF Natural Areas Plan

Dear Mr. Wycko,
I am writing to advocate that the maximum restoration alternative must

3

Kesel-1

RECEIVED
OCT 21 2014
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: DEIR on Significant Natural Resource Areas Management Plan

Mr. Bill Wycko,

01 My comments pertain to the DEIR for the Natural Areas Management Plan (SNRAMP). The DEIR for SNRAMP is an accurate, adequate, and complete review of the plan. It considers a range of potential impacts to City resources and proposes mitigations where possible. This DIER is based on sound science and expert opinions. The DEIR is consistent with the City's Sustainability Plan as well as other directives. Furthermore, the DIER addresses potential impacts for natural and recreational amenities in San Francisco's Natural Areas.

02 SNRAMP is an innovative plan that will protect San Francisco's natural resources. Implementation of the plan will help safeguard local plants and animals by providing clear direction management priorities. This is the most cost effective method for managing San Francisco's natural resources.

Thank you

Rachel Kesel

99 Ellsworth St
San Francisco

Kessler-1

October 24, 2011

RECEIVED
OCT 26 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: Public Comment on Draft Environmental Impact Report for Natural Areas Management Plan

Dear Mr. Wycko,

I am a resident of San Francisco, and am keenly interested in its wildlife, truly natural areas, and habitat. My prime occupation is taking photographs and studying the behavior of our urban wildlife here in San Francisco -- I spend three or more hours daily doing this. I have had exhibits at The Seed Gallery of The Tides Foundation in the Presidio, at the Josephine Randall Junior Museum, and at the main branch of the San Francisco Public Library. I have written articles and self-published a booklet to inspire acceptance of our coyotes and wildlife. I am specifically interested in our wildlife which is not protected because it is not on any "endangered" lists -- these are the animals I photograph.

01 The current Draft Environmental Report appears to be slanted toward "Native Plant" management, at the expense of other interests.

The removal of so called "invasive" plants destroys habitat.

02 1. The report repeatedly mentions "invasive trees", usually in reference to eucalyptus. This tree has not been shown to be invasive. The trees that are here were planted, many of them a century or more ago. The main issue appears to be that they are occupying land that Native Plant advocates want to convert to Native Plant areas.

03 2. The trees, as well as other plants targeted for removal (including blackberry brambles and vines) form valuable habitat for birds, animals and insects. By focusing on a handful of species, the needs of all the others are neglected. The areas of Native Plants do not appear to be superior habitat in general. With a few exceptions, they do not provide the cover or the food resources birds and animals need. Thousands of eucalyptus trees and thousands of cubic feet of bushy habitat are being destroyed.

Strong toxic pesticides are increasingly necessary.

04 3. Because Native Plants are no longer suited to this eco-system – and because of the need for NAP to stop Natural Succession, when different plants in turn dominate a particular area – the "Natural" Areas Program requires a great deal more pesticides than would be needed if

Kessler-1

these areas were truly natural. The Report underplays both the amounts and the toxicity of the pesticides that will be used. In fact, it does not even say how much will be used.

04 (Cont.) 4. Garlon (triclopyr), Roundup (glyphosate), and Imazapyr are mentioned as the most likely chemicals to be used. Garlon is a Tier I (Most Hazardous) chemical. Roundup and Imazapyr are Tier II. No Tier III herbicides are even mentioned.

5. The report contains errors that minimize the impact of these chemicals.

05
- On p 365, it says Garlon degrades quickly and has low toxicity to aquatic species. However, the Material Safety Data Sheet (MSDS) (http://www.fs.fed.us/r5/eldorado/documents/freds/WEB%20Only/garlon_4_msds_rev_030909.pdf) says "Material is highly toxic to aquatic organisms" and also that it is "slightly toxic to birds." The MSDS also says the material is "expected to biodegrade only very slowly in the environment" and "Fails to pass OECD/EEC tests" (for ready biodegradability). The report says Garlon is being phased out; but if the NAP's tree-felling program goes through, a lot more will need to be used to prevent resprouting since it is the only herbicide known to prevent the resprouts of eucalypts.

06
- Imazapyr – which was approved for NAP's use in 2011 – is not approved for use in Europe. It moves readily in the soil, and is excreted by some plants through their root systems. It does not biodegrade quickly. Its end-product, quinolic acide, is a neurotoxin. The report does not mention these issues where it mentions using Imazapyr.

07
- Roundup (glyphosate) is the second most commonly used chemical in NAP (used 31 times in 2010 compared to Garlon's having been used 36 times). This has been linked to birth defects (including brain damage and neural tube damage) in humans and in animals. (Glyphosate-Based Herbicides Produce Teratogenic Effects on Vertebrates by Impairing Retinoic Acid Signaling; Carrasco et al. http://pubs.acs.org/doi/abs/10.1021/tx1001749) It is also highly lethal to amphibians, according to a University of Pittsburgh study. This is a concern because many of the areas where it is used have water nearby. Glen Canyon, for instance, has a stream running through it. Roundup is also associated with changes to the soil and fungal root disease. http://www.reuters.com/article/2011/08/12/us-glyphosate-idUSTRE77B58A20110812

08
- The main argument used by the Draft EIR to justify the use of pesticides in the natural areas is that NAP is following the rules, that therefore by definition there is no environmental impact from its use. (This reminds me of a recent US Supreme Court decision in which patients harmed by medical devices are now prohibited from suing the manufacturers of those devices if they were approved by the FDA.) There are two reasons why this argument is not an adequate defense: (1) NAP's uses of both Garlon and Imazapyr have been granted by exception by the Department of the Environment and they are not used by other agencies in the city. (2) NAP does not always follow

Kessler-1

08 (Cont.) the rules, such as posting a date of the application of the pesticide as required by policy.

04 (Cont.) The report says that only 10% of SF RPD's pesticide use is in Natural Areas, which are 25% of the total area. However, certain places, such as sports fields and golf courses, use a disproportionate amount of herbicides. If the natural areas were truly natural, they would need no herbicides at all. The SFNAP should use no Tier II or Tier I herbicides.

NAP was originally intended to preserve the few remnants of San Francisco's historical habitat, but the program has morphed into an empire that controls over one-quarter of all the city-managed parkland -- land for which access is being limited by the NAP program in a city coping with more and more people. We have wonderful natural areas -- forests, thickets and overgrown areas, which everyone loves as they are -- they are truly natural -- but they are being removed for NAP's program.

09 NAP is actually harming the environment by destroying trees, established habitat, and established ecosystems which include our existing wildlife. NAP wants to recreate our environment as one of native grasses which might have existed in the area in 1776 -- in very delimited spaces this seems fine, but they should not be taking over our parks which have evolved on all levels since that time. The grasses were native to a sand-dune ecology, but that is no longer the case within the city, and the grasses provide no protective habitat to the animals which now occupy these spaces -- animals which are not on NAP's "specified" or "endangered" lists. There has been an alarmingly high rate of failure when "endangered" species have been introduced -- this is because they are no longer suited to this environment which has evolved and changed since 1776. NAP is a political program, not a program based on science, and one which is hampering people's enjoyment and use of their parks.

10 And what about birds, raptors and furry animal life that are not on the endangered lists -- wildlife which already lives in these areas now? There is no mention of these in the EIR. To

11 put in their grasses, NAP is destroying healthy trees -- trees which, besides offering animal habitat, collect moisture from the fog, offer shade, serve as wind barriers, supply beauty and psychological relief. The trees are part of ecosystems which were established over 100 years ago. They are a part of a balanced, healthy animal habitat. What ever happened to saving the trees?

09 (Cont.) We have now discovered that, for native plants, there is a huge issue of "sustainability" which has been totally overlooked by the NAP program: the Native Plants in fact cannot survive without artificial means of keeping them going, including huge amounts of human management and poisons to keep other growth down: this project is an absolute waste of resources. And the result is artificial museum gardens which preclude other uses of the parks -- access to more and more areas is being restricted because of the NAP program. The very phrase "natural areas" is totally deceptive to the public -- these are artificial creations.

Kessler-1

If you want to look at some areas which have been left totally bare because NAP ripped out what was there, look at the periphery of Pine Lake -- the NAP program first began there 15 years ago and it is a mess. And now the lush growth in Glen Canyon is slowly and
09 systematically being removed, NAP is turning a gem of a wilderness park -- something that
(Cont.) everyone wants retained -- into a native grassland area, even removing and thinning truly-native willows and coyote brush. No one wants these parks turned into these artificial museum gardens except the NAP people themselves and their recruited volunteers. Twin Peaks is sprayed with poisons every four months so that native plants can grow. More people that I speak to want to end the NAP domination of our so-called "natural areas."

12 For all these reasons, the Proposed Project as well as the "Maximum Restoration Alternative" are bad for wildlife, habitat and environment. The "Maintenance Alternative", as stated in the Draft Environmental Impact Report on page 526, states that this is the
13 Environmentally Superior Alternative because it has the least negative impact on the environment of all alternatives. Of these alternatives, I am advocating the "Maintenance Alternative." However, I and many others would like to see the NAP program actually cut
14 back. Page 2 of your summary needs to be corrected to reflect what page 526 of the Draft
15 says: that the "Environmentally Superior Alternative" is the "Maintenance Alternative."

Please let's preserve nature -- true nature and wildlife -- not these artificially created museum gardens for which NAP is destroying the forests, thickets and underbrush we have, that are non-sustainable needing constant human intervention and poisons, that are limiting access to those of us who use the parks.

Sincerely,

Janet Kessler

Janet Kessler
636 Douglass Street
San Francisco, CA 94114
jannyck@aol.com
www.urbanwildness.com
www.coyoteyipps.com

Enclosed: All of these photos were taken in San Francisco parks and open spaces -- this is the so-called "invasive" and "non-native" habitat used by our existing wildlife. This habitat is being removed for native grasses. These animals are not listed in the EIR report.

Kessler-1

All of these photos were taken in San Francisco parks and open spaces – **these show** the so-called "invasive" and "non-native" habitat used by our existing wildlife. This habitat: trees, thickets and dense undergrowth, is being removed for native grasses. These animals are not listed in the EIR report -- **why aren't they?**



Red-winged Blackbird in non-native Cherry tree



Honeybee hive in non-native Eucalyptus

Kessler-1



Honeybee works in non-native wild mustard



Great Blue Heron family in non-native Monterey Pine



Nuthatch feeds and nests in non-native Eucalyptus

Kessler-1



Great Horned Owlets born and raised in non-native Eucalyptus



Black-headed Grosbeak in non-native Eucalyptus



Honeybee finds pollen in non-native wild radish

Kessler-1



Red-tailed Hawk finds mouse in non-native Iceplant



Gopher lives in non-native grasses



Baby Red-tail Hawks in their non-native Eucalyptus tree nest

Kessler-1



Night Heron hunts in non-native Scotch Pine



Butterfly on non-native wild radish



Brown Creeper hunts for food in non-native Eucalyptus

Kessler-1



Barn Owl nests in non-native palm tree



Song Sparrow in non-native wild radish

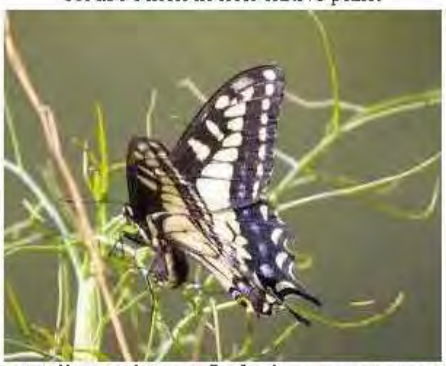


Garter snake feeds and hides in non-native Eucalyptus leaves

Kessler-1



House Finch in non-native plant



Yellow Swallow-tail Butterfly feeds in non-native Fennel



Red-tailed Hawk makes nest of, and in non-native Eucalyptus tree

Kessler-1



Brown Squirrel escapes in non-native Eucalyptus



Painted Lady Butterfly on non-native Wiegela



Great Horned Owl sleeps in Eucalyptus

Kessler-1



Possum hunts around in a non-native Pittosporum (Victoria Box)



coyote hunts in non-native iceplant



Great White Heron in non-native grasses

Kessler-1



Red Legged Frog in non-native pond plants



raccoon family nest in non-native pine



Twin Peaks is sprayed with Garlon4Ultra — note the required respirator is not being worn



Kessler-1

San Francisco and its native plants in 1806



Mount Davidson and its native plants 1885



Beehive deliberately destroyed by NAP people on October 14, 2011

Kessler-2



Bill Wycko/CTYPLN/SFGOV
10/27/2011 11:31 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Public Comment on Draft Environmental Impact Report for Natural Areas Management Plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 11:31 AM ——



janet kessler <jannyck@aol.com>
10/25/2011 06:42 PM

To bill.wycko@sfgov.org
cc
Subject Public Comment on Draft Environmental Impact Report for Natural Areas Management Plan

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
bill.wycko@sfgov.org

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Kessler-2

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- 05 On p 365, it says Garlon degrades quickly and has low toxicity to aquatic species. However, the Material Safety Data Sheet (MSDS) (http://www.fs.fed.us/r5/eldorado/documents/freds/WEB%20Only/garlon_4_msds_rev_0_30909.pdf) says "Material is highly toxic to aquatic organisms" and also that it is "slightly toxic to birds." The MSDS also says the material is "expected to biodegrade only very slowly in the environment" and "Fails to pass OECD/EEC tests" (for ready biodegradability). The report says Garlon is being phased out; but if the NAP's tree-felling program goes through, a lot more will need to be used to prevent resprouting since it is the only herbicide known to prevent the resprouts of eucalypts.

- 06 Imazapyr – which was approved for NAP's use in 2011 – is not approved for use in Europe. It moves readily in the soil, and is excreted by some plants through their root systems. It does not biodegrade quickly. Its end-product, quinolic acide, is a neurotoxin. The report does not mention these issues where it mentions using Imazapyr.

- 07 Roundup (glyphosate) is the second most commonly used chemical in NAP (used 31 times in 2010 compared to Garlon's having been used 36 times). This has been linked to birth defects (including brain damage and neural tube damage) in humans and in animals. (Glyphosate-Based Herbicides Produce Teratogenic Effects on Vertebrates by Impairing Retinoic Acid Signaling; Carrasco et al. http://pubs.acs.org/doi/abs/10.1021/tx1001749) It is also highly lethal to amphibians, according to a University of Pittsburgh study. This is a concern because many of the areas where it is used have water nearby. Glen Canyon, for instance, has a stream running through it. Roundup is also associated with changes to the soil and fungal root disease. http://www.reuters.com/article/2011/08/12/us-glyphosate-idUSTRE77B58A20110812

- 08 The main argument used by the Draft EIR to justify the use of pesticides in the natural areas is that NAP is following the rules, that therefore by definition there is no environmental impact from its use. (This reminds me of a recent US Supreme Court decision in which patients harmed by medical devices are now prohibited from suing the manufacturers of those devices if they were approved by the FDA.) There are two reasons why this argument is not an adequate defense: (1) NAP's uses of both Garlon and Imazapyr have been granted by exception by the Department of the Environment and they are not used by other agencies in the city. (2) NAP does not always follow the rules, such as posting a date of the application of the pesticide as required by policy.

The report says that only 10% of SF RPD's pesticide use is in Natural Areas, which are 25% of the total area. However, certain places, such as sports fields and golf courses, use a disproportionate amount of herbicides. If the natural areas were truly natural, they would need no herbicides at all. The SFNAP should use no Tier II or Tier I herbicides.

09 NAP was originally intended to preserve the few remnants of San Francisco's historical habitat, but the program has morphed into an empire that controls over one-quarter of all the city-managed parkland — land for which access is being limited by the NAP program in a city coping with more and more people. We have wonderful natural areas — forests, thickets and overgrown areas, which everyone loves as they are — they are truly natural — but they are being

Kessler-2

removed for NAP's program.
NAP is actually harming the environment by destroying trees, established habitat, and established ecosystems which include our existing wildlife. NAP wants to recreate our environment as one of native grasses which might have existed in the area in 1776 — in very delimited spaces this seems fine, but they should not be taking over our parks which have
09 evolved on all levels since that time. The grasses were native to a sand-dune ecology, but that is no longer the case within the city, and the grasses provide no protective habitat to the animals which now occupy these spaces — animals which are not on NAP's "specified" or "endangered" lists. There has been an alarmingly high rate of failure when "endangered" species have been introduced — this is because they are no longer suited to this environment which has evolved and changed since 1776. NAP is a political program, not a program based on science, and one which is hampering people's enjoyment and use of their parks.

10 And what about birds, raptors and furry animal life that are not on the endangered lists — wildlife which already lives in these areas now? There is no mention of these in the EIR. To put in their grasses, NAP is destroying healthy trees — trees which, besides offering animal habitat,
11 offer shade, wind barriers, beauty and psychological relief. The trees are part of ecosystems which were established over 100 years ago. They are a part of a balanced, healthy animal habitat. What ever happened to saving the trees?

We have now discovered that, for native plants, there is a huge issue of "sustainability" which has been totally overlooked by the NAP program: the Native Plants in fact cannot survive without artificial means of keeping them going, including huge amounts of human management and poisons to keep other growth down: this project is an absolute waste of resources. And the result is artificial museum gardens which preclude other uses of the parks — access to more and more areas is being restricted because of the NAP program. The very phrase "natural areas" is totally deceptive to the public — these are artificial creations.
09 If you need to look at areas which have been left totally bare because NAP ripped out what was
(Cont.) there, look at the periphery of Pine Lake — the NAP program first began there 15 years ago and it is a mess. And now the lush growth in Glen Canyon is slowly and systematically being removed, NAP is turning a gem of a wilderness park — something that everyone wants retained — into a native grassland area, even removing and thinning truly-native willows and coyote brush. No one wants these parks turned into these artificial museum gardens except the NAP people themselves. Twin Peaks is sprayed with poisons every four months so that native plants can grow. More people that I speak to are for ending the NAP domination of our so-called "natural areas."

12 For all these reasons, the Proposed Project as well as the "Maximum Restoration Alternative" are bad for wildlife, habitat and environment. The "Maintenance Alternative", as stated in the Draft
13 Environmental Impact Report on page 526, states that this is the Environmentally Superior Alternative because it has the least negative impact on the environment of all alternatives. Of
14 these alternatives, I am advocating the "Maintenance Alternative." However, I and many others would like to see the NAP program actually cut back extensively. Page 2 of your
15 summary needs to be corrected to reflect what page 526 of the Draft says: that the "Environmentally Superior Alternative" is the "Maintenance Alternative."

Please let's preserve nature — true nature and wildlife — not these artificially created museum gardens for which NAP is destroying the forests, thickets and underbrush we have in our parks. The native plant gardens are non-sustainable and need constant human intervention and poisons, and they are limiting access to those of us who use the parks.

Sincerely,
Janet Kessler
www.urbanwildness.com
www.coyoteyipps.com

Kind-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:46 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:47 AM -----



Jean Kind
<sfmomdog@yahoo.com>
10/31/2011 10:38 AM
Please respond to
Jean Kind
<sfmomdog@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject NAP

Dear Mr. Wycko,

01 I am very much opposed to the NAP that would close the Lake Merced dog play area and reduce off-leash dog recreation on Bernal Hill and in McLaren Park.

I believe enough land has been set aside for the preservation of native plants within our urban environment.

These are areas where residents of San Francisco, myself included, regularly walk with their dogs and their children.

Thank you,

Jean Kind
2165 15th Avenue
San Francisco, CA 94116

King-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:15 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Regarding the the NAP EIR for Dog Play Areas

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:15 PM ——



carpediva <carpediva@gmail.com>
10/31/2011 02:46 PM

To bill.wycko@sfgov.org
cc
Subject Regarding the the NAP EIR for Dog Play Areas

Dear Mr. Wycko:

I am writing to offer my brief comments on the changes being proposed by the recent NAP EIR as the relate to Dog Play Areas. I have lived directly across the street from McLaren park for over 6 years, and have walked my dog in that DPA nearly daily for that period. I have seen absolutely no visible deterioration of the natural resources of McLaren. (And in fact, the park has become safer over the years due to the presence of so many dogs and their walkers & owners.)

01 The changes proposed appear to have been made based on a series of assumptions of how dogs MAY be impacting natural areas, but the "data" provided is spotty, inconclusive, and in some portions of the report, flat-out incorrect. The lack of scientific method or quantifiable results is disturbing, and certainly shouldn't provide a basis for making such sweeping changes that will negatively impact so many citizens.

McLaren Park in particular remains one of only places in the city where dogs and their owners can exercise together over great distances, while co-existing peacefully with the natural inhabitants of the park, as well as other human users. I urge you to reconsider the proposed changes being made, and allow our already limited DPAs to remain as they are.

Thank you for your time.

Respectfully,

Julie King
The Portola
San Francisco, CA 94134

Klebaner-1



Bill Wycko/CTYPLN/SFGOV
06/05/2012 10:52 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Draft Environmental Impact Report for Natural Areas Management Plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/05/2012 10:52 AM ——



<klebans@wellsfargo.com>
06/05/2012 08:32 AM

To <bill.wycko@sfgov.org>
cc <John.Avalos@sfgov.org>, <Sean.Elsbernd@sfgov.org>, <David.Chiu@sfgov.org>, <Carmen.Chu@sfgov.org>, <malia.cohen@sfgov.org>, <Eric.L.Mar@sfgov.org>, <jane.kim@sfgov.org>, <Christina.Olague@sfgov.org>, <David.Campos@sfgov.org>, <mark.farrell@sfgov.org>, <mayoredwinlee@sfgov.org>, <scott.wiener@sfgov.org>
Subject FW: Draft Environmental Impact Report for Natural Areas Management Plan

Dear Mr. Wycko,

01 I'm opposed to this plan. Cutting healthy trees and using herbicides should be illegal. It **would** have **significant negative impact** on wind and shadow, hydrology and water quality, and forest resources – the findings ar incorrect.

02 MAINTENANCE ALTERNATIVE is the only acceptable alternative.
Personally, I'd like the NAP eliminated all together.

Sincerely,

Susanna Klebaner,
SF - 94121

Koster-1

October 13, 2011

RECEIVED
OCT 17 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Mr. Bill Wycko
Environmental Review Officer
SF Planning Department
1650 Mission St., Ste. 400
San Francisco, CA 94103

RE: Draft EIR Natural Areas Plan

Dear Mr. Wycko:

I'm not a scientist but I understand and appreciate science, having spent my career working at UCSF. The so-called restoration ecology espoused by the backers of NAP is not backed by science but by ideology. I am appalled that this movement has apparently taken over government agencies that should be representing all the people, not a vocal minority.

01

The expansion of the NAP and the destruction of healthy, mature trees in many areas of SF is not only a waste of tax-payer money but a blight on the landscape. If more people were aware of the plan, I'm sure they would be pounding down the doors of City Hall in protest. But ordinary citizens are too busy with their lives, working, taking care of their children, etc. Also, there is no coverage of this issue in our local papers as far as I have seen.

I have seen pictures of SF in the 1800s and it is not an attractive sight. Windswept, barren, sand dunes creating wind tunnels from the ocean to downtown. Is that what we want to recreate? If this inevitable result of what the NAP supporters desire was put to the public in an open vote, I'm sure it would be voted down. As representatives of the citizens of SF, I urge you to support our interests and reject the EIR and the specious 'science' it's predicated upon.

Sincerely,

Carolyn Koster

Carolyn Koster

Koury-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:13 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Program comment

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:14 PM ——



carl.staryan@comcast.net
10/31/2011 03:14 PM

To bill.wycko@sfgov.org
cc
Subject Natural Areas Program comment

Dear Mr. Wycko,

I support the MINIMUM of NAP activity in our parks and open space. NAP jurisdiction should not be expanded beyond their already invasive areas of activity.

The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created.

This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.

Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

01

Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.

The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.

Spending tax dollars to take away recreation areas from residents is outrageous.

I want more Rec and Park gardeners hired and less staff positions paid to the Natural Areas

Koury-1

01
(Cont.)

Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You
Sincerely,
Richard Koury
38 Lynch St.
San Francisco, CA

Kovinsky-1



Bill Wycko/CTYPLN/SFGOV
10/27/2011 05:10 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: please oppose ggnra plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 05:11 PM ——



Matthew Kovinsky <kovinsky@gmail.com>
10/27/2011 04:40 PM

To bill.wycko@sfgov.org
cc
Subject please oppose ggnra plan

01 **open offleash is already so limited and busy. please dont curb access. thank you**

Kushner-1

Bill Wycko, SF Planning Department
1650 Mission Street, Suite 400
San Francisco CA 94103

October 31, 2011

Comments on the draft Environmental Impact Report for the Natural Areas Program

INTRODUCTION

As to whether or not habitat restoration works, to quote Greg Gaar, prominent natural historian of San Francisco, "NAP and volunteer work parties have been extremely successfully in preserving the native plant communities on Mt. Davidson. Those rich habitats would have been destroyed by rapidly advancing eucalyptus, English ivy, cotoneaster, blackberry etc. if folks have not been controlling the weeds for the last twenty years.
"The Nootka Reed Grass Community on the spine of Mt. Davidson is amazingly healthy considering that it is surrounded by invasive exotics.
"The Huckleberry Scrub Community on the north side of the mountain is unique to San Francisco and probably to California. This plant community would have been destroyed by weeds by now. Thanks to NAP and volunteers, it thrives today.
"Habitat Restoration works."

Secondly, the issue of habitat restoration versus recreation is a false dichotomy. We recreate by playing cards and computer games, by playing tennis or soccer. To place recreation as opposed to the Natural Areas Program is patently absurd, especially under the rubric of an *environmental* impact statement. Two exceptions are 1) the recreation of walking and looking at nature, which was at the top of activities chosen by San Franciscans in a survey done by the Neighborhood Parks Council, and 2) the recreation of doing habitat restoration.

San Francisco is truly remarkable to have these remnant native sites, which are due to chance in some cases and the rugged terrain in others. I was raised in St. Louis; nowhere was there a natural area. Everywhere horticulture, rather than nature, reigns in St. Louis. These natural remnants are not merely 'exotic horticulture'. **They are our natural history** as much as are the birds of the Pacific Flyway, the Mission Blue butterflies, and the endangered clapper rail. Our children and our grandchildren deserve their **preservation, enhancement and expansion.**

SPECIFIC COMMENTS

01 1) With respect to the description of the twenty-two natural areas in San Francisco, the DEIR is accurate, thorough and complete.

02 2) The consideration of Sharp Park should be removed from the DEIR and placed on a separate planning track.

3) The evaluation of the various environmental impacts should be redone. Comments below:

03 Table 21 in the dEIR compares the project and the proposed alternatives relative to the various considerations that make up an environmental impact, i.e., Land Use and Land Use Planning, Aesthetics, Cultural and Paleontological Resources, Wind and Shadow, Recreation, Biological Resources, Hydrology and Water Quality, Hazards and Hazardous Materials, Agriculture and Forest Resources, and Air Quality. This list in the dEIR does not grade or weight the considerations; it merely views them as though they were all equal.

The legislative intent of the California Environmental Quality Act does not view these considerations as equal. The preservation and enhancement of the environment are more

Kushner-1

03 (Cont.)

important than these other issues. The evaluation of the different alternatives in the NAP dEIR relative to their environmental impacts should be made in the context of the intent of the CEQA legislation and not treat impact considerations as equals. The most disconcerting aspect of the considerations listed in Table 21 is that all are treated as though each is equivalent to biological resources, and yet this is not according to the legislative intent of the CEQA code. (For example, there is even no mention of "recreation" in the legislative intent.)

§ 21000. LEGISLATIVE INTENT,

The Legislature finds and declares as follows:

(e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

§ 21001. ADDITIONAL LEGISLATIVE INTENT

The Legislature further finds and declares that it is the policy of the state to:

(a) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

(b) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

(c) Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.

(d) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

(e) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.

(f) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

Throughout the dEIR, the various potential impacts should be re-evaluated with respect to legislative intent. Below are a few examples:

04

"Dog activity in DPAs is an existing use, and the SNRAMP does not propose increasing this activity; however, closing or reducing DPAs under the SNRAMP could intensify dog use in the remaining DPAs. In addition, because resources to enforce leash laws are limited, dogs would likely continue to be let off leash in parts of Natural Areas outside of DPAs, even though that activity is prohibited. As a result, dogs may currently be impacting and may continue to impact protected plant species in or near DPAs. Pet owners may contribute to disturbance via trampling. ***As a result, implementation of the SNRAMP could have significant adverse impacts on these species****."* [Emphasis added.]

This conclusion is very odd and out of sorts with the intent of CEQA. A more appropriate conclusion would be the mitigation that the Recreation and Parks Department enforce leash laws more adequately. The department has a beefy Parks Patrol division that could certainly be used to enforce leash laws, with fines that strongly encourage compliance. [sfweekly.com—article

Kushner-1

attached].

"The Maximum Restoration Alternative meets some, but not all, of the project objectives presented in Section III.C. Specifically, the Maximum Restoration Alternative does not meet the objective related to recreation, as the Maximum Restoration Alternative would provide additional restrictions on public use and access of the Natural Areas."

05 *"This alternative has impacts similar to those discussed for the proposed project. However, implementing management actions that restore native habitat throughout all Natural Areas would take precedent over implementing management actions for recreation facilities. Compared to the proposed project, this alternative involves no new trails in the Natural Areas, thereby providing reduced recreation opportunities. The Natural Areas Program would continue to promote passive recreation.*

"This alternative would further reduce the size of existing DPAs, so it could increase the use of the remaining DPAs, potentially resulting in greater physical deterioration of recreation facilities, compared to the proposed project. As with the proposed project, these impacts are expected to be less than significant. Within the cumulative timeframe, the GGNRA Dog Management Plan also would restrict dog use on GGNRA lands that may result in potentially significant and unavoidable cumulative impacts associated with the physical deterioration of the Natural Areas DPAs."

These excerpts demonstrate the crux of the issue of how recreation and public use (i.e., unleashed dogs) are given the same weight as habitat restoration. This is counter to the intent of the CEQA legislation, which nowhere mentions recreation (or dogs or companion animals).

06 (Another oddity in dEIR is that with all of the attention the voluminous document gives to dogs, nowhere is dog urine mentioned. Good people do "pick up after" their dogs, but certainly not the urine. With an estimated 130,000 dogs in San Francisco, dog urine is an environmental hazard to many, many plants. Surely this oversight in the dEIR is unintentional, but it should be corrected.)

07 Simply stated by the organization, Nature in the City, "If the recreation and maintenance alternatives are the '**environmentally superior alternatives**' and neither the *restoration* nor the proposed project are, then this analysis is flawed."

In summary, there is something out of sink with the intent of the CEQA legislation and it occurs throughout the dEIR. The draft needs to be changed to comply with intent, according to the legislative code of the State of California.

Sincerely,

Pinky Kushner
1362 6th Avenue
San Francisco, CA 94122

Kushner-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:07 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: pdf footnote for comments on the dEIR for the NAP

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:08 AM ----



Pinky Kushner
<pinkykushner@mac.com>
10/31/2011 08:44 AM

To bill.wycko@sfgov.org
cc
Subject pdf footnote for comments on the dEIR for the NAP

Greetings Mr. Wycko,
Attached here is a pdf footnote for my comments about the dEIR for the NAP.
Thank you,
Pinky Kushner
1362 6th Avenue
San Francisco, CA
pinkykushner@mac.com



S.F. Park Patrol1.pdf

Kushner-1

Ranger Noir: S.F. Park Patrol Run as Money Machine



By Matt Smith
published: Wed., Sep. 21 2011 @ 12:40 PM



This week's *SF Weekly* cover story "Ranger Noir" takes a close look at the law enforcement unit that covers San Francisco park facilities, and discovers an agency seemingly gone bad.

Among its findings:

A full-time Park Patrol supervisor holds a second, separate full-time job with the state of California. Park staffers say he often doesn't show up to work. But Department of Recreation and Park operations manager Denny Kern says he approved this arrangement. "The explanation is, there is no conflict," his spokeswoman told us.

Another Park Patrol allegedly skips his rounds and sleeps during his graveyard shift, then shows up for work the next day to log overtime hours, thus doubling his $53,000 salary. He's considered one of the chief park ranger's favored employees.

The man in charge of the unit, meanwhile, reportedly manipulates overtime assignments and then divvies them up among buddies, saving some plum ones for himself.

Last year, chief Park Patrol Officer Marcus Santiago collected more than $85,000 in overtime pay on top of his $67,000 annual salary, averaging more than 70 hours of work per week, 52 weeks annually.

Perhaps the most bizarre aspect of this story is that some of the apparent wrongdoing has been going on under the noses of high-ranking government officials.

According to the story:

> Santiago has been the target of whistleblower and other complaints. To cover his tracks during one city inquiry, Santiago allegedly told underlings to backdate overtime paperwork, according to multiple sources with knowledge of the situation. Another time, Santiago reportedly responded to a request for cellphone records -- which might have shown a city investigator whether or not he was lying about overtime -- by claiming that he'd dropped his phone in water. Despite investigating some of these complaints, his boss, Recreation and Parks Operations Manager Dennis Kern has protected Santiago, *SF Weekly* has found. Late this summer, following an extensive investigation, the federal Equal Employment Opportunity Commission authorized an internal report documenting the overtime allegations. The report showed evidence of discrimination against employees not in his inner circle and retaliation against complainants. It also affirmed that Santiago misled city officials on his San Francisco employment application in order to cover up that he was fired from the Oakland Police Department on allegations of misappropriating evidence and abusing people in custody.

The Park Patrol has been run for years as Marcus Santiago's personal fiefdom. Now that this is out in the open, I'm curious to see if Mayor Ed Lee will ask his parks General Manager Phil Ginsburg to get rid of this apparent liability.

Follow us on Twitter @SFWeekly and @TheSnitchSF

Showing 2 comments

Oneslimcat 1 month ago

Sounds like the good old boys club to me. What happen to cutting Overtime for no essential City Employees.

starchild 1 month ago

Nice exposé. So I wonder, will this be enough to get Marcus Santiago, Thomas Tom, and Jose Mitra fired, and Hanley Chan's company barred from doing business with the city? And what about the rangers' bosses, who've been letting them get away with it, Operations Manager Dennis Kern and Parks chief Phil Ginsberg? Are you listening, Rec & Park Commissioners, Mayor Lee? When you're running for mayor and the city's facing massive recurrent deficits, seems like it might not be the best time to be letting rampant corruption and overtime abuse go unchecked.

Langille-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Subject: Fw: SF Natural Areas Plan

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:48 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:21 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: SF Natural Areas Plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:22 PM -----

celeste langille <cclangille@earthlink.net>
10/31/2011 11:09 PM

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: SF Natural Areas Plan

Langille-1

Dear Mr. Wycko,

01 I am writing to advocate that the maximum restoration alternative must include restoring the whole Sharp Park golf course to endangered species, bird and other wildlife habitat for a truly ecologically sustainable coastal lagoon restoration.

02 Please separate out Sharp Park from the Natural Areas Plan so that San Francisco's nature and biodiversity is not dragged down by Sharp Park and its golf course.

For over a decade, SF Recreation and Parks Natural Areas Program has been working to realize the Significant Natural Resource Areas Management Plan (SNRAMP), the most important environmental document in San Francisco's history.

Please include and analyze the following considerations:

03 - The Natural Areas Plan goals are sufficient,

04 - The SNRAMP DEIR, with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan.

05 - The Plan is NOT radical. In fact, the Proposed Project neglects to fully address the long-term sustainable management and control of invasive plants, due to the retention of weed-nurturing eucalyptus groves in the MA-3 areas, which designation perpetuates a fragmented approach to natural resources management.

06 - For the purposes of the SNRAMP DEIR, recreation should include community stewardship. This would change the balance of purported recreational impacts.

07 - That the recreation and maintenance alternatives are the "environmentally superior alternatives" and neither the restoration nor the proposed project are, is, apparently, an unfortunate paradox of CEQA, where biodiversity is considered no more important than aesthetics or recreation within the human environment.

08 - The true impacts (and benefits!) of the maximum restoration alternative cannot be properly evaluated against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about recreation impacts or biological benefits can be made because there is no substance to the alternative. It is totally general.

1& 2 (Cont) Therefore, please separate out Sharp Park from the Natural Areas Plan! In addition, please ensure that the City and County of San Francisco places the protection of the natural environment and endangered species at Sharp Park Golf Course at the highest priority.

Thank you
Celeste Langille

Sent from my iPhone

Lansdown-1

Victoria Lansdown
105 Jarboe Ave.
S.F CA. 94110

RECEIVED
OCT 17 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Bill Wycko
Environmental Review Officer
1650 Mission St.
S.F. CA. 94103

10/17/11

Dear Sir,

I am writing regarding the expansion and implementation of the Natural Areas Program. I am a native San Franciscan, who raised three children here. I am a home owner in Bernal Heights and I operate a small business in the city. I have a long time vested interest in the parks. As a home owner and small business operator, I pay thousands of dollars yearly in taxes and licensing fees to the city of San Francisco. Now I find out that access to my local park for the recreation of walking my dog is about to be denied. HOW DARE THEY!

How dare the staff, especially Lisa Wade, tell me what I can or cannot do in the parks I PAY FOR! I am outraged and incensed. How dare they usurp almost 70% of our public lands, denying taxpayers use of their parks, for their own elitist agenda. Bernal Heights is a dense mid-town neighborhood, whose residents need access to that open space. Hundreds of people use that park on a daily basis. How does Lisa Wade have the nerve to arbitrarily dictate how our parkland is to be used?

01 Furthermore, by their own admission, NAP can barely manage the land they have. Two years ago, they met then Mayor Newsom, demanding more money for their program, claiming they didn't have the budget for the projects they were then attempting. And now, they want more?!?!?! They want more land and more money to perpetuate this myth that they can restore the land to pre-Colombian condition. That is not even possible.

As a taxpayer and home owner in the city of San Francisco, I demand this folly be stopped.

Sincerely,

Victoria Lansdown

Lapins-1

October 30, 2011

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission St, Suite 400
San Francisco, CA 94103

RE: Draft Environmental Impact Report for the Natural Areas Resource Management Plan

SENT VIA E-MAIL TO: bill.wycko@sfgov.org

Dear Mr. Wycko:

We are neighbors of two "natural areas" at either end of our street (Belgrave): Tank Hill and the Interior Greenbelt. Our opinion of the Natural Areas Program and the associated Environmental Impact Report is based on our personal experience and direct observation of those two natural areas.

About 25 trees on Tank Hill were destroyed over a period of 6 to 10 years by staff of the Natural Areas Program (NAP) and/or volunteer supporters of NAP. Those trees were young and healthy, with trunks varying in diameter of 6" to 24".

We weren't happy about the destruction of those trees and we appealed to the Recreation and Park Department to stop cutting the trees down. In a meeting with the General Manager at that time, Elizabeth Goldstein, an agreement was reached that would save the roughly 30 to 40 trees that remain until an equal number of native trees reached maturity to replace them.

The Recreation and Park Department supplied about two dozen oak trees that were approximately 12" to 30" tall with trunks of about 1" in diameter. The neighbors planted those trees. Five of those trees have survived so far. Only one seems to have achieved any real security and growth since it was planted.

The trees that remain have been severely pruned to reduce the shade they cast on the ground. Occasionally they are further mutilated. We have complained to the Executive Director of the Natural Areas Program about the damage being done to the trees that remain. She has assured us that the staff of the Natural Areas Program no longer works on Tank Hill. Therefore, we assume that this damage is inflicted by a volunteer who continues to work on Tank Hill, apparently unsupervised.

We have also recently (2010) witnessed the destruction of many healthy, young trees in the Interior Greenbelt when a trail was developed there under the auspices of the Natural Areas Program.

Based on these experiences, we are submitting the following comments on the Draft Environmental Impact Report (DEIR):

01

1. The DEIR claims that only dead, dying, diseased, trees will be destroyed by the implementation of the management plan (SNRAMP). This claim is not consistent with our experience with the actions of NAP or with the written management plan.

02

2. The DEIR claims that every tree that is destroyed will be replaced with a native tree. We do not believe, based on our experience, that it will be physically possible to replace every tree with a native tree because native trees will not grow in most places in San Francisco. Our experience with "replacement trees," makes us question that NAP has the resources to implement such a commitment, even if the native trees would grow.

Lapins-1

03

3. We are opposed to the Maximum Restoration Alternative. The Natural Areas Program does not seem to have sufficient staff to take care of the existing natural areas. Furthermore, they are not supervising the volunteers who are sometimes engaging in what amounts to vandalism in the natural areas. It is not realistic to expect the Natural Areas Program to expand their active restoration efforts into the MA-3 areas. Given the severe economic constraints on public funding, it is not feasible, nor would it be beneficial, to expand the staff of the Natural Areas Program.

04

4. We support the Maintenance Alternative because it will do the least damage to the environment. Fewer trees will be destroyed and less pesticide will be needed to destroy more non-native plants and trees. The native wild flowers on Tank Hill are thriving in the company of non-native trees. We would be happy to have more native plants on Tank Hill, but we do not believe that it is necessary to destroy trees for that purpose.

Thank you for your consideration.

The neighbors of Tank Hill, San Francisco

Denise Lapins
Via my e-mail address: dlapins415@comcast.net
15 Belgrave Avenue
SF, CA 94117

This letter sent separately from the one signed by Tank Hill Neighbors as I was away when signatures were collected.

Lee-P-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: environmental impact report (EIR)
Date: 10/11/2011 09:14 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/11/2011 09:14 AM -----

PC Lee
<pamleesf@yahoo.com>

10/10/2011 09:12 PM

Please respond to
PC Lee <pamleesf@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject environmental impact report (EIR)

Dear Mr. Bill Wycko,

01 I am writing you in regarding on some of the public parks closures to dogs environmental impact report (EIR). I am asking you do not take away this beautiful city San Francisco provides to people and dogs. Dogs need places to run just like people need open space for outdoor activities. Dogs do not ask anything from human and they do not have voice. Let them have what nature can provide to them.

Sincerely,

Pam

Lee-Y-1

RECEIVED
NOV 15 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

November 14, 2011

San Francisco Planning Department
1650 Mission Street, #400
San Francisco, CA 94103

Attention: Bill Wycko, Environmental Review Officer

Re: Supporting Designation of Sharp Park Golf Course as a "Historical Resource"

Dear Mr. Wycko:

I have been a San Francisco resident since 1975. I love the City and also enjoy the surroundings of my neighborhood very much. That is the reason for me and my family to live in the same Parkside home for over 36 years. Personally, I do not consider myself as a community activitist. Nonetheless, I have continuously and faithfully served my civic duties, such as casting ballots regularly and serving as a juror when required. Occisionally, I aspire to express my view on a specific civic subject when I deem necessary, such as the Sharp Park case.

01 I am writing this letter to fully support the decision to designate Sharp Park Golf Course as a "historical resource". Besides those historical and technical grounds which have already been presented by the experts on this topic, I just want to add that, as a retiree who is living in the city, I believe the Sharp Park Golf Course is a vital golf links for modest income people who love the golf game. As we all know there is no other place around the City to play the game on a nice course like Sharp Park at such affordable rates.

I am gratified if you could take my view into consideration.

Sincerely yours,

Yen L. Lee
545 Crestlake Drive
San Francisco, CA 94132

cc: Carmen Chu, San Francisco Board of Supervisors
San Francisco Public Golf Alliance

Lendaro-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 11:56 AM
To: Bock, John
Subject: Fw: Please Help Save the dog areas!

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

---- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 11:57 AM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 10:36 AM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Please Help Save the dog areas!

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 10:36 AM -----

"Melody Lendaro" <mlendaro@moscone.com>
11/01/2011 09:47 AM

To: <bill.wycko@sfgov.org>
cc:
Subject: Please Help Save the dog areas!

Lendaro-1

01 Has anyone really looked at these native plants they are really really ugly....no one thinks they are worth saving at any cost... Every one who votes for this will NEVER get reelected because there are so many dog lovers in SF they won't stand a chance... Do we really need another matter to be upset about during these trying times...political unrest war and unemployement...now where to walk your dog..
Give us a break....put this on the back burner until the economy turns around and we have jobs to go to instead of walking our dogs...

Melody Lendaro
Director of Sales
Moscone Center
747 Howard Street, 5th Floor
San Francisco, CA 94103
Phone: 415-974-4023 Fax: 415-974-4073
Email: mlendaro@moscone.com
Sales Coordinator: Lorelei Lopez @ Ph:415-974-4055
Email: llopez@moscone.com

Levins-1

ALAN S. LEVINS
180 Twenty-Eighth Avenue
San Francisco, CA 94121

RECEIVED
OCT 19 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

October 18, 2011

Mr. Bill Wycko
Environmental Review Officer
1650 Mission Street, #400
San Francisco, CA 94103

Re: Supporting "Historical Resource" Designation
For the Sharp Park Golf Course
Significant Natural Resource Areras, etc.
DEIR No. 2005.1912E

Dear Mr. Wycko:

01 I am not a golfer, so my support for the Historical Resource Designation pending comes from a slightly different point of view. I wholeheartedly support the designation because of the unique, historic and wonderful asset San Francisco has – an authentic Alister MacKenzie 18-hole golf course. This is truly a treasure that should be preserved. As a long-term San Franciscan resident, moreover, I believe having this public golf course available at reasonable rates to people of all walks of life is what San Francisco is all about.

I vote, and I support this Historic Resource Designation.

Very truly yours,

Alan S. Levins

Firmwide:104595221.1 999999.1113

Links-1

BO LINKS
585 Ortega Street
San Francisco, CA 94122

P: 415-564-3890
C: 415-509-4133
E: bo@slotelaw.com

RECEIVED
OCT 0 3 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

September 29, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource" Designation
For the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear Mr. Wycko:

01 I am writing to fully support the decision to designate Sharp Park Golf Course as an "historical resource."

By way of background, I am a lifelong City resident and an avid golfer. I have served as a volunteer golf historian for the City & County of San Francisco for several years, providing historical data when the City has needed it in connection with the various golf courses maintained by the Recreation and Parks Department. I have published two golf books, both published by Simon & Schuster (*Follow the Wind*, a fantasy about a young man's encounter with Ben Hogan at San Francisco's Lincoln Park; and *Riverbank Tweed & Roadmap Jenkins: Tales from the Caddie Yard*, a series of short stories set at local Bay Area golf courses). I have also published two extended essays about significant golf events in the City (*Return to Glory*, about the revival of Harding Park; and *More Than A Game*, about the creation of an inner city driving range and First Tee facility as Visitacion Valley Middle School).

In addition, I am the only two-time winner of the Lido Design Contest sponsored by the Alister MacKenzie Society, which is an international competition designed to recognize amateur golf course architects who best demonstrate a working understanding of Dr. Alister MacKenzie's core design concepts – the very concepts he utilized to create Sharp Park 80 years ago.

I am also a co-founder, along with Richard Harris, of the San Francisco Public Golf Alliance. Quite naturally, I fully endorse and support the letter he has submitted on September 20th behalf of our group, which numbers 5,000 strong. By this letter, I would like to add my individual voice to that of our group.

01 (Cont.) Sharp Park is the functional equivalent of fine art – it represents the work of an unquestioned master (Dr. Alister MacKenzie, renown the world over as perhaps the greatest

Links-1

golf course architect in history) and the course today still contains the vast majority of timeless features Dr. MacKenzie created almost 80 years ago. While the course needs restoration work, that fact alone does not diminish its importance. Our Cable Cars needed work in order to save them, too. And so do many of our fine buildings, which are architectural landmarks themselves.

Th fact is, Sharp Park is a part of our collective history. It is living breathing organism that requires our tender, loving care. And golfers around the world know of the course and appreciate its beauty and what it represents as an outstanding example of golf course architecture in the game's "golden age." In a sense, Sharp Park stands as does the Palace of Fine Arts as a reminder of a time long ago, and something worth preserving for generations to come. The extra bonus in this case is that the golf course itself has always been -- and remains today -- a vital recreational resource for modest income people who love the game of golf. It is used by diverse group of people who, quite literally, have no place else to play the game at affordable rates. The course has been recognized far an wide as an historic property and has demonstrated that golfers and endangered species can get along with each other in a healthy environment.

01
(Cont.)

I am gratified that the City and County of San Francisco has joined the chorus to support Sharp Park Golf Course as a public resource worthy of preservation. This decision is clearly correct on the historic record, and is another reminder that San Francisco is the City that knows how.

For all of these reasons, as well as those expressed in the San Francisco Public Golf Alliance's letter dated September 20, 2011, I am proud to support the designation of Sharp Park Golf Course as an historic resource under the California Environmental Quality Act.

Thank you for considering my views.

Sincerely,

BO LINKS

BL/r
Cc: Hon. Jackie Speier, Member, House of Representatives
Hon. Ed Lee, Mayor, City & County of San Francisco
Hon. Mary Ann Nihart, Mayor, City of Pacifica
Hon. David Chiu, President, San Francisco Board of Supervisors
Hon. Carole Groom, President, San Mateo Board of Supervisors
Mr. Phil Ginsburg, San Francisco Recreation & Parks Department
Mr. Charles Edwin Chase, AIA,
President, San Francisco Historic Preservation Commission
San Francisco Public Golf Alliance

Links-2

SLOTE & LINKS
255 California Street, Suite 1300
San Francisco, CA 94111-4925
Phone 415-393-8001
Fax 415-294-4545

Robert D. "Bo" Links
bo@slotelaw.com
•
Adam G. Slote
adam@slotelaw.com
•
Of Counsel
Stephen M. Boreman
steve@slotelaw.com

June 11, 2012

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resources, etc.
DEIR No. 2005.1912E

Dear Mr. Wycko,

I am a San Francisco resident and attorney, and am a co-founder of the San Francisco Public Golf Alliance. I am also a volunteer golf historian for the City and County of San Francisco, and am a serious amateur golf designer.[1] This letter is based on my knowledge of golf history and architecture, and upon my historical research, including research in the old San Francisco newspaper records of the San Francisco Public Library.

01 I write this letter in support of the San Francisco Planning Department's designation of Sharp Park Golf Course as an "historical resource" under the California Environmental Quality Act.[2] I also write this letter to point out several serious factual errors in the October 27, 2011 letter of Wild Equity Institute's "historic landscape architect" Chris Pattillo, which errors discredit Mr. Pattillo's analysis.

By letter dated October 31, 2011, Wild Equity Institute challenges the Planning

[1] I am the only two-time winner of the Alister MacKenzie Society's annual Lido Design Competition, having won the honor in 2007 and 2008.

[2] San Francisco Planning Department, Historic Resource Evaluation Response, Case No. 1005.1912E, dated February 8, 2011, at page 2.

Links-2

Department's historical resource designation, on grounds that Sharp Park Golf Course "no longer retains integrity."[3] For this claim, Wild Equity relies on Mr. Pattillo's October 27, 2011 letter[4].

In his letter, Mr. Pattillo alleges: (1) Sharp Park Golf Course today has "only [one] hole [that] is similar to the original design"[5]; (2) "the course no longer reflects the work of Alister MacKenzie"[6]; (3) "Construction of a seawall in 1941 . . . eliminated . . . the essence of the links design concept"[7], and (4) "Sharp Park Golf Course lacks integrity."[8]

But Mr. Pattillo displays serious lack of understanding of both (1) the design of Sharp Park Golf Course as it was actually built by Dr. MacKenzie in 1930-1932, and (2) the current (2012) configuration of the golf course. Nowhere in his letter does Mr. Pattillo state that he actually paid a site visit to Sharp Park Golf Course, or that he has any familiarity with golf course architecture. It is apparent from his letter that neither is the case.; indeed, many of Mr. Pattillo's claims are wildly at odds with both the historical facts and the current layout of the golf course.

The design and construction of Sharp Park began with an initial conceptual plan by Dr. Alister MacKenzie, with his associate H. Chandler Egan, a version of which was published in the San Francisco Chronicle February 23, 1930.[9]

---

[3] Letter, Wild Equity Institute to Bill Wycko, San Francisco Planning Department, October 31, 2011 (on file with the Planning Department), at pages 4-5.

[4] Letter, Chris Pattillo to Bill Wycko, October 27, 2011 (on file with the Planning Department).

[5] *Id.*, p. 2

[6] *Id.*, p. 3

[7] *Id.*, p. 2

[8] *Id.*, p. 4

[9] San Francisco Chronicle, Daily Sporting Green, "Chandler Egan Will Inspect Sharp Park Golf Course as City Park Board Plans Early Construction Start," February 23, 1930. (Copy attached as Exhibit 1).

Links-2

Construction and grow-in took two years, and the course was opened on or about April 16, 1932. At the time of the opening, the San Francisco Chronicle on or about April 9, 1932 published a map of the golf course *as actually constructed.*[10] Also at or about Opening Day, 1932, the golf columnist for the San Francisco Call-Bulletin, Frank Noon, published a hole-by-hole description of the golf course by MacKenzie's construction assistant Jack Fleming.[11]

Mr. Pattillo's comparison of the historic Sharp Park to the current golf course ignores both the 1932 as-built map of the course and Jack Fleming's description of the Opening Day holes. Instead, Mr. Pattillo incorrectly bases his analysis on the 1930 conceptual routing map[12], which differed in several particulars from the golf course that existed on Opening Day, 1932.[13]

I am familiar with the Sharp Park Golf Course as it exists today, as reflected in the current golf course scorecard (a copy of which is attached hereto as Exhibit 4). Twelve of today's holes (numbers 1, 2, 3, 8, 9, 10, 11, 13, 14, 15, 17, and 18) are original Opening Day holes, only slightly modified by the passage of 80 years, while two others (numbers 12 and 16) utilize original fairways, but do not have original greens.[14]

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[10] San Francisco Chronicle, Daily Sporting Green, April 9, 1932, "Sharp Park Fairways Ready". (Copy attached as Exhibit 2.)

[11] San Francisco Call-Bulletin, "Tee Topics: Here's What you'll find at Sharps Park; Fleming Describes City's Newest Layout," by Frank P. Noon, March (?), 1932. (Copy attached as Exhibit 3.)

[12] Letter, Chris Pattillo to Bill Wycko, October 27, 2011, *supra*, p. 1, at fn. 2.

[13] For example: The 1930 conceptual routing plan shows Original Hole 1 and 12 as straightaway 4-par holes; whereas the 1932 as-built map and Mr. Fleming's written descriptions disclose that by Opening Day, show Original Hole 1 as a dogleg-right 4-par, and 12 as a dogleg 5-par hole.

[14] It can readily be seen by comparing the 1932 As-Built Map (Exhibit 2) with the current Scorecard (Exhibit 4), the Jack Fleming Opening Day hole-by-hole descriptions (Exhibit 3), and an aerial view of the current golf course (Sharp Park Golf Course (Sharp Park Historical Resources Evaluation Report, Fig. 2), that the holes on today's Sharp Park Golf Course correspond to MacKenzie's 1932 Opening Day holes as follows: Current Hole 1 was Opening Day Hole 16; current Hole 2 was Opening Day Hole 15; current Hole 3 was Opening Day Hole 13; current hole 8 was Opening Day Hole 14 (shortened from 130 to 100 yards); current Hole 9 was Opening Day Hole 17; current hole 10 was Opening Day Hole 18; current Hole 11 was

Links-2

The hole descriptions contained in Mr. Pattillo's October 27, 2011 letter do not reflect that he either consulted the current scorecard or bothered to visit Sharp Park Golf Course before writing his letter.[15] His factual claims cannot possibly withstand the scrutiny of any knowledgeable observer.

Typical of Mr. Pattillo's distortion is his incredible statement that the Sharp Park sea wall "eliminated . . . the essence of the links design concept."[16] Alister MacKenzie, himself an authority on links golf, having been the consulting architect at the Old Course at St. Andrews, Scotland and the architect at the Cypress Point Club on the Monterey Peninsula, declared that Sharp Park "has a great resemblance to real links land."[17] To this day, as it always has, the golf course borders the ocean, with views of the coast headlands, while the sea air, wind, and weather strongly affect play of the course. Thus, Sharp Park embodies the essence of links golf.

01 (Cont.)

I also wish to comment on the issue of Sharp Park's qualification for historical status under Criteria A/1, association with significant historical times and events. Sharp Park was designed and built during the so-called "Golden Age of Golf" in the United States and California, during which history's greatest golf architects, including Alister MacKenzie, were

---

Opening Day Hole 1; current Hole 12 is the tee and a portion of the fairway of Opening Day Hole 2; Current Hole 13 is Opening Day Hole 9; current Hole 14 is Opening Day Hole 10; current Hole 15 is Opening Day Hole 11; current Hole 16 is played in the western fairway of the double-fairwayed Opening Day Hole 5; current Hole 17 is Opening Day Hole 5 (minus the western double-fairway); current Hole 18 is Opening Day Hole 12.

[15] For example, at page 2 of his October 27, 2011 letter, Mr. Pattillo mistakenly states that the area occupied by original holes 13, 14, and 15 (current holes 3, 8, and 2, respectively) "today... has four holes, that all run east-west." In making this statement, Mr. Pattillo appears to have confused current Holes 2, 3, and 8 with current holes 4, 5, 6, and 7 (which do generally run east-west). He says that original hole 16 (current #1) was replaced by current Hole No. 3, and says further that Original Hole 17 (current hole #9) was replaced by current No. 8 ("a short, straight fairway"). It stretches the imagination that these mistakes could have been made by someone who took the trouble to make a site visit to Sharp Park.

[16] Letter, Chris Pattillo to Bill Wycko, October 27, 2011, *supra*, p. 1, at fn. 2.

[17] Alister MacKenzie, "The Spirit of St. Andrews," Sleeping Bear Press, 1995, at p. 172.

Links-2

01 (Cont.)

building courses and expanding the reach of the sport in the United States and around the world.[18] During this period, golf was expanded, by construction of Sharp Park and other public courses, to the urban masses. Sharp Park has always fulfilled its role as the "poor man's Pebble Beach": great architecture for the common people. In this connection, in 1955 Sharp Park was the site of the inaugural tournament of the Western States Golf Association[19], one of the country's oldest and largest African-American golfing societies. Sharp Park thus played a significant role in the racial integration of American public recreation.

Finally, I have personally walked Sharp Park with several of the nation's great present day architects, including Robert Trent Jones, Jr. and Jim Urbina, and with Michael Keiser, the developer of the highly-acclaimed Bandon Dunes Golf Resort in Oregon.[20] I have also toured the course with Mike Davis, President of the United States Golf Association and with Lyn Nelson, Executive Director of the Northern California Golf Association.

All of these knowledgeable golf experts have commented to me in no uncertain terms that Sharp Park is a special, historic golf course that needs to be preserved. Tom Doak, one of the worlds leading golf course architects and himself a Mackenzie restoration expert, has personally visited the site on more than one occasion and recently expressed to me how grateful he is that Sharp Park is still here after all these years; he is a passionate advocate for its restoration.

Perhaps the most telling comment came from noted MacKenzie restoration architect Jim Urbina, who asked: "Does the City understand what it has here?"

---

[18] See, generally, Geoff Shackelford, "The Golden Age of Golf Design," Sleeping Bear Press, 1999, at Introduction, pages 1-3, and at the chapter entitled "The MacKenzie School of Design" (where he calls MacKenzie ""arguably the most charismatic, original and creative golf architect of the Golden Age." (Copies of relevant pages attached hereto as Exhibit 5.)

[19] See letter of Bay Area Golf Club of Northern California to Bill Wycko, dated October 11, 2011, on file with the Planning Department.

[20] See letter of Michael Keiser to San Francisco Planning Department, September 22, 2011, on file with the Planning Department.

Links-2

SLOTE & LINKS
Attorneys at Law

Mr. Bill Wyco
San Francisco Planning Department
Re: Supporting "Historical Resource" Designation for the Sharp Park Golf Course Significant Natural Resources, etc. DEIR No. 2005.1912E
June 11, 2012
Page 6

I therefore respectfully submit these comments in the hope that they are helpful, and also in the hope that the City will confirm and retain the designation of Sharp Park as an important historical resource that should be saved for future generations.

Respectfully submitted,

Robert D. "Bo" Links

RDL/r
Enclosures
cc: Mr. Phil Ginsburg (by email)
Ms. Dawn Kalamanathan (by email)
Mr. Richard Harris, SF Public Golf Alliance

Links-2

EXHIBITS

FOLLOW THIS PAGE

Links-2

SAN FRANCISCO CHRONICLE DAILY SPORTING GREEN

nks Raise Arguments on "Play as It Li

Chandler Egan Will Inspect Sharp Park Golf Course As City Park Board Plans Early Construction Start

Noted Player and Architect to Supervise Links Building

H. Chandler Egan, former national amateur champion and noted golf architect, will this week inspect Sharp Park where construction of San Francisco's third municipal golf course is to begin Monday, March 3. This was the announcement yesterday of Herbert Fleishhacker, president of the park commission.

Plans for the course were drawn last year by Dr. Alister Mackenzie, British golf architect with whom Egan is associated. Mackenzie is now in Europe and Egan will carry on the work in his absence.

Those who saw the superb test of golf that Egan created for the national amateur championship at Pebble Beach last September are

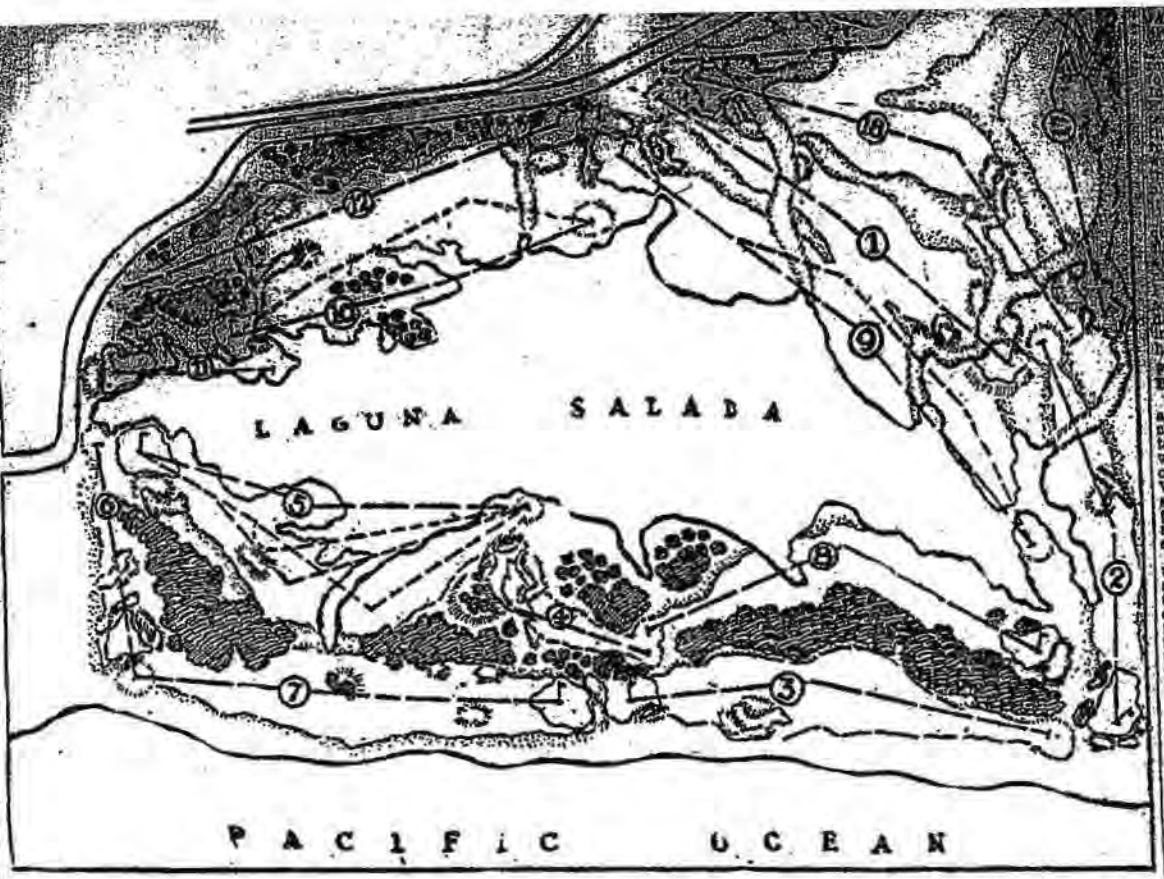
Here Is Card For Sharp Park

CHAMPIONSHIP length of 6590 yards will make difficult par 71 on the city's new Sharp Park golf course.

Hole	Yds.	Par	Hole	Yds.	Par
1	420	4	10	380	4
2	250	4	11	190	3
3	470	5	12	430	4
4	140	3	13	440	4
5	280	4	14	210	3
6	170	3	15	370	4
7	375	4	16	410	4
8	455	5	17	430	4
9	580	5	18	420	4
Out	3340	37	In	3250	34
			Out	3340	37
Total				6590	71



Links-2



SAN FRANCISCO'S third municipal golf course, Sharp Park, is depicted in this diagram, showing the plan devised by Architects Alister Mackenzie and H. Chandler Egan. Construction is to begin Monday, March 3, according to plans of the Park Commission and Architect Egan. The course is located at Salada Beach. It is reached by the Skyline boulevard, half an hour's drive from the City Hall. More than half of the holes border on Lake Salada, which John McLaren, superintendent of parks, transformed from a salt water marsh into a picturesque fresh-water pool.

confident that Sharp Park will be among America's finest municipal courses.

Egan has had a wide range of golf course construction experience. From a home-made links at his home at Medford, Or., to the national test at Pebble Beach he has shown uncanny ability to suit the layout to the terrain and the purpose of each course.

As a public links, Sharp Park will not be as difficult as Pebble Beach for the average golfer. It will conform to the Egan theory, however, of giving sporty hazards to stars who seek birdies.

With Lake Salada furnishing a fine natural water hazard, it will be more testing than either Lincoln or Harding park present many layouts.

The finance committee of the Board of Supervisors last Friday appropriated $25,000 for initial construction at Sharp Park, on the Skyline boulevard, located just over the San Mateo county line, and sixteen miles from the City Hall. The rest of the $150,000 needed to complete the course and clubhouse was promised for appropriation next June. The course will be ready in March of next year, it is expected.

Plans of the architects call for a course with a par of 71 and 6590 yards long, which is full championship length. Par on the first nine is 37, yardage 3340. Par on the return nine is 34, with yardage 3250.

Fight by Rounds

ROUND ONE

The pair met in the center of the ring and sparred at long range. Corbett shot a light left to the body and followed up with a light left to the jaw. They clinched. Fields missed a right to the head. The champion worked cautiously but uncorked two hard rights to the jaw which caused Corbett to back away.

Corbett was short with a left to the body and fell into a clinch. Jackie blocked a left to the body and Corbett clinched. Corbett staggered Fields with a left to the chin and repeated with a series of lefts and rights. Fields retreated into a clinch but came out of it to find Corbett's jaw with a mean right.

Corbett had a slight advantage in the opening round.

ROUND TWO

Corbett started things by sending lefts and rights to the head. Both boys resorted to rough stuff in a clinch. Fields missed a right and Corbett nailed him with a left to the face.

Fields scored lightly with a right to the jaw and they clinched again. Jackie tapped Corbett with two light rights and cuffed Corbett with a left in a clinch. Corbett sank his left into the pit of the champion's stomach and followed up with another left to the jaw back with another sharp right to the head. Corbett landed a left to the body but took three rights to the ribs at close range.

Corbett connected with a lusty left to the jaw and landed again with the same punch as he fell into a clinch. The Fresnan repeated with two more lefts to head and body and came back with another series of lefts, which reached the champ's ribs. Fields came in fast, but could not avoid Corbett's left hand. The southpaw wrestled Fields around the ring at the bell. Corbett's round.

ROUND SIX

Fields opened with a light right to the head, but remained at a cautious distance from his foe. Corbett rocked Fields' head with a left but Jackie came back with two right taps to the face and Corbett clinched.

The Fresno southpaw lashed out with a sweeping left which found the champion's face. Fields put two rights to Corbett's head, and Corbett retaliated with a left to the cheek. The champion took another hard left as he came into a clinch. Corbett tied Fields up at close quarters. Fields assumed the aggressive, but could not escape another Corbett left. Corbett's left thudded against the champion's face twice at the bell.

Benny Bass Battles Draw With Anderson

MILWAUKEE, Wis., Feb. 22 (AP)—Benny Bass, Philadelphia, junior lightweight champion, and Eddie "Cowboy" Anderson, Chicago, fought a 10-round draw, featured by nine knockdowns here tonight. Bass' title was not at stake.

The ninth round, with both fighters endeavoring to land a knockout punch, was replete with thrills. During this session the champion was knocked dizzy twice, while Anderson was on the canvas three times. Anderson had been on the floor four times in previous rounds, but always managed to weather the jolts to come back strong. The decision of the referee in calling the bout a draw met with favor of the fans.

Lou Magnolia Will Referee Miami Bout

MIAMI, Feb. 22 (AP)—Lou Magnolia of New York has been selected to referee the fifteen-round heavyweight elimination battle between Jack Sharkey of Boston and Phil Scott of England at Madison Square Garden's second "Battle of the Palms" February 27.

The selection was announced after a conference between fighters, managers and promoters of the af-

1.2

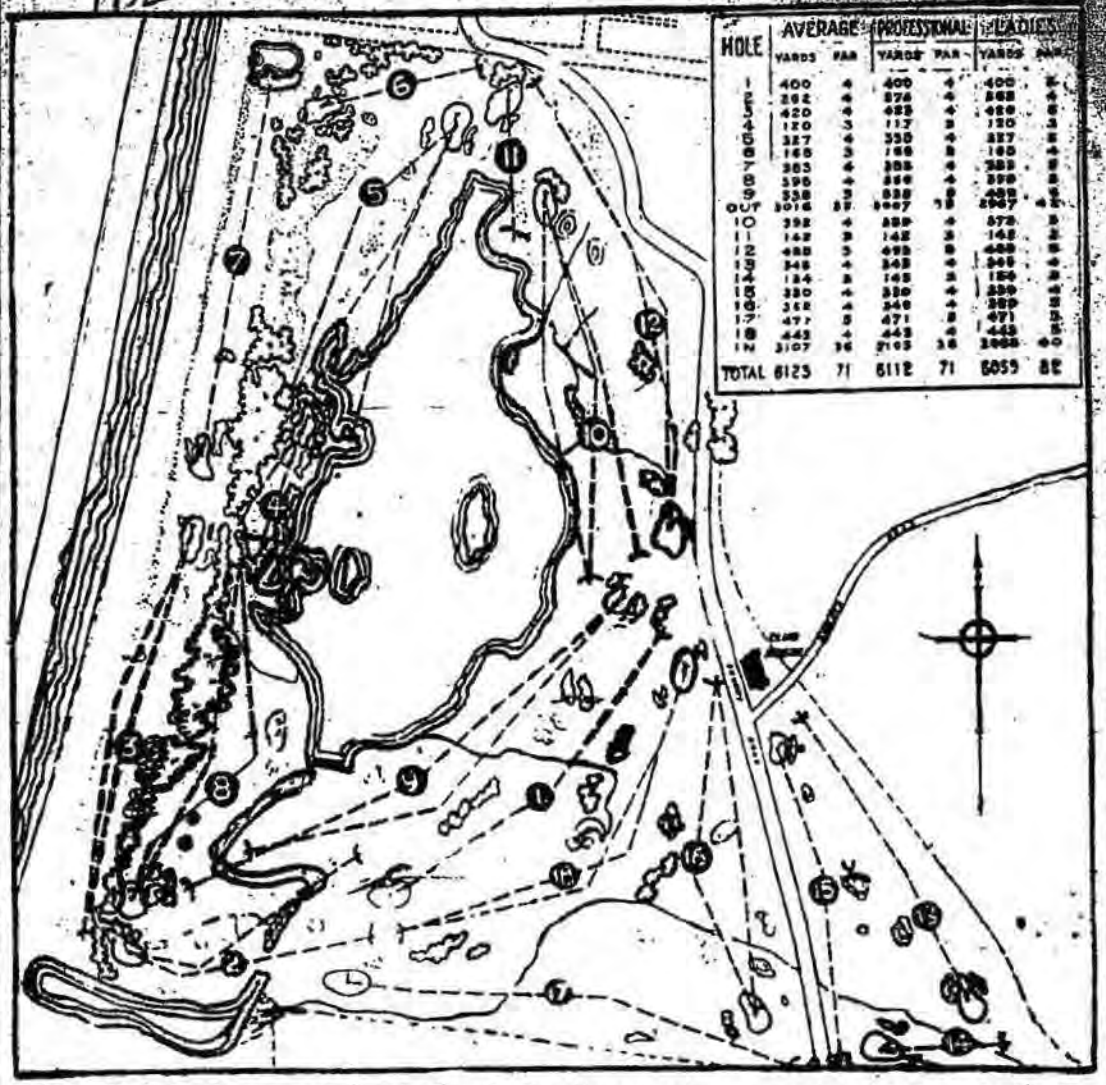
Links-2

SAN FRANCISCO CHRONICLE DAILY SPORTING

Apr. 9 1932

SHARP PARK FAIRWAYS READY

HOLE	AVERAGE YARDS	AVERAGE PAR	PROFESSIONAL YARDS	PROFESSIONAL PAR	LADIES YARDS	LADIES PAR
1	400	4	400	4	400	5
2	382	4	374	4	368	4
3	420	4	423	4	420	5
4	120	3	117	3	120	3
5	327	4	330	4	327	5
6	165	3	168	3	165	4
7	383	4	385	4	383	5
8	390	4	389	4	390	5
9	338	3	338	3	488	5
OUT	3016	33	3007	33	2987	42
10	392	4	389	4	372	5
11	142	3	142	3	142	3
12	488	5	493	5	488	6
13	348	4	343	4	348	4
14	134	3	145	3	134	3
15	330	4	330	4	330	4
16	358	4	340	4	389	5
17	477	5	471	5	471	5
18	443	4	443	4	443	5
IN	3107	36	3105	36	3096	40
TOTAL	6123	71	6112	71	6059	82



Sharp Park Golf course at Salada Beach, San Francisco's new municipal links, which will be opened for play a week from today with an inaugural tournament.

Frank Wykoff

Experts Pick-

Ex. 2

San Francisco Call-Bulletin, March (?), 1932

TEE TOPICS

By. FRANK P. NOON

Here's What You'll Find at Sharps Park

Fleming Describes City's Newest Layout

With the opening of the Sharps Park course set for April 1, a lot of fairway folks want to know what the "going" is like between the first tee and the eighteenth green.

Playing the layout the other afternoon with Dr. Alister Mackenzie, its designer; Bob Hunter Jr., who played a prominent part in the construction of the course, and Jimmy McGee, the writer agrees with Jack Fleming, the superintendent of the course, that he has had one whale of a time trying to grow grass on the acreage circling Laguna Salada.

The soil itself is not good, and innumerable top dressings have not benefited it much. There is sufficient water available, but until a reservoir is constructed in the canyon east of the course to guarantee an adequate supply of fresh water, I am inclined to the belief that growing grass will remain a problem to Fleming.

Water now used on the course is pumped from a reservoir near the beach, and, naturally, contains salt. The result is that the grass isn't growing as it should, and the course at present presents a "splotchy" appearance. The greens are excellent.

* * *

You want to know about the course, don't you? Well, here is a description of the layout as written by Jack Fleming. You will be interested, I know, in knowing that Fleming is rated by none other than Dr. Mackenzie as one of the most expert greenkeepers in the country.

* * *

Here is Fleming's hole by hole description of the course:

FIRST NINE

No. 1—400 yards, par 4. A fairly long two shot hole, slightly dog legged. No particular difficulties to a straight hitter.

* * *

No. 2—262 yards, par 4. A short two shotter. Drive must clear an arm of lake at about 100 yards, but a wide fairway available at 170 yards out. Greens set back against trees and trapped in front right.

* * *

No. 3—420 yards, par 4. One of the ocean holes constructed on the beach in a slight depression bounded by sand and sand grass embankment on left, trees on right. Entrance to green slightly advantageous from left on account of trap.

* * *

No. 4—120 yards, par 3. A one shotter. Green very large, but well trapped in front and right, trees on left and rear.

* * *

No. 5—327 yards, par 4. A lakeside hole and one of the most interesting holes on the course, similar to Dr. Mackenzie's "ideal golf hole." Three trees, four routes. Easy route probably will cost at least one extra stroke to get on, while the other combinations of tees and routes give rewards proportionate to their respective risks.

* * *

No. 6—168 yards, par 3. A difficult par. Green well trapped.

* * *

No. 7—383 yards, par 4. Similar to No. 3, but in opposite direction. A trap endangers the short player on his second, but properly played as a two shot hole a par is possible.

* * *

No. 8—338 yards, par 4. A dog-leg, quite difficult for two shots. Drive is blind and over trees if played close to get in opening for a good second. Plenty of fairway, however, for those who play short and do not care to risk trees on right for possible par. The wide play practically requires three strokes to get on.

* * *

No. 9—525 yards, par 5. A lakeside hole with wide, sandy beach on water side. Back tee should be used by all, as water carry is very short and close to tee. Requires three good shots to get on if dog-leg is played, but possibly a very long sure apron and get in under par.

SECOND NINE

No. 10—382 yards, par 4. One of the best holes, two tees, four possible routes, sand and water carries optional. The ideal shot is an accurately placed ball on an island with a water carry on both first and second shots. If well placed on first, the green opens well for a pitch and run second. All other approaches to the green are guarded.

* * *

No. 11—142 yards, par 3. A fairwayless short hole. Water and sand carry, trap green. Green, however, is long and should receive an average straight ball easily.

* * *

No. 12—488 yards, par 5. Fairway flat, double dogleg. Not difficult except to get two good, straight drives in succession.

* * *

No. 13—345 yards, par 4. Passing the clubhouse from No. 12 green to No. 13 tee. The thirteenth, fourteenth and fifteenth are all holes of a different type than the lakeside and ocean side holes. No. 13 is an upland type of hole of average difficulty. The green is well trapped.

* * *

No. 14—134 yards, par 3. This short hole has two tees. The tee with the carry across the creek opens into green easily, while on crossing creek to the other tee a more difficult shot over a trap at the green is encountered. Directly into prevailing winds.

* * *

No. 15—330 yards, par 4. Similar to No. 13. At present along the edge of the county road, which it is planned to re-locate. No. 15 green is near clubhouse.

* * *

No. 16—363 yards, par 4. A nice hole with two optional routes and a creek to cross.

* * *

No. 17—471 yards, par 5. A long hole down the south property line. The green is on a 15 foot fill.

* * *

No. 18—443 yards, par 4. The finishing hole is long and hazardous if not successfully played on both long shots, but the green is wide, open and nicely rolling in order to lend interest to the many thrilling final decisions which will no doubt be made on it. A clump of trees guards the green on the left.

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Attachment B: Draft EIR Comment Letters

Responses to Comments
November 2016

B-986

Significant Natural Resource Areas Management Plan
Planning Department Case No. 2005.0912E

Links-2

Hole Descriptions
from
Opening Day - 1932

Hole 1 (current 11th hole)
409 yards - Par 4
A fairly long two shot hole slightly dog legged. No particular difficulties to a straight hitter.

Hole 2 (current 12th hole)
262 yards - Par 4
A short two shotter. Drive must clear an arm of lake at about 100 yards, but a wide fairway available at 175 yards out. Green set back against trees and trapped in right front.

Hole 3 (lost)
420 yards - Par 4
One of the ocean holes constructed on the beach in a slight depression bounded by sand and sand grass embankment on left, trees on right. Entrance to green slightly advantageous from left on account of traps.

Hole 4 (fallow)
120 yards, Par 3
A one shotter. Green very large, but well trapped in front and right, trees left and rear.

Hole 5 (right fairway is current 17th hole)
327 yards - Par 4
A lakeside hole and one of the most interesting holes on the course, similar to Dr. MacKenzie's "ideal golf hole" [a reference to the Lido Design]. Three tees, four routes. Easy route probably will cost at least one extra stroke to get on while the other combinations of tees and routes give rewards proportionate to their respective risks.

Hole 6 (fallow)
158 yards - Par 3
A difficult par. Green well trapped.

Hole 7 (lost - parallels current 16th hole)
383 yards - Par 4
Similar to No. 2, but in opposite direction. A trap endangers the short player on his second, but properly played as a two shot hole a par is possible.

Hole 8 (fallow)
398 yards - Par 4
A dogleg, quite difficult for two shots. Drive is blind and over trees if played close to get in opening for a good second. Plenty of fairway, however, for those who play short and do not care to risk trees on right for possible par. The wide play practically requires three strokes to get on.

Hole 9 (current 13th hole)
538 yards - Par 5
A lakeside hole with wide, sandy beach on water side. Back tee should be used by all, as water carry is very short and close to tee. Requires three good shots to get on if dogleg is played, but possibly a very long sure approach will get in under par.

Hole 10 (current 14th hole)
382 yards - Par 4
One of the best holes, two tees, four possible routes, sand and water carries optional. The ideal shot is an accurately placed ball on an island with a water carry on both first and second shots. If well placed on first, the green opens well for a pitch and run second. All other approaches to the green are guarded.

Hole 11 (currently 15th hole)
142 yards - Par 3
A fairway-less short hole. Water and sand carry, trap green. Green, however, is long and should receive an average straight ball easily.

Links-2

Hole 12 (current 18th hole)
486 yards - Par 5
Fairway flat, double dogleg. Not difficult except to get two good straight drives in succession.

Hole 13 (current 3rd hole)
345 yards - Par 4
Passing the clubhouse from No. 12 green to No. 13 tee. The thirteenth, fourteenth and fifteenth are all holes of a different type than the lakeside and ocean holes. No 13 is an upland type of hole of average difficulty. The green is well trapped.

Hole 14 (lost - current 8th green site)
134 yards - Par 3
This short hole has two tees. The tee with the carry across the creek opens into green easily, while on crossing creek to the other tee a more difficult shot over a trap at the green is encountered. Directly into prevailing winds.

Hole 15 ((current 2nd hole)
339 yards - Par 4
Similar to No. 12. At present along the edge of the county road, which it is planned to re-locate. No. 15 green is near clubhouse.

Hole 16 (current 1st hole)
363 yards - Par 4
A nice hole with two optional routes and a creek to cross.

Hole 17 (current 9th hole)
471 yards - Par 5
A long hole down the south property line. The green is on a 15 foot fill.

Hole 18 (current 10th hole)
443 yards - Par 4
The finishing hole is long and hazardous if not successfully played on both long shots, but the green is wide, open and nicely rolling in order to lend interest to the many thrilling final decisions which will no doubt be made on it. A clump of trees guards the green on the left.

Links-2


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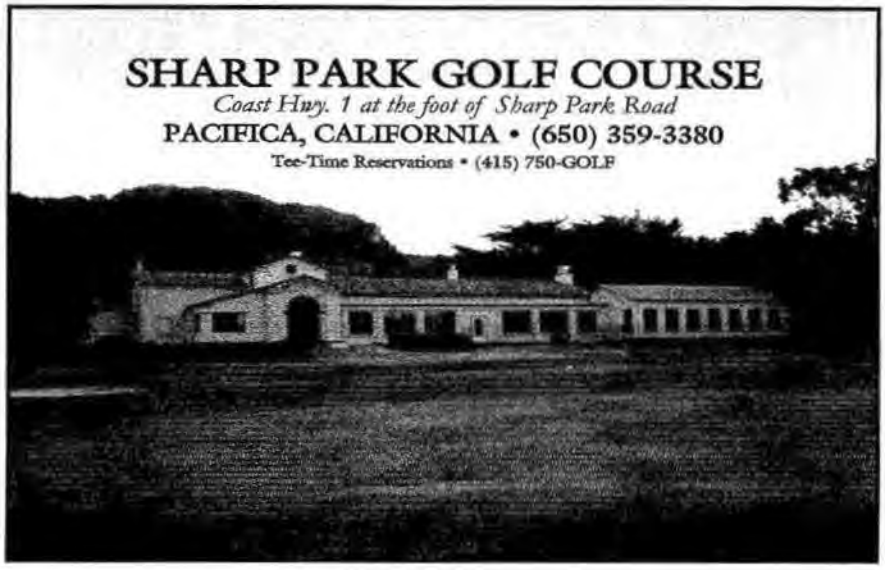
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Links-2

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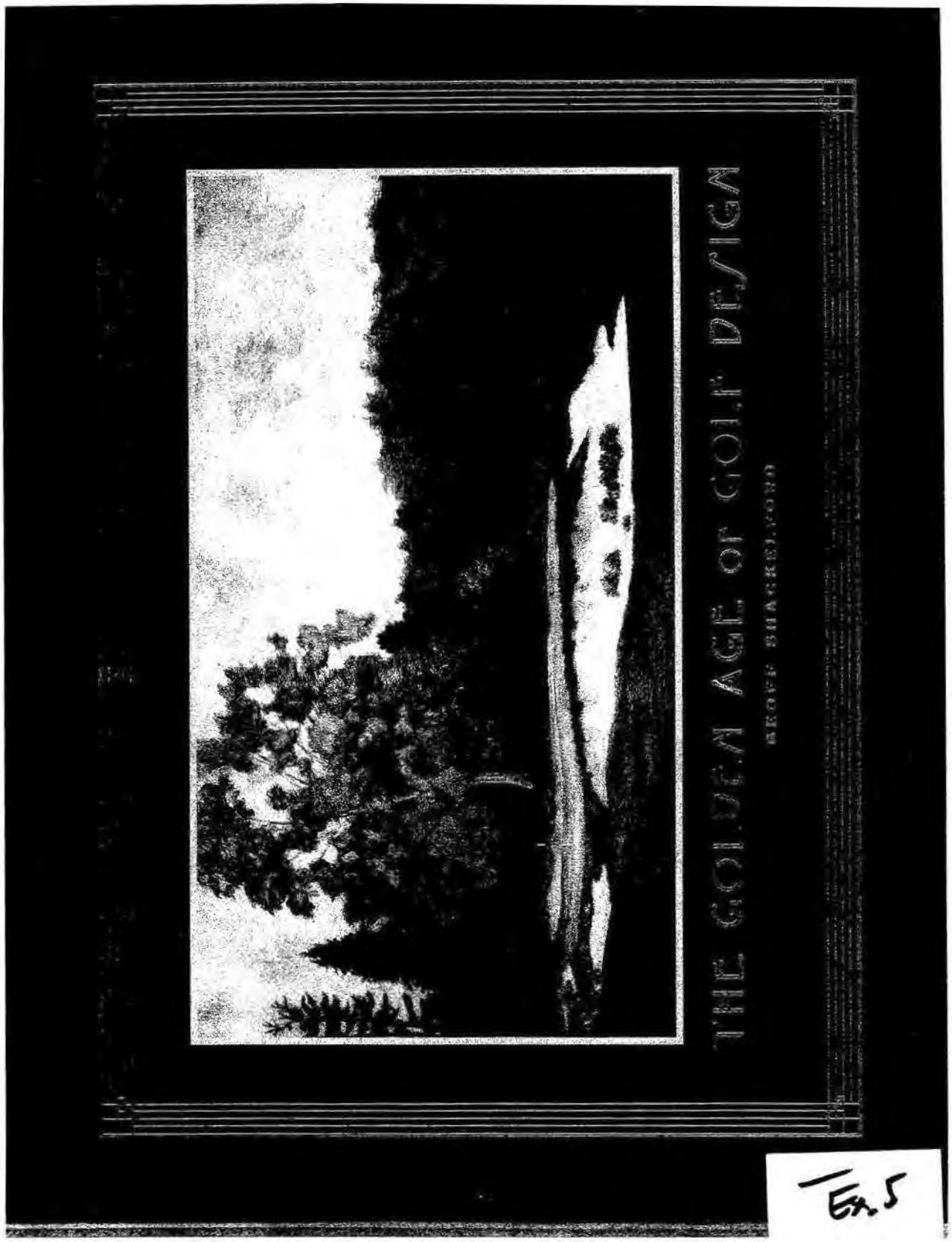
Back		362	332	360	453	193	408	405	99	471	3083		414	413	205	551	383	142	360	340	491	3299	6382	71.2/119		
Middle		353	319	348	443	175	393	376	93	455	2955		407	401	185	519	362	134	368	319	483	3178	6133	70.0/116		
Forward		334	289	315	433	146	335	360	87	444	2743		363	361	161	461	355	119	360	262	458	2900	5643	68.5/121		
Par		4	4	4	5	3	4	4	3	5	36		4	4	3	5	4	3	4	4	5	36	72	Rating/Slope		
Handicap	HDCP	6	16	8	12	10	2	4	18	14			1	3	7	11	5	17	9	15	13					
Hole #		1	2	3	4	5	6	7	8	9	Out	Initial	10	11	12	13	14	15	16	17	18	In	Total	Hcp.	Net.	Adj.
Forward		334	289	315	433	146	335	360	87	444	2743		363	361	161	461	355	119	360	262	458	2900	5643	72.9/120		
Par		4	4	4	5	3	4	4	3	5	36		5	5	3	5	4	3	4	4	5	38	74	Rating/Slope		
Handicap		10	16	12	6	14	8	2	18	4			11	9	13	1	3	15	5	17	7					

Scorer: _____ Attest: _____ Date: / / Tee Time: _____

64.

Links-2



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INTRODUCTION



An example of early geometric design, circa 1900. This is the original Annandale Golf Club in Pasadena, California. Note the oiled sand green and chocolate drop mounds.

At some point in their life every adult longs for the "good old days" when things were simpler and times were better. Sometimes, in our desire to paint the past as an idyllic time, we selectively ignore certain facts that might taint our rosy remembrances of the way things used to be. Sometimes our nostalgia for times past is justified, other times it is not. For the game of golf, there was no better or more prosperous time than the 1920s. The twenties really were the good old days.

Many will argue that the 1940s and early 1950s, when Nelson, Hogan and Snead ruled the game, was golf's Golden Age. However, beginning in 1911, when Charles Blair Macdonald opened The National Golf Links of America on Long Island, golf took an important step forward and did not look back until the leanest years of the Great Depression. Not only were virtually all of the greatest courses in America built during this twenty-five year period, the game itself expanded rapidly thanks in large part to the inspiring play of Bobby Jones.

In the early 1890s, you could count the number of golfers in the United States on two hands. By 1930 there were 2.25 million Americans playing the game. The number of golf courses had

"Viewing the monstrosities created on many modern golf courses which are a travesty on Nature, no golfer can but shudder for the soul of golf. It would seem that in this striving after 'novelty and innovation,' many builders of golf courses believe they are elevating the game. But what a sad contemplation! Motoring to Southampton, I pass a goodly number of new courses. As I view the putting greens it appears to me they are all built similarly, more or less of a bowl or saucer type, then built up toward the back of the green, and then scalloped with an irregular line of low, waving mounds or hillocks, the putting green for all the world resembling a pie-faced woman with a marcel wave. I do not believe any one ever saw in nature anything approaching these home-made putting greens. Then scattered over the side of the fairway are mounds modeled after haycocks or chocolate drops. The very soul of golf shrieks!"

— C.B. Macdonald

increased from 742 in 1916 to a total of 5,691 by 1930. The people of the United States were putting World War I behind them by creating better transportation, using new modes of communication and enjoying fresh forms of recreation.

Aided by rapid economic expansion, the decade between 1920 and 1930 was perhaps the most creative, daring and innovative period in American history. In no place was this more evident than in golf course architecture, where early layouts were transformed from mundane and geometrically-edged mediocrities, to grand-scaled, artistic and strategically designed masterpieces.

Sadly, golf course architecture has never come close to scaling the heights it achieved between 1911 (when C. B. Macdonald opened his ideal course on Long Island) and 1937 (when Perry Maxwell constructed the first nine holes at Prairie Dunes). A look at any of the rankings in contemporary golf magazines reveals that an overwhelming majority of the top courses were created during this Golden Age. Recently, *Golfweek* magazine resorted to splitting their rankings into two eras, operating on the valid premise that it is not possible to compare more recent design work with the classics of the past.

So how did this happen? What made the Golden Age such a special time, and why hasn't anything since measured up to the superiority of this era?

For one thing, the Great Depression and World War II played significant and understandable roles in squelching the desire of American architects to try something more bold and daring than the Golden Age work. In addition, American golfers have drastically changed their expectations for golf architecture and the game's style of play from the way it was played in the 1920s. Today, beauty and stroke play are in; strategy and match play seem to be a thing of the past.

The primary inspiration back then was still the Scottish way of playing shots close to the ground. And match play, which allowed architects more freedom to create daring holes where high scores might be racked up from time to time, had not been overtaken by stroke play as the primary method of competition. Also, luck was considered an interesting facet of the game during the Golden Age, whereas in today's game architects and superintendents are asked to do everything in their power to eliminate luck, which certainly limits the more creative design concepts.

The modern American game is also plagued by a mechanical, numbers-driven mind-set. If a layout does not stretch to well over 7,000 yards and play to a par 70 or more, it is not considered a worthy test of golf. If the course record is low and the layout is vulnerable to good scores, there must be something faulty in its design. Of course, nothing could be further from the truth. Great courses yield to skillful golf and joy can be found on any well-designed course, no matter what the scorecard says.

Today's courses are rarely designed to make golfers think. More often than not, they seem to only serve as beautiful settings in which golfers may launch shots high into the air only to land on soft, green turf. However, the primary mark of a top course during the Golden Age was not its prettiness or the color of its grass, though the Golden Age designers certainly created the most stunning bunkers and contours ever seen. But the landmark courses from the Golden Age were special then and timeless now because of their ability to test the mental as well as the physical component of the golfer's game, a concept better known as strategy.

The Golden Age came about because of many unique factors falling into place most conveniently. Time brought on a negative reaction to



CHAPTER FIVE

THE MACKENZIE SCHOOL OF DESIGN

Although the most appropriate designation for Alister MacKenzie would have been in a design school created by his first mentor, H.S. Colt, MacKenzie's remarkable portfolio requires the designation of his own school. From masterpieces like Cypress Point and Augusta National, to lesser-known but equally as brilliant designs like Pasatiempo and Crystal Downs, MacKenzie was arguably the most charismatic, original and creative golf architect of the Golden Age.

Born in Yorkshire, England in 1870, MacKenzie spent many of his summers as a young man in the highlands of Scotland. He studied at Cambridge and earned degrees in medicine, natural science, and chemistry before serving as a field surgeon in the Boer War where he developed many of his theories on camouflage. MacKenzie studied how the Boer soldiers hid themselves in the treeless fields and later applied his observations to golf course design.

Following the war, MacKenzie briefly practiced medicine in Leeds, England, and in his spare time created models of greens and bunkers while serving as Green Committee Chairman at Alwoodley Golf Club. H.S. Colt, an established architect at the time, visited the Leeds area in 1907 and stayed at MacKenzie's residence where the two evidently discovered many philosophic similarities. Colt then requested MacKenzie's assistance in the redesign of Alwoodley. They eventually worked together on several other projects and in 1914 MacKenzie achieved some fame when his submission of a par-4 drawing won first prize in C.B. Macdonald's *Country Life* magazine contest. The contest-winning hole, judged by Horace Hutchinson, Herbert Fowler, and Bernard Darwin, was later constructed by C.B. Macdonald and Seth Raynor at the now defunct Lido Golf Club on Long Island, New York.

MacKenzie's medical practice had been dissolved and he was dabbling in architecture, but war broke out and the British Army called on his services. After the war, MacKenzie formed a partnership with Colt and C.H. Alison. Just two years later, Dr. MacKenzie published his first book, *Golf Architecture*, a concise text which was one of the first to clarify the fundamentals of design.

The Colt-MacKenzie partnership deteriorated around this time and MacKenzie began to work independently. During the 1920s MacKenzie made an extended trip through South Africa, New Zealand, and Australia, designing courses on paper and leaving them to the talented Alex Russell and others to construct. Two Australian courses, Royal Melbourne's West Course and the highly touted redesign of Kingston Heath, are the most noted layouts from this period of MacKenzie's work.



Doctor Alister MacKenzie

The late '20s marked MacKenzie's most influential accomplishments in America, where he formed three notable, but brief, design partnerships. The first was with millionaire Socialist Robert Hunter, which dissolved sometime after Cypress Point was completed. MacKenzie then joined forces with H. Chandler Egan, who was fresh off a redesign of Pebble Beach Golf Links where MacKenzie had rebuilt the eighth and thirteenth greens in 1926. But that partnership created few if any designs together. Finally, MacKenzie established a Midwest partnership with Perry Maxwell. Among his finer courses in America were his collaborations with Hunter at the Valley Club of Montecito, The Meadow Club and Cypress Point, all opened by 1928. He followed those with a solo design at his new Santa Cruz home, Pasatiempo, in 1929. He was also responsible for several other interesting California designs at Union League Golf Club, Haggin Oaks Golf Course, Claremont Country Club and Sharp Park Municipal, and redesigns at Lake Merced Golf Club and California Golf Club.

MacKenzie won the design job for Augusta National Golf Club (over a disappointed Donald Ross) sometime in late 1930 and began the two-year design process. In 1933 he completed Crystal Downs Country Club in Michigan where Perry Maxwell oversaw the construction. MacKenzie also designed the University of Michigan golf course, again supervised by Maxwell, and made plans for the Ohio State courses which were built many years after his death.

MacKenzie died in Santa Cruz, California in 1934, and his ashes were spread over the Pasatiempo golf course via airplane. Living those final years in Santa Cruz beside the sixth fairway, MacKenzie wrote a second book on architecture, *The Spirit of St. Andrews*, a manuscript thought lost until almost sixty years later when his step-grandson discovered it buried in a chest full of papers. Its brilliant content serves as a perfect reminder as to why MacKenzie may have been the most complete of all the Golden Age architects.

Litehiser-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:22 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR Comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:22 AM -----



Linda Stark Litehiser
<linda.litehi@gmail.com>
10/30/2011 08:40 AM

To bill.wycko@sfgov.org
cc
Subject NAP EIR Comments

T0: Bill Wycko, Environmental Review Officer
SF Planning Department
1650 Mission St. Suite 400
San Francisco, CA 94103

Dear Mr. Wycko,

I am writing in response to the Natural Areas Plan EIR adoption. I have some serious concerns about many aspects of the proposals.

01 1. I am strongly in favor of adopting the least restrictive plan I believe this is the Maintenance Alternative. I feel that our parks and open spaces must be as "multi-use" as possible. We need to allow both passive and active recreation in our parks.

02 2. The current trend in our city planning is to provide more housing and increase density (Park Merced development is a good example), this mean we will need to have more accessible open space for recreation and park enjoyment, not less.

03 3. I have a dog and use many of the parks listed in the EIR report for dog play recreation. McLaren Park is my favorite park for off leash recreation. The park is large and has ample trails and areas for dog walkers. The park has struggled for years with perceptions of isolation and unsafe conditions. The introduction of large numbers of dog walkers in the past decade has increased park safety-- more people, more eyes on the trials-- has seen a big increase in people feeling comfortable walking alone in the park. This is also backed up by crime statistics.

04 4. I also want to comment on what I consider an obsessive zeal of some Natural Areas promoters to restrict use of large parts of our parks for recreation...as well as the removal of plants, habitat and trees to "restore" the park lands to some sort of "pristine wilderness" dating back hundreds of years. We need to look first at the needs of our citizens to enjoy the outdoors in their local parks and have as much access to them as possible. Plans that restrict "people" use of the parks is going in the wrong direction. I am also concerned about the use of pesticides use on attempts to eradicate invasive species in areas where people ad pets may be exposed.

I think my husband put it best, "a native plant is just an invasive species that got there first". We have to be sensible about how we use our open space. Urban parks need to serve their populations first.

Best regards,

Linda Stark Litehiser
78 Havelock St.
San Francisco, CA 94112
(District 11)
415-585-8005

Lock-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: People over pets
Date: 10/05/2011 09:51 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:51 AM -----

"Ken Lock" <KENWLOCK1@comcast.net>

10/05/2011 09:50 AM

To <bill.wycko@sfgov.org>
cc
Subject People over pets

01 I am sickened by the fact that there are so many people out there who believe that the needs of their pets trump the health, safety and welfare of human beings. In addition to fines, confiscation and euthanasia of offending animals, I believe that the pet owners should undergo psychiatric counseling to straighten out their misconceptions that the welfare of pets takes precedence over that of human beings. POWER TO THE PEOPLE!

Loeffler-1

RECEIVED
OCT 2 20
CITY & COUNTY OF S
PLANNING DEPARTMENT
MEA

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: Natural Areas Program:

Dear Bill:

I believe that the parks are for the people. I have lived in San Francisco since 1977 and would not want to be anywhere else. I lived near Golden Gate Park for 20 years, and was in the park every day as a dog recreation person or a bike rider. I purchased a home in the Portola neighborhood because it was near McLaren Park. I walk everyday with my dog and know the benefits for my health and my dogs. My dog is going to be 12 soon and you would not ever believe it because she runs, runs and runs in the park. If my dog (or any dog) only gets to walk as much as their owner, they are being deprived of their needed exercise. I am all for respecting natural areas of the parks, but to take more space away from people trying to recreate themselves and their dogs, does not make sense, especially in this tight financial climate , where people are looking for economical ways to recreate. Putting a well socialized dog on a leash will often make them more aggressive. There are more dogs than children in San Francisco. Dogs need to play, not be held on a leash.

01

McLaren Park is a Natural park. We who walk here, love it and come here because we love it AND because we have a dog that can RUN FREE. I would bet that most parks are used mostly by dog walkers. I can tell you that, I walk every day, and most of the people I see walking, have a dog with them. That is the largest percentage of people who use the parks.

McLaren Park is full of dog owners and dogs- please do not take away dog walking areas and do not make more stringent laws about putting dogs on leashes in more areas.

Sincerely,

Joan Loeffler

Joan Loeffler

1718 Burrows Street

San Francisco, CA 94134

415-816-1335

Lorenz-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:49 PM
To: Bock, John
Subject: Fw: Public Comment on NAP EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:51 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:27 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Public Comment on NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:28 PM -----

Henry <lorrad@gmail.com>
10/31/2011 04:57 PM

To: bill.wycko@sfgov.org
cc:
Subject: Public Coment on NAP EIR

Lorenz-1

01 I am a frequent user of the SF city parks and support the maintenance alternative. I grew up in SF and my elderly parents are long time residents of the Richmond district. We all enjoy the parks as they are and oppose significant changes in the balance of native vs non-native plants, cutting down trees and underbrush, using toxic chemicals to control invasive plants, and closing 25% of park trails. All of these have a significant impact on my family's quality of life and the

02 recreational value of the parks to my family. I also am quite concerned that limited city finances are being used for these type of obituary projects, and a financial analysis hasn't been completed to understand the cost of the programs.

03 We also frequently visit Sharp Park, and the EIR does not address the significant impact of the unsightly fence and the proposed barrier between the golf course and the berm. People have been enjoying a small portion of the lagoon for generations and that is part of the historic design of the course. Just because the walkers aren't organized is no reason to ignore the aesthetic and usage impact of this major change to the park's design and usage. From what I observe, more people use the berm for recreation than use the golf course, and the berm is just as important to aesthetics and recreation as maintaining any other historical aspect of the course.
The EIR needs to do a comprehensive evaluation of the addition of any barrier and not present it as not having any impact.

04 Also, the plan does not recognize that the city of SF has already set aside huge areas for native plant habitats in the form of the San Francisco Peninsula Watershed. This needs to be acknowledged in the EIR.
Thank you for considering my public comment.
Regards,
Henry Lorenz
San Bruno, CA

Louie-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:14 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SF Natural Areas Plan

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:14 PM ----



Denise Louie
<denise_louie_sf@yahoo.com>
10/31/2011 03:06 PM
Please respond to Denise Louie <denise_louie_sf@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject SF Natural Areas Plan

Dear Mr. Wycko,

01 Please SEPARATE out SHARP PARK from the Natural Areas Plan, so that San Francisco's nature and biodiversity are not dragged down by Sharp Park and its golf course. And please RESTORE SAN FRANCISCO'S NATURAL AREAS.

Natural areas are important to my family and me, because we believe that habitats for native plants and the wildlife that depend on certain plants have already been diminished by human impacts. We and our friends volunteer to remove invasive weeds, propagate local native plants and restore habitat in our backyards, at schools and plant nurseries. I'm so proud of my 6-year-old niece, who learned to pull oxalis at age 4 and who is now learning about habitats at school.

Thank you and have a nice day.

Sincerely,
Denise Louie
SF taxpayer, voter and volunteer

Lu-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:43 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: comment on NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:43 AM ----



kathy lu <klu7@lycos.com>
10/31/2011 11:12 AM

To bill.wycko@sfgov.org
cc scott.wiener@sfgov.org
Subject comment on NAP EIR

Dear Mr. Wycko,

01 I am writing to express my dismay regarding the Natural Areas Program (NAP) disruption to San Francisco park areas. I am a 20-year resident of San Francisco and advocate for the natural environment (NRDC). The idea of "original" habitat restoration in the midst of urban areas is, in my opinion, misguided.

For the past ten years, I have visited and enjoyed numerous local parks with my mixed breed labrador. We frequent Tank Hill, Corona Heights, Bernal Heights, Buena Vista, Twin Peaks, Lower Twin Peaks Reservoir, Duboce Park, Dolores Park, Upper Douglass, Ocean Beach, and Stern Grove, as well as GGNRA off-leash areas and the Presidio. I am aware of RPD's efforts to "rehabilitate" parks with native flora and fauna.

01 (Cont.) I am not convinced that restoration of native species will succeed, and I do not agree that the effort required to do so is a good use of limited resources. Some of the attempts to "improve" local park areas have been obvious failures. The speculative impacts of people, plants and animals described in the EIR do not provide a sound basis for large-scale land use redirection. Programs such as NAP are, in fact, highly disruptive to already-established communities of flora and fauna, which may be non-native but at this point deserve to be left in place.

If public safety is an issue, due to naturally occuring root system failure, weather, or erosion, those issues should be addressed as they arise. Resource-intensive, anticipatory, poorly researched and planned interventions are usually ill advised. In my opinion, NAP is squarely in the ill-advised category due to mechanical and chemical interventions applied in a densely populated, frequently visited region.

Please reconsider NAP in light of what exists today. There are far better uses for The City's time and money.

Thank you for your attention.

Sincerely,
K. Lu
SF, CA 94114

Lundeen-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: dog management plan
Date: 10/06/2011 09:40 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/06/2011 09:41 AM -----

Eddie Lundeen <eddie@jobetty.com>

10/06/2011 07:19 AM

To bill.wycko@sfgov.org
cc
Subject dog management plan

Dear Mr. Wycko,

01

dog parks add to a community and as a friend of mine Amy Breeze once said "dogs make people more human". I have seen this over and over again and have experienced this myself. In a world when it seems most people are texting, talking on

their smart phone or have head phones on and do not interact with each other, in dog parks you will see just the opposite. We are a little more "human" when we are at the dog park and educating park users and having guidelines for dog parks

makes a difference, just take a look at Point Isabel across the bay the largest off leash dog park in the nation managed by East Bay Regional Parks District.

Thank you,

Eddie Lundeen
Jobetty, LLC
www.jobetty.com
eddie@jobetty.com

www.the-poop.com

Lynch-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Born in SF 1957
Date: 10/04/2011 09:32 AM

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 09:32 AM -----

paul l <paul.ignatius.lynch@gmail.com>
10/03/2011 09:46 PM

To bill.wycko@sfgov.org
cc
Subject Born in SF 1957

01 Hey this dog stuff is way crazy...I am opposed to this for many good reasons. Live and let live...

Paul Lynch SF

Mace-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:25 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:25 AM -----



Shannon Mace
<shannonmace@gmail.com>
10/29/2011 05:45 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR

Mr. Wycko,

I have lived in San Francisco for the last three, years, and in the Bay Area for the last eleven. One of the things that I love about living here is how the City seems to understand the need for the people who have dogs to be able to exercise them. The City is a crowded place, and everybody needs to be able to live together. being able to exercise my dog assures that my dog is tired out every night, and not up and barking at every last noise she hears, keeping the neighborhood awake with her restlessness. It also ensures that she is happy and exercised, and not inclined to be bothered by other dogs or people when we walk on leash.

01 It seems. however, that City officials have decided that dogs destroy native plants around here. I walk my dog everyday around these parks, and I am here to tell you that that is simply not true. Responsible dog owners (and we are the majority of dog owners) don't let there animals off trails, or on native grasses or other plants. Just because you love your dog does not make you an enemy to the environment. It is also my observation that irresponsible dog owners are irresponsible people in general. They are irresponsible parents, and citizens. These people let their children, and their own actions do way more damage to the environment than any dog could do. Are you also gonig to ban children form the parks because they cause environmental damage?

02 I urge you to implement the maintenance alternative and not to implement the maximum restoration alternative or any other alternative that will take away recreational space in San Francisco city parks. San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. Less recreational space will negatively impact the quality of life in our city.

Sincerely,
Shannon Mace

Madar-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:23 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off leash areas for Dogs

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:23 AM ----



Jennifer Madar <jayarem415@me.com>
10/29/2011 09:36 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Off leash areas for Dogs

01 Please preserve the few off leash areas left in the city for our pets - it's important to us!

Jen

Sent from my iPhone 3GS

Mansbach-1

Larry Mansbach
582 Market Street, #217
San Francisco, CA 94104

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

October 28, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear Mr. Wycko:

01 This letter is written to support the decision to designate the Sharp Park golf course as a "Historical Resource".

You may recognize may name as a former employee of the Planning Department. I am also an avid golfer and enjoy playing at the beautiful Sharp Park course. It is reasonably priced and draws a wide demographic of golfers.

02 I am aware that the continued existence of Sharp Park as a golf course faces opposition. I really don't understand why as the golf course and the wildlife can and do coexist. Certainly my planning background influences my thinking that competing land uses for a specific property can be amicably accommodated.

The "Historical Resource" designation will help to preserve Sharp Park as a treasured recreational facility open to the pubic. That is the way it should be.

Thank you for allowing me to express my views.

Sincerely,

Larry Mansbach

Mar-1



Bill Wycko/CTYPLN/SFGOV
10/20/2011 04:30 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: One short weigh-in on the Natural Areas program

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/20/2011 04:30 PM ----



Glenn Mar
<gmar@mediaplex.com>
10/13/2011 11:03 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject One short weigh-in on the Natural Areas program

Sir,

01 From what I've seen, it seems obvious to me that "Maintenance Alternative" is much preferable to a "Maximum Restoration Alternative". I don't see what's inherently better about a "native habitat." We should be going for a natural one, no matter how the plants got here.

Glenn Mar – Bernal Heights
"I'm not concerned about all hell breaking loose, but that a **part** of hell will break loose... it'll be much harder to detect."
- **George Carlin**

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via return email, telephone, or fax and destroy this original transmission
and its included files without reading or saving it in any manner.
Thank you.

Masud-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Draft EIR on DPA's
Date: 10/04/2011 02:12 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 02:12 PM -----

Chuck Masud
<chuck.masud@asml.com>

10/04/2011 01:02 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Draft EIR on DPA's

Mr. Wycko,

01 I'd like to express my support for additional restrictions on DPA's and off-leash dog access.

First and foremost, our parks are for people. I for one do not feel inclined to use a park area knowing that it has been repeatedly urinated and defecated on (even of dog owners " pick up " - you can't pick up urine). If it was homeless people urinating all over, the same dog owners would be appalled but somehow when a dog does it it's different?

I also often feen unsafe as an increasing number of dogs in the parks are large agrressive breeds (pit bulls, etc).

Finally, I've seen the severe disruption to wildlife caused by off leash dogs in the GGNRA (I live at Ocean Beach) and have supported the efforts to restrict off leash dog access there as well.

Thank you for your consideration,

Chuck Masud

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Masud-1

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Mattingly-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:27 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:27 AM -----



Judith Mattingly
<jmattingly@matharch.com>
10/29/2011 12:19 PM
Please respond to jmattingly@matharch.com

To bill.wycko@sfgov.org
cc
Subject NAP plan

Dear Mr. Wycko,

I have been reading about the Natural Areas Program, and am very concerned about what I understand is happening.

01 Planting 'native' plants that then mostly die due to lack of maintenance suggests that the 'native' plants are no longer viable in the current San Francisco area climate. With climate change, plants better suited to this area seem like better options than trying to restore plants that may have been native hundreds of years ago.

02 I was also extremely concerned to read that Rec and Park is using pesticides to kill 'non-native' plants as part of the so-called restoration project. Since I like to use many of the City parks like McClaren and Glen Park with my family and dogs, I am now very worried about exposure to dangerous toxins. This is beyond reprehensible! How dare you risk the health of our citizens in order to maintain poor plant choices - all of which is being done at my (taxpayer) expense!

03 I am also very unhappy to hear that you plan to cut down scores of healthy 'non-native' trees with a desire to create a more open scrub bush and grassland environment. I understand many species have adapted to the more forested environment, including some endangered species. This seems like a very rash idea that could have unexpected domino effects. Has anyone studied any of the repercussions?

I vote no to this plan.
thank you,
Judith Mattingly
--

McAllister-1

From: Mary McAllister
To: Jessica.Range@sfgov.org
Subject: Re: Question about the Draft EIR for the Natural Areas Program
Date: 09/22/2011 08:18 AM

Ms. Range,

01 Thank you for your reply. This error will seriously compromise the public comment period because the majority of readers will be unaware of it. The error is made on page 2 of the document and is therefore prominent to readers. Few, if any readers will read the entire document to find the correct statement that does not appear until page 525 of the document, nearly the last page of the document. The error will profoundly prejudice readers to a project alternative that is not preferred by the environmental analysis.

02 I respectfully request that the document be corrected and recirculated with the correction of the error prominently displayed to readers. When the document has been corrected and recirculated, a new comment period should be announced of equal length to that first announced.

The SNRAMP was approved by the Recreation and Park Department in August 2006. The environmental review has therefore been in process for over five years. It is pointless to jeopardize the environmental review by rushing it after a long delay and a large investment of public funding in its preparation. After five years, another month is an inconsequential further investment in the process.

Without such a remedy, the public comment period will be fatally flawed and will expose the City to legal challenges to both the document and the process used to review and certify it, thereby adding to the expense of the environmental review at a time when public funding is scarce.

Please inform me of the decision to correct this serious error.

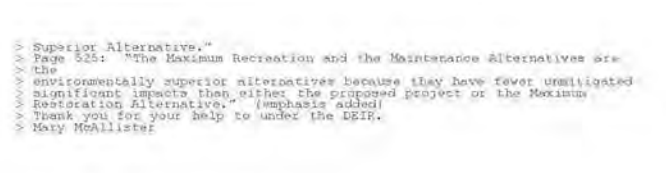
Thank you for your cooperation.

Mary McAllister

----- Original Message -----
From: <Jessica.Range@sfgov.org>
To: "Mary McAllister" <marymcallister@comcast.net>
Cc: <john.bock@tetratech.com>
Sent: Wednesday, September 21, 2011 4:16 PM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

> Ms. McAllister,
>
> You are correct in that there is a contradictory statement in the EIR. The
> discussion on page 525 contains the detailed analysis of which alternative
> is the environmentally superior alternative. The discussion on page 2 is
> incorrect and will be revised in the Comments and Responses document. I am
> copying the EIR consultant on this email to keep Tetra Tech in the loop.
>
> Thank you for pointing this out.
>
> Regards,
>
> Jessica Range, LEED AP
> San Francisco Planning Department
> Environmental Planning
> 1650 Mission Street, Suite 400
> San Francisco, CA 94103
> Phone: (415) 575-9018 / Fax: (415) 558-6409
> www.sfplanning.org
>
>
>
>
> "Mary McAllister"
> <marymcallister@c
> omcast.net> To
> "Jessica Range"
> 09/21/2011 01:26 <Jessica.Range@sfgov.org>
> PM cc
>
> Subject
> Question about the Draft EIR for
> the Natural Areas Program
>
>
>
>
>
>
>
>
>
>
> Hello Ms Range,
> I have a question about the Draft EIR for the Natural Areas Program.
> There
> are two statements in the DEIR that appear to be contradictory. Can you
> reconcile these seemingly contradictory statements? If not, can you refer
> me to someone who can?
> Page 2: "The Maximum Restoration Alternative is the Environmentally

McAllister-1



> Superior Alternative."
> Page 525: "The Maximum Recreation and the Maintenance Alternatives are
> the
> environmentally superior alternatives because they have fewer unmitigated
> significant impacts than either the proposed project or the Maximum
> Restoration Alternative." (emphasis added)
> Thank you for your help to under the DEIR.
> Mary McAllister

McAllister-2

RECEIVED
OCT 27 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Public Comment
Draft Environmental Impact Report for the Natural Resource Areas Management Plan
RE: False assumptions about fire hazards

The Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) makes assumptions regarding fire hazards in San Francisco for which it provides no scientific or experiential evidence:

1. **That native vegetation is less flammable than non-native vegetation**
2. **That thinning trees will reduce fire hazard**

These assumptions are false and we will provide scientific and experiential evidence that they are false. Unless the final EIR can provide scientific evidence and/or actual experience to support these assumptions in the DEIR, these statements regarding fire hazards must be revised to be consistent with available evidence.

1. **Non-native vegetation, including eucalyptus is NOT inherently more flammable than native vegetation**

The DEIR makes the following claims:

"...maximize indigenous vegetation for fire control." (DEIR, page 78)

"...vegetation with high fire hazard ratings such as broom and eucalyptus." (DEIR, page 111,396)

01 *"...replacing highly flammable eucalyptus trees with more fire resistant species."* (DEIR, page 410)

Fear of fire has fueled the heated debate about native plant restorations in the Bay Area. Native plant advocates want the public to believe that the non-native forest is highly flammable, that its destruction and replacement with native landscapes would make us safer. Nothing could be further from the truth. The fact is that the forest—whether it is native or non-native—is generally less flammable than the landscape that is native to California. In the specific case of the Sutro Forest in San Francisco, this general principal is particularly true: the existing forest is significantly less flammable than the landscape that is native to that location.

The "Mount Sutro Management Plan" was written by UCSF and is available on their website. It describes "native" Mount Sutro as follows: "In the 1800s, **like most of San Francisco's hills**, Mount Parnassus [now known as Mount Sutro] was covered predominantly with coastal scrub chapparal [sic], consisting of native grasses, wildflowers, and shrubs..." (page 4) (emphasis added)

A Natural History of California[1] tells us that chaparral is not only highly flammable, but is in fact dependent upon fire to sustain itself:

> "Chaparral...is...most likely to burn. The community has evolved over millions of years in association with fires, and in fact **requires fire for proper health and vigor.** Thus it is not surprising that most chaparral plants exhibit adaptations enabling them to recover after a burn...**Not only do chaparral plants feature adaptations that help them recover after a fire, but some characteristics of these plants, such as fibrous or ribbonlike shreds on the bark, seem to encourage fire.** Other species contain volatile oils. In the absence of fire, a mature chaparral stand may become senile, in which case growth and reproduction are reduced. " (emphasis added)

[1] Allan Schoenherr, UC Press, 1992, page 341

1

McAllister-2

The local chapter (Yerba Buena) of the California Native Plant Society acknowledges the value of fire to restore and maintain native plant populations. A wildfire fire on San Bruno Mountain in native grassland and coastal scrub "consumed about 300 acres" in June 2008, according to an article on their website[2]. The article reports that

> "Fire is an adaptive management tool that, along with natural grazing and browsing, has been missing in promoting healthy grasslands that once covered much of the lower elevations of California...The threats to native grasslands are invasions of non-native grasses and forbs, and succession by native and invasive shrubs. Fortunately the fire scrubbed the canyons pretty clean of just about everything. This gives the land a shot of nutrients to recharge the soil and awaken the seedbanks that have long been lying dormant."

The fire on Angel Island in October 2008, demonstrates that native grassland is more flammable than the non-native forest. According to an "environmental scientist" from the California state park system, 80 acres of eucalyptus were removed from Angel Island 12 years ago in order to restore native grassland. Only 6 acres of eucalyptus remain.[3] The fire that burned 400 acres of the 740 acres of Angel Island in 2008 stopped at the forest edge: "At the edge of the burn belt lie strips of intact tree groves...a torched swath intercut with untouched forest." [4] It was the native grassland and brush that burned on Angel Island and the park rangers were ecstatic about the beneficial effects of the fire: "The shrubs—coyote bush, monkey flower and California sage—should green up with the first storms...The grasses will grow up quickly and will look like a golf course." Ironically, the "environmental scientist" continues to claim that the eucalyptus forest was highly flammable, though it played no part in this fire and there was no history of there ever having been a fire in the eucalyptus during the 100 years prior to their removal.

01 (Cont.)

Unfortunately, the 1991 fire in the Oakland hills has enabled native plant advocates to maintain the fiction that eucalyptus is highly flammable. And in that case there is no doubt that they were involved in that devastating fire. However, there were factors in that fire that are not applicable to San Francisco. The climate in San Francisco is milder than the climate in the East Bay because of the moderating influence of the ocean. It is cooler in the summer and warmer in the winter. There are never prolonged, hard freezes in San Francisco that cause the eucalyptus to die back, creating dead, flammable leaf litter. The 1991 fire in the Oakland hills occurred in the fall, following a hard winter freeze that produced large amounts of flammable leaf litter. In fact, there were several fires in the Oakland hills in the 20th century. Each followed a hard winter causing vegetation to die back.

The 1991 Oakland hills fire started in grass, spread to dry brush, and was then driven by the wind to burn everything in its path. The fire burned native plants and trees as readily as eucalyptus.[5]

When it is hot and dry in the Oakland hills, as it was at the time of the 1991 fire, it is cool and damp in San Francisco. Fogs from the ocean drift over the eucalyptus forests, condensing on the leaves of the trees, falling to the ground, moistening the leaf litter.[6] When the heat from the land meets the cool ocean air, the result is the fog that blankets San Francisco during the summer. These are not the conditions for fire ignition that exist in the Oakland hills.

UCSF applied for a FEMA grant to fund its project to destroy the eucalyptus forest and restore native chaparral, based on its claim that the eucalyptus forest is highly flammable. In its letter of October 1, 2009 (obtained by FOIA request), FEMA raised questions about UCSF's claim of fire hazard. (See Attachment A) FEMA asked UCSF to explain how fire hazard would be reduced by eliminating most of the existing forest, given that **reducing moisture on the forest floor by**

[2] http://www.cnps-yerbabuena.org/experience/other_articles.html#pageTop
[3] "Rains expected to help heal Angel Island," SF Chronicle, October 14, 2008
[4] "After fire, Angel Island is a park of contrasts," SF Chronicle, October 15, 2008
[5] FEMA Technical Report on 1991 Oakland Fire, http://www.usfa.dhs.gov/downloads/pdf/publications/tr-060.pdf
[6] Gilliam, Harold, The Weather of the San Francisco Bay Area, UC Press, 2002

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eliminating the tall trees that condense the fog from the air could increase the potential for ignition. FEMA also asked UCSF to provide "scientific evidence" to support its response to this question. Rather than answer this and other questions, UCSF chose to withdraw its FEMA application.

The reputation of eucalyptus as a fire hazard is also based on the assumption that oils in its leaves are flammable. The National Park Service reports on its website that the leaves are, in fact, fire resistant: "The live foliage [of the eucalyptus] proved fire resistant, so a potentially catastrophic crown fire was avoided." [7]

01 (Cont.)

The predominant species of eucalyptus in California, the blue gum eucalyptus (*E. globulus*) is native to Tasmania. Scientists at the University of Tasmania conducted laboratory experiments on the plants and trees in the Tasmanian forest to determine the relative flammability of their native species. The blue gum eucalyptus (*E. globulus)* is included in this study. The study reports that, "*E. globulus* leaves, both juvenile and adult, presented the greatest resistance [to ignition] of all the eucalypts studied. In this case, leaf thickness was important as well as the presence of a waxy cuticle." Also, in a table entitled "Rate of flame front movement," the comment for *E. globulus* leaves is "resistant to combustion."[8] In other words, **despite the oil content in the leaf, its physical properties protect the leaf from ignition**.

Even if oils were a factor in flammability, there are many native plants that are equally oily, such as the ubiquitous coyote brush and bays. According to Cornell University studies, essential/volatile oils in blue gum eucalyptus leaves range from less than 1.5 to over 3.5%. [9] The leaves of native California bay laurel trees contain 7.5% of essential/volatile oils, **more than twice the amount of oil in leaves of blue gums.**[10]

Likewise, non-native broom is not more flammable than its native counterpart in the chaparral plant community, coyote brush. The leaves of both shrubs are small, the fine fuel that ignites more readily than larger leaves and branches. But the leaves of native coyote brush contain oil not found in non-native broom. And the branches of broom are green to the ground, unlike the branches of coyote brush which become woody thickets with age. Broom therefore contains more moisture than coyote brush, which reduces its combustability.

Fire is an essential feature of the landscape that is native to California.[11] Destroying a non-native forest in order to create a native landscape of grassland and scrub will not make us safer.

2. Thinning the non-native forest will NOT reduce fire hazard

The DEIR makes the following claim:

> *"...timber thinning would increase the space between trees, reducing the ability of a fire to rapidly spread."* (DEIR, page 396)

02

Most fires in California are hot, wind-driven fires in which everything burns. The composition of the fuel load in a wind-driven fire is irrelevant. Everything in its path will burn.[12] The 1991 fire in the Oakland hills was an example of such a fire. According to the FEMA technical report on that fire, both native and non-native vegetation, as well as about 3,800 homes burned in that fire.

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[7] http://www.firescape.us/coastliveoaks.pdf
[8] Dickinson, K.J.M. and Kirkpatrick, J.B., "The flammability and energy content of some important plant species and fuel components in the forests of southeastern Tasmania," Journal of Biogeography, 1985, 12: 121-134.
[9] http://www.ansci.cornell.edu/plants/medicinal/eucalyp.html
[10] http://www.paleotechnics.com/Articles/Bayarticle.html
[11] Sugihara, Neil, Fire in California's Ecosystems, UC Press, 2006
[12] Keeley, J, and Fotheringham, "Impact of past, present, and future fire regimes on North American Mediterranean shrublands, pages 218-262 in Veblen, et al., editors, Fire and climate change in temperate ecosystems of the Western Americas, 2003.

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Windbreaks are therefore one of the few defenses in a wind-driven fire. For that reason, in its letter of October 1, 2009 (see attachment A), FEMA asked UCSF to explain how the destruction of the tall trees on Mount Sutro would reduce fire hazard. FEMA noted that **eliminating the windbreak that the tall trees provide has the potential to enable a wind-driven fire to sweep through the forest unobstructed**. FEMA also asked UCSF to provide "scientific evidence" to support its answer to this question. We repeat, UCSF chose to withdraw its application for FEMA funding of its project rather than answer this question.

In 1987, 20,000 hectares burned in a wildfire in the Shasta-Trinity National Forest. The effects of that fire on the forest were studied by Weatherspoon and Skinner of the USDA Forest Service. They reported the results of their study in Forest Science.[13] **They found the least amount of fire damage in those sections of the forest that had not been thinned or clear-cut.** In other words, the more trees there were, the less damage was done by the fire. They explained that finding:

> "The occurrence of lower Fire Damage Classes in uncut stands [of trees] probably is attributable largely to the absence of activity fuels [e.g., grasses] and to the relatively closed canopy, which reduces insolation [exposure to the sun], wind movement near the surface, and associated drying of fuels. Conversely, opening the stand by partial cutting adds fuels and creates a microclimate conducive to increased fire intensities."

02 (Cont.)

In other words the denser the forest,

- The less wind on the forest floor, thereby slowing the spread of fire
- The more shade on the forest floor.
  - The less flammable vegetation on the forest floor
  - The more moist the forest floor

All of these factors combine to reduce fire hazard in dense forest. Likewise, in a study of fire behavior in eucalyptus forest in Australia, based on a series of experimental controlled burns, wind speed and fire spread were significantly reduced on the forest floor.[14] **Thinning the forest will not reduce fire hazard. In fact, it will increase fire hazard.**

The DEIR also says that fire hazard will be reduced by removing dead trees:

> *"Removed trees would include those that are diseased and dying, thereby reducing easily combustible fuel loads."* (DEIR, page 396)

We do not dispute that dead trees are more flammable than living trees because they contain less moisture, one of the key variables in combustability. However, we have established in another comment that the claim that only dead and dying trees will be removed is contradicted by the SNRAMP which the DEIR is supposedly evaluating. There is no evidence that the trees that will be removed are dead or dying (see Attachment B). Furthermore, if the predictions of experts on Sudden Oak Death prove to be true, 90% of the native oak woodland which SNRAMP proposes to expand will be dead and highly flammable within 25 years.[15]

[13] Weatherspoon, C.P. and Skinner, C.N., "An Assessment of Factors Associated with Damage to Tree Crowns from the 1987 Wildfires in Northern California," Forest Science, Vol. 41, No 3, pages 430-453
[14] Gould, J.S., et. al., Project Vesta: Fire in Dry Eucalyptus Forests, Commonwealth Scientific and Industrial Research Organisation and Department of Environment and Conservation, Western Australia, November 2007
[15] Fimrite, Peter, "Sudden oak death cases jump, spread in the Bay Areas," San Francisco Chronicle, October 2, 2011

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Conclusion

Unless scientific evidence can be provided to support statements in the DEIR regarding fire hazard, the final EIR must be corrected to reflect the scientific and experiential evidence that refutes it:

- **Native vegetation is not inherently less flammable than non-native vegetation, including eucalyptus**
- **Thinning the forest will not reduce fire hazards.**

Mary McAllister
marymcallister@comcast.net

October 26, 2011

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Attachment B

Excerpt from Public Comment
Draft Environmental Impact Report for the Natural Resource Areas Management Plant
RE: Environmental Impact of Destroying Trees

2. The trees that have been designated for removal are NOT dead, dying, or hazardous

We have many reasons to challenge the truth of the claim in the DEIR that only dead, dying, hazardous or unhealthy trees will be removed by the implementation of SNRAMP:

- SNRAMP documents that young, non-native trees less than 15 feet tall will be removed from the "natural areas." By definition these young trees are not dead or unhealthy because they are young and actively growing.
- SNRAMP did **not** designate only dead, dying, hazardous trees for removal. Trees have been selected for removal only in so far as they support the goal of expanding and enhancing areas of native plants, especially grasslands and scrub.
- The predominant non-native tree in San Francisco, blue gum eucalyptus lives in Australia from 200-400 years, depending upon the climate. (Jacobs 1955, page 67) In milder climates, such as San Francisco, the blue gum lives toward the longer end of this range. The trees over 15 feet tall that have been designated for removal are almost exclusively blue gum.
- However, there are many natural predators in Australia that were not imported to California. It is possible that the eucalypts will live longer here: "Once established elsewhere, some species of eucalypts are capable of adjusting to a broader range of soil, water, and slope conditions than in Australia...once released from inter-specific competitions and from native insect fauna..." (Doughty 2000, page 6)
- The San Francisco Presidio's Vegetation Management Plan reports that eucalypts in the Presidio are about 100 years old and they are expected to live much longer: "blue gum eucalyptus can continue to live much longer..." (Vegetation Management Plan, page 28)
- The Natural Areas Program has already destroyed hundreds of non-native trees in the past 15 years. We can see with our own eyes that these trees were not unhealthy when they were destroyed.
- Neither written plans nor EIRs are required to remove hazardous trees. The City has the right and an obligation to remove hazardous trees when they are identified as such by qualified arborists.

Trees have been designated for destruction solely to benefit native plants

The DEIR claims that only dead, dying, hazardous trees will be removed from the natural areas. This claim is contradicted by the SNRAMP that the DEIR is supposedly evaluating. Not a single explanation in the SNRAMP of why trees have been selected for removal is based on the health of the trees.

- Lake Merced: The explanation for removing 134 trees is "To maintain and enhance native habitats, it is necessary to selectively remove some trees."
- Mt. Davidson: The explanation for removing 1,600 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas. Coastal scrub and reed grass communities require additional light to reach the forest floor in order to persist "
- Glen Canyon: The explanations for removing 120 trees are: "to help protect and preserve the native grassland" and "to increase light penetration to the forest floor"

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- Bayview Hill: The explanation for removing 505 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas."
- McLaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."
- Interior Greenbelt: The explanation for removing 140 trees is: "In order to enhance the seasonal creek and sensitive species habitat that persists in the urban forest understory, invasive blue gum eucalyptus trees will be removed in select areas."
- Dorothy Erskine: The explanation for removing 14 trees is: "In order to enhance the grassland and wildflower community, removal of some eucalyptus trees is necessary."

03

In not a single case does the management plan for the Natural Areas Program corroborate the claim made in the DEIR that only dead, dying, diseased, or hazardous trees will be removed. In every case, the explanation for the removal of eucalypts is that their removal will benefit native plants, specifically grassland and scrub. In other words, the explanation provided by the DEIR for tree removals in the natural areas is a misrepresentation of the SNRAMP which it is supposedly evaluating.

<u>The trees that have already been destroyed in the "natural areas" were NOT dead, dying, or diseased.</u>

Although it's interesting and instructive to turn to the written word in SNRAMP for the Natural Areas Program to prove that the DEIR is based on fictional premises, the strongest evidence is the track record of tree removals in the past 15 years. The trees that have been destroyed in the "natural areas" in the past 15 years were NOT dead, dying, or diseased.

Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub.

Mary McAllister

October 24, 2011

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Public Comment
Draft Environmental Impact Report for Natural Resource Areas Management Plan
RE: Environmental Impact of Destroying Trees

The Significant Natural Resource Areas Management Plan (SNRAMP) which is evaluated by the Draft Environmental Impact Report (DEIR) documents plans to destroy thousands of trees in the parks managed by the City of San Francisco in San Francisco and Pacifica. This planned tree destruction will release significant amounts of carbon dioxide into the atmosphere. The DEIR reaches the conclusion that the removal of these trees will have no impact on the environment and will not violate California State law regarding greenhouse gas emissions (AB32). This conclusion is based on several fictional premises:

1. That all the trees that are removed will be replaced within the natural areas by an equal number of trees that are native to San Francisco.
2. That only dead, dying, hazardous, or unhealthy trees will be removed.
3. That these tree removals will not result in the loss of carbon stored in the urban forest

This comment will document that these are fictional premises. They are:

- Contradicted by the horticultural requirements of trees native to San Francisco
- Contradicted by the actual plans as documented by SNRAMP
- Contradicted by the actual health status of the existing forest
- Contradicted by the actual past practices of the Natural Areas Program with respect to tree removals
- Contradicted by the science of the terrestrial carbon cycle

1. Trees destroyed by implementation of SNRAMP cannot/will not be replaced

01

The DEIR claims that all trees removed in San Francisco will be replaced "one-to-one" by trees that are native to San Francisco. The SNRAMP supports this fictional premise by falsely reducing the number of trees that will be removed:

- By not counting trees less than 15 feet tall which it intends to destroy, despite the fact that the US Forest Service survey of San Francisco's urban forest reports that the trunks of most (51.4%) trees in San Francisco are less than 6 inches in diameter at breast height, the functional equivalent of trees less than 15 feet tall. (Nowak 2007)
- By not counting the hundreds of healthy rees that have already been destroyed by the Natural Areas Program in "natural areas" at Tank Hill, Pine Lake, Lake Merced, Bayview Hill, Glen Canyon parks, etc., prior to the approval of SNRAMP. (see pages 5-8 for details)

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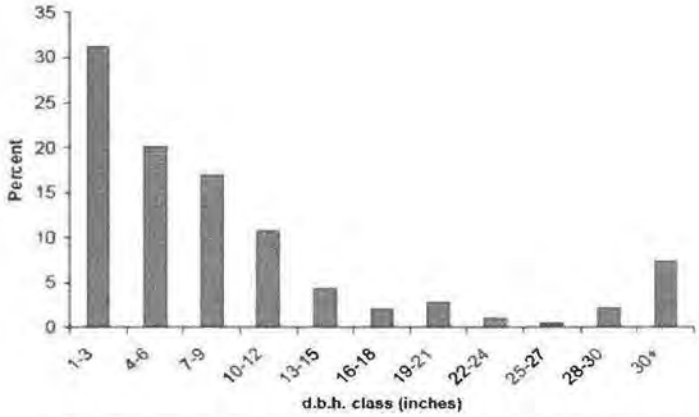

Size of trees in San Francisco's Urban Forest, US Forest Service Survey

However, even artificially reducing the number of trees removed by the implementation of SNRAMP does not make "one-to-one" replacement a realistic goal.

The natural history of trees in San Francisco

01 (Cont.)

The primary reason why we know that it will not be possible to grow native trees in the natural areas in San Francisco is that there were few native trees in San Francisco before non-native trees were planted by European settlers in the late 19th century. San Francisco's "Urban Forest Plan" which was officially adopted by the Urban Forestry Council in 2006 and approved by the Board of Supervisors, describes the origins of San Francisco's urban forest as follows:

> "**No forest existed prior to the European settlement of the city** and the photographs and written records from that time illustrate a lack of trees...Towards the Pacific Ocean, one saw vast dunes of sand, moving under the constant wind. While there were oaks and willows along creeks, San Francisco's urban forest had little or nothing in the way of native tree resources. The City's urban forest arose from a brief but intense period of afforestation, which created forests on sand without tree cover."



San Francisco in 1806 as depicted by artist with von Langsdorff expedition

2

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The horticultural reality of trees native to San Francisco

More importantly, the reality is that even if we want to plant more native trees in San Francisco, they will not grow in most places in San Francisco because they do not tolerate San Francisco's climate and growing conditions: wind, fog, and sandy or rocky soil, etc. We know that for several reasons:

- There are few native trees in San Francisco now. According to the US Forest Service survey of San Francisco's urban forest only two species of tree native to San Francisco were found in sufficient numbers to be counted in the 194 plots they surveyed: Coast live oak was reported as .1% (one-tenth of one percent) and California bay laurel 2.1% of the total tree population of 669,000 trees. (Nowak 2007)
- The City of San Francisco maintains an official list of recommended species of trees for use by the Friends of the Urban Forest and the Department of Public Works. (CCSF Resolution No. 003-11-UFC)
  - The most recent list (2011) categorizes 27 species of trees as "Species that perform well in many locations in San Francisco." There is not a single native tree in that category.
  - Thirty-six tree species are categorized as "Species that perform well in certain locations with special considerations as noted." Only one of these 36 species is native to San Francisco, the Coast live oak and its "special considerations" are described as "uneven performer, prefers heat, wind protection, good drainage."
  - The third category is "Species that need further evaluation." Only one (Holly leaf cherry) of the 22 species in that category is native to San Francisco.
- Finally, where native trees have been planted by the Natural Areas Program (NAP) to placate neighbors who objected to the removal of the trees in their neighborhood parks, the trees did not survive. (see page 6 for details)

01 (Cont.)

SNRAMP documents that there is no intention to plant "replacement" trees

In fact, the SNRAMP documents that the Natural Areas Program (NAP) does not intend to plant replacement trees for the thousands of trees it proposes to destroy.

- The majority of trees over 15 feet tall designated for removal by SNRAMP (15,000 trees) are in Sharp Park. The DEIR acknowledges that these trees will not be replaced because this area will be converted to native coastal scrub.
- The DEIR makes no commitment to replace the trees less than 15 feet tall that will be removed but are not quantified by SNRAMP because they are not defined by SNRAMP as trees. There are probably thousands of trees less than 15 feet tall in the "natural areas" that will be removed and not replaced.
- Because most of the natural areas are rock outcrops and sand hills that were treeless prior to the arrival of Europeans, there is little acreage within the "natural areas" that is capable of supporting trees that are native to San Francisco: "Two native forest series...comprise approximately 17 acres, 2 percent of total vegetation [in the natural areas]" (SNRAMP, Setting, page 3-11). Obviously, it would not be physically possible to plant thousands of native trees in the small areas in which they would be able to survive.
- SNRAMP documents the intention to convert all MA-1 and MA-2 areas, comprising 58% of the total acres of "natural areas" to grassland and scrub: "Within MA-1 and MA-2, these sites [of tree removals] would then be replanted with native shrub and grassland species." (SNRAMP, Forestry Statement, page F-3)
- Only MA-3 areas, comprising 42% of total acreage will continue to support the urban forest: "Within MA-3, urban forest species would be planted or encouraged (see Section 5, GR-15)" (SNRAMP, Forestry Statement, page F-3). However, the Forestry Statement also documents the intention to thin the urban forest in MA-3

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areas to a basal area of 60-200 trees per acre (our estimate based on the formula for basal area in SNRAMP). That represents a significant thinning of the urban forest when compared to the tree density of the eucalyptus forest on Mount Sutro documented by UCSF as 740 trees per acre.

- The "Urban Forestry Statements" in Appendix F of the management plan contain the long-term plans for the natural areas in which trees will be destroyed. All but one of these specific plans is some variation of "conversion of some areas of forest to scrub and grasslands." The exception is Corona Heights for which the plans are "converted gradually to oak woodland." The Corona Heights natural area is 2.4 acres, making it physically impossible to plant thousands of oaks in that location.
- "Oak woodland" is the only vegetation goal in SNRAMP which foresees the planting of native trees. Yet, the DEIR says nothing about the potential for Sudden Oak Death (SOD) to decimate the oak population in the San Francisco Bay Area. Ironically, the DEIR acknowledges that one of the comments on the Initial Study raised this question. Yet, despite that question, the DEIR remains silent about the potential for oaks to be killed by SOD. Since the publication of the Initial Study, our local expert (Matteo Garbelotto, UC Berkeley) has reported the rampant spread of SOD and its deadly consequences: "...experts predict as many as 90% of California live oaks and black oaks could die from the disease within 25 years." [1]

01 (Cont.)

2. The trees that have been designated for removal are NOT dead, dying, or hazardous

We have many reasons to challenge the truth of the claim in the DEIR that only dead, dying, hazardous or unhealthy trees will be removed by the implementation of SNRAMP:

- SNRAMP documents that young, non-native trees less than 15 feet tall will be removed from the "natural areas." By definition these young trees are not dead or unhealthy because they are young and actively growing.
- SNRAMP did **not** designate only dead, dying, hazardous trees for removal. Trees have been selected for removal only in so far as they support the goal of expanding and enhancing areas of native plants, especially grasslands and scrub.
- The predominant non-native tree in San Francisco, blue gum eucalyptus lives in Australia from 200-400 years, depending upon the climate. (Jacobs 1955, page 67) In milder climates, such as San Francisco, the blue gum lives toward the longer end of this range. The trees over 15 feet tall that have been designated for removal are almost exclusively blue gum.
- However, there are many natural predators in Australia that were not imported to California. It is possible that the eucalypts will live longer here: "Once established elsewhere, some species of eucalypts are capable of adjusting to a broader range of soil, water, and slope conditions than in Australia...once released from inter-specific competitions and from native insect fauna..." (Doughty 2000, page 6)
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- The Natural Areas Program has already destroyed hundreds of non-native trees in the past 15 years. We can see with our own eyes that these trees were not unhealthy when they were destroyed.
- Neither written plans nor EIRs are required to remove hazardous trees. The City has the right and an obligation to remove hazardous trees when they are identified as such by qualified arborists.

02

[1] Fimrite, Peter, "Sudden oak death cases jump, spread in the Bay Areas," San Francisco Chronicle, October 2, 2011

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02
(Cont.)

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- Bayview Hill: The explanation for removing 505 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-grassland ecotone, invasive blue gum eucalyptus trees will be removed in select areas."
- McLaren: The explanation for removing 805 trees is: "In order to enhance the sensitive species habitat that persists in the urban forest understory and at the forest-scrub-grassland ecotone, invasive trees will be removed in select areas. Coastal scrub and grassland communities require additional light to reach the forest floor in order to persist."
- Interior Greenbelt: The explanation for removing 140 trees is: "In order to enhance the seasonal creek and sensitive species habitat that persists in the urban forest understory, invasive blue gum eucalyptus trees will be removed in select areas."
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02 (Cont.)

Hundreds of trees have been removed in the natural areas since the Natural Areas Program began 15 years ago. We'll visit a few of those areas with photographs of those destroyed trees to prove that healthy, young non-native trees have been destroyed. This track record predicts the future: more healthy young trees will be destroyed in the future for the same reason that healthy young trees were destroyed in the past, i.e., because their mere existence is perceived as being a barrier to the restoration of native grassland and scrub.



Some of the approximately 1,000 girdled trees on Bayview Hill, 2010

02 (Cont.)

- The first tree destruction by the Natural Areas Program and/or its supporters took the form of girdling about 1,000 healthy trees in the natural areas about 10 to 15 years ago. Girdling a tree prevents water and nutrients from traveling from the roots of the tree to its canopy. The tree dies slowly over time. The larger the tree, the longer it takes to die. None of these trees were dead when they were girdled. There is no point in girdling a dead tree.



One of about 50 girdled trees on Mt. Davidson, 2003

02 (Cont.)

- Many trees that were more easily cut down without heavy equipment were simply destroyed, sometimes leaving ugly stumps several feet off the ground.

6

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Stumps of small trees destroyed on Bayview Hill, 2002

02
03
(Cont.)

- About 25 young trees were destroyed on Tank Hill about 10 years ago. We can see from those that remain that the trees—which were planted around the same time—were young. They don't look particularly healthy in the picture because they were severely limbed up to bring more light to the native plant garden for which the neighboring trees were destroyed. All of the trees would have been destroyed if the neighbors had not come to their defense. About 25 oaks were provided to the neighbors by NAP to plant as "replacement" trees. Only 5 are still alive. Only one has grown. The remainder are about 36" tall and their trunks about 1" in diameter, as when they were planted.



Tank Hill, 2002

02
(Cont.)

- About 25 young trees were destroyed at the west end of Pine Lake to create a native plant garden that is now a barren, weedy mess surrounded by the stumps of the young trees that were destroyed.

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West end of Pine Lake, July 2011

02 (Cont.)

- About 25 trees of medium size were destroyed at the southern end of Islais Creek in Glen Canyon Park about 6 years ago in order to create a native plant garden. They were replaced with shrubs.
- Many young trees were recently destroyed in the "natural area" called the Interior Greenbelt. These trees were destroyed in connection with the development of a trail, which has recently become the means by which the Natural Areas Program has funded tree removals with capital funding.



Interior Greenbelt, 2010

02 (Cont.)

There was nothing wrong with any of these trees before they were destroyed. Their only crime was that they were not native to San Francisco. There are probably many other trees that were destroyed in the natural areas in the past 15 years. We are reporting only those removals of which we have personal knowledge.

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3. The implementation of SNRAMP will result in a significant loss of stored carbon

The urban forest of San Francisco stores 196,000 tons of carbon and adds to that accumulated store of carbon at an annual rate of 5,200 tons per year according to the US Forest Service survey. (Nowak 2007) About 25% of the annual rate of sequestration and the accumulated storage of carbon are accomplished by the blue gum eucalyptus, the chief target for destruction by SNRAMP. When a tree is destroyed, it releases the carbon that it has accumulated throughout its lifetime into the atmosphere as Carbon Dioxide (CO_2) as it decays. Carbon Dioxide is the predominant greenhouse gas that is causing climate change.

Since greenhouse gases are regulated in California by a law that commits the state to reduce greenhouse gas emissions, the Draft Environmental Impact Report (DEIR) for the Natural Areas Program (NAP) goes to great lengths to make the case that destroying thousands of trees will not violate California law. The DEIR's claim that the implementation of SNRAMP will not contribute to greenhouse gas emissions is based on:

03

- Fabricating facts by misrepresenting scientific studies. The facts are:
  - Grassland in San Francisco does NOT lower ground temperature
  - Grassland does NOT store more carbon than forests
- The DEIR confuses the RATE of carbon sequestration with the total accumulated carbon storage in the plant or tree as it continues to grow. While a young tree may sequester carbon at a faster RATE while it is growing rapidly that does not alter the fact that a mature tree stores more carbon over its lifetime as the carbon accumulates.
- Replacing mature trees with ANY plant or tree will never compensate for the loss of the carbon stored in the trees that will be destroyed.
- Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in mature trees

Grassland in the San Francisco Bay Area does NOT lower ground temperature

The DEIR claims:

> *"According to a study presented at the American Geophysical Union's meeting,* ***grasslands above 50 degrees latitude*** *reflect more sun than forest canopies, thereby keeping temperatures lower by an average of 0.8 degree Celsuis."* (DEIR, page 457, cited study[2])

This statement in the EIR does not apply to the San Francisco Bay Area and the reference used to support it misrepresents the cited study:

[2] Jha, Alok. 2006. The Guardian. "Planting Trees to Save Planet is Pointless, Say Ecologists." Friday, December 15, 2006.

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04

- **The entire continental United States, including the San Francisco Bay Area, is below 50 degrees latitude. In other words, this statement—even if it were true—does not apply to the San Francisco Bay Area.**



03 (Cont.)

- The statement is taken out of the context of the article. The entire sentence in which this statement appears actually says, "Grassland or **snowfields**, however, reflected more sun, keeping temperatures lower. **Planting trees above 50 degrees latitude, such as in Siberia, could cover tundras normally blanketed in heat-reflecting snow."** It does not snow in the San Francisco Bay Area. Therefore, this statement does not apply to the San Francisco Bay Area.
- The article being quoted by the DEIR is NOT the scientific study, but rather a journalistic article in The Guardian, a newspaper in England, in which the author of the study has been misquoted and his study misrepresented.
- The day after this article appeared in The Guardian (and also in the New York Times), The Guardian published an op-ed (which also appeared in the New York Times) by the author of the scientific study, Ken Caldeira in which he objected to the misrepresentation of his study:

  "I was aghast to see our study reported under the headline "Planting trees to save planet is pointless, say ecologists." (December 15). Indeed, our study found that ***preserving and restoring tropical forests is doubly important****, as they cool the earth both by removing the greenhouse gas carbon dioxide from the atmosphere and by helping produce cooling clouds. We did find that preserving and restoring forests outside the tropics does little or nothing to help slow climate change, but nevertheless* ***these forests are a critical component of Earth's biosphere and great urgency should be placed on preserving them."*** (Caldeira 2006)

As if this misrepresentation of the facts weren't bad enough, we find in Appendix A of the DEIR that this isn't the first time that someone has informed the authors of the DEIR that this statement is not accurate. One of the public comments submitted in 2009 in response to the Initial Study quotes Ken Caldeira's op-ed in the New York Times. Yet, two years later, the DEIR persists in repeating this misrepresentation of Professor Caldeira's (Stanford University) research.

Grassland does NOT store more carbon than forests

The DEIR also claims:

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"Research studies have concluded that grassland and scrub habitat could act as a significant carbon sink." (DEIR, page 457, cited studies[3])

Once again, **the cited study does not support the statement in the EIR:**

- Again, the statement has been taken out of context. The entire sentence reads, "We conclude that grasslands can act as a significant carbon sink **with the implementation of improved management.**" This sentence appears in the abstract for the publication. (Conant 2001)
- One wonders if the authors of the DEIR read the entire article or just the abstract. The point of the study is that land management techniques such as fertilization, irrigation, introduction of earthworms, plowing and fallow methods, etc., can improve the sequestration of carbon in the soil of croplands and pastures. This is obviously irrelevant to the Natural Areas Program, which is not engaged in agriculture or pasturage.
- However, the study is relevant in one regard. It reports that **when forest is converted to grassland, no amount of "management techniques" compensates for the loss of the carbon in the trees that are destroyed**:

  "Though more than half of the rain forest conversion studies (60%) resulted in increased soil Carbon content, ***net ecosystem Carbon balance...decreased substantially due to the loss of large amounts of biomass carbon.***" (Conant 2001)

03 (Cont.)

The second study cited in support of the claim about carbon storage in grassland reports that increased levels of Carbon Dioxide **in the air** increases carbon accumulation in the soil. This study tells us nothing about the relative merits of grassland and forests with respect to carbon storage. (Hu 2001) Another study reports a similar relationship between global warming and carbon storage in trees: "...warmer temperatures stimulate the gain of carbon stored in trees as woody tissue, partially offsetting the soil carbon loss to the atmosphere." (Melillo 2011)

The DEIR confuses the RATE of carbon sequestration with the total accumulated storage over the life of the tree

The DEIR claims that because a young tree, growing at a faster rate than a mature tree, sequesters carbon at a faster rate than a mature tree, it follows that replacing mature trees with young trees will result in a net carbon benefit. This is NOT a logical conclusion, as illustrated by this graph from the US Forest Service survey of San Francisco's urban forest (Nowak 2007):

[3]Conant, L., Paustian K, and Elliot E. 2001. "Grassland Management and Conversion into Grassland Effects on Soil Carbon." Natural Resource Ecology Laboratory. Colorado State University. Fort Collins, USA. Sponsor: US Environmental Protection Agency, Ruminant Livestock Efficiency Program. 2001, and

Hu, S., Chapin, Firestone, Field, Chiariello. 2001. "Nitrogen limitation of microbial decomposition in a grassland under elevated C02," Nature 409: 188-191.

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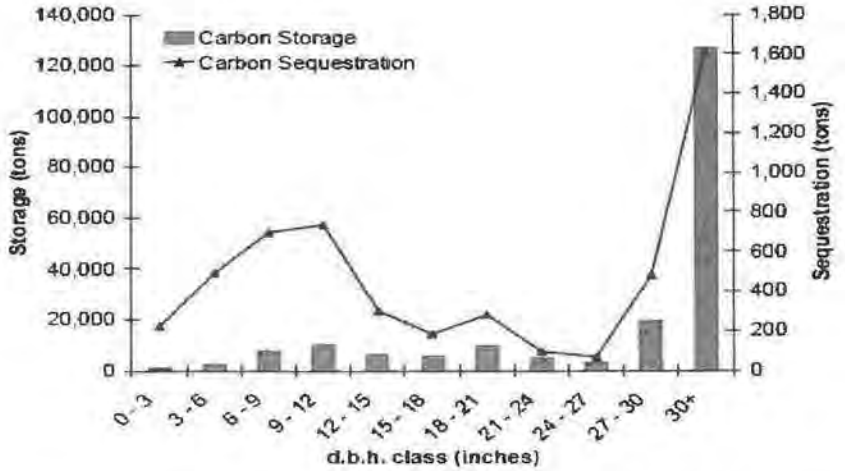

This graph tells us that although trees sequester carbon faster when they are very small, the large, most mature trees are also sequestering carbon and they store far more carbon than the smaller trees. This is as we would expect, because **the total amount of carbon stored within the plant or tree is proportional to its biomass, both above ground (trunk, foliage, leaf litter, etc.) and below ground (roots).**

Even IF it were possible replace the non-native trees with native trees—and it's NOT–the native trees would be significantly smaller than the trees that will be destroyed. The few trees that are native to San Francisco are ALL small trees, compared to the trees that will be destroyed. Since the amount of carbon stored within the tree is proportional to its biomass, the native trees would never sequester as much carbon as the trees that will be destroyed by the implementation of SNRAMP.

In its zeal to exonerate SNRAMP from releasing carbon stored in the trees it proposes to destroy, it contradicts itself, i.e., that SNRAMP proposes to destroy all non-native trees less than 15 tall. These are the very same young trees that the DEIR says are capable of sequestering more carbon than mature trees. If, indeed, carbon storage could be preserved by a forest of exclusively young trees—and it CAN'T—what is the point of destroying all the young non-native trees?

03
(Cont.)

<u>The DEIR does not account for the loss of the carbon in the trees that will be destroyed</u>

If we were starting with bare ground, it might be relevant to compare carbon sequestration in various types of vegetation, but we're not. We're talking about a specific project which will require the destruction of thousands of non-native trees. Therefore, we must consider the loss of carbon associated with destroying those trees. **It doesn't matter what is planted after the destruction of those trees, nothing will compensate for that loss because of how the trees will be disposed of.**

The fate of the wood in trees that are destroyed determines how much carbon is released into the atmosphere. For example, if the wood is used to build houses the loss of carbon is less than if the wood is allowed to decompose on the forest floor. And that is exactly what this project proposes to do: chip the wood from the trees and distribute it on the forest floor, also known as "mulching." **As the wood decomposes, the carbon stored in the wood is released into the atmosphere as carbon dioxide**: "Two common tree disposal/utilization scenarios were modeled: 1) mulching and 2) landfill. Although no mulch decomposition studies could be found, studies on decomposition of tree roots and twigs reveal that 50% of the carbon is lost within the first 3 years. The remaining carbon is estimated to be lost within 20 years of mulching. Belowground biomass was modeled to decompose at the same rate as mulch regardless of how the aboveground biomass was disposed" (Nowak 2002)

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Furthermore, the process of removing trees releases stored carbon into the atmosphere, regardless of the fate of the destroyed trees: "Even in forests harvested for long-term storage wood, more than 50% of the harvested biomass is released to the atmosphere in a short period after harvest." (Anderson 2008)

The DEIR claims to have run a model of carbon loss resulting from the project in Sharp Park: "The model returns the CO_2 emission rates for all equipment deliveries, and worker activity involving on-road and off-road gasoline and diesel fuel use." (DEIR, page 455). The CO_2 emissions resulting from the destruction of 15,000 trees over 15 feet tall in Sharp Park is conspicuously absent from their analysis.

03 (Cont.)

Managing the forest by thinning and reforestation does NOT compensate for the loss of carbon stored in the trees that will be removed.

The DEIR claims that improving the health of the urban forest by thinning and reforestation with young trees—which will NOT be physically possible--will result in a net benefit of carbon storage.

In fact, the more open canopy of an urban forest with less tree density results in greater growth rates. (EPA 2010) Although more rapid growth is associated with greater rates of carbon sequestration, rates of storage have little effect on the net carbon storage over the life of the tree. (Nowak 1993) **Net carbon storage over the life of the tree is determined by how long the species lives and how big the tree is at maturity. These characteristics are inherent in the species of tree and are little influenced by forest management practices such as thinning.** (Nowak 1993)

More importantly, even if there were some small increase in carbon storage of individual trees associated with thinning, this increase would be swamped by the loss of the carbon in the trees that will be destroyed.

Conclusion

The final EIR must correct the following errors of FACT in the DEIR:

01 (Cont)
- The final EIR cannot claim that all non-native trees that will be destroyed will be replaced with an equal number of native trees because that is neither consistent with the SNRAMP, nor is it physically possible.

02 (Cont)
- The final EIR cannot claim that all non-native trees that will be destroyed are dead, dying, diseased, or hazardous because they are NOT and the claim contradicts the SNRAMP.
- The citations used to make bogus claims regarding carbon sequestration must be removed because they are not relevant and they have been misrepresented by the DEIR.
- The DEIR's presentation of the terrestrial carbon cycle must be corrected because it is inaccurate:
  - RATES of carbon sequestration must not be confused with the total accumulated stored carbon in mature trees.
  - The final EIR cannot claim that there will be a net carbon benefit of the proposed tree destruction because that claim is inconsistent with the science of the terrestrial carbon cycle

03 (Cont)

The DEIR has not quantified the carbon stored in the current landscape; has not quantified the carbon released by the planned tree destruction; has not quantified the carbon stored in the resulting grassland and scrub. The claimed "qualitative analysis" does not tell us how much carbon will be released into the atmosphere by the implementation of SNRAMP.

As required by CEQA and California Law AB 32, the final EIR must quantify the loss of carbon resulting from the destruction of thousands of healthy trees, compare that loss to the resulting vegetation (grassland and scrub) and mitigate for the net loss of carbon that is the inevitable outcome of the implementation of SNRAMP.

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October 24, 2011

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Public Comment

Draft Environmental Impact Report for the Natural Resource Areas Management Plan

RE: Herbicides required to implement SNRAMP

The Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP) claims that the herbicides required to implement SNRAMP will not have a significant impact on the environment. It reaches that conclusion by providing inadequate and inaccurate information about the use of herbicides by the Natural Areas Program (NAP) in the present and by providing no information about the requirements for more herbicides in the future to kill the roots of thousands of trees that will be destroyed. In this public comment we will document these issues as follows:

1. **The DEIR provides no information about the frequency of use of herbicides by the Natural Areas Program**
2. **The DEIR claims that herbicide applications by the Natural Areas Program comply with San Francisco's IPM Ordinance. In fact, the public record contains considerable evidence that herbicide applications by the Natural Areas Program frequently violate San Francisco's IPM Ordinance.**
3. **The DEIR misstates the facts about the toxicity of the herbicides being used by the Natural Areas Program**
4. **The DEIR provides no information about the increased use of herbicides that will be required to prevent the resprouting of the trees that will be destroyed by the implementation of SNRAMP.**

1. Herbicide use by the Natural Areas Program

The Draft Environmental Impact Report (DEIR) provides no information about the volume of herbicides used by the Natural Areas Program (NAP). The sole sentence in the DEIR pertaining to volume of use of herbicides is this:

04 *"In 2004, the Natural Areas Program accounted for less than 10 percent of the overall SFRPD pesticide use, even though the Natural Areas account for approximately 25% of the land managed by the SFRPD."* (DEIR, page 365)

This statement provides inadequate information regarding NAP's pesticide use because:

- It is eight years out of date.
- Since we aren't informed by the DEIR of the volume of SFRPD's pesticide use, we are unable to determine the volume of NAP's pesticide use, i.e., NAP's pesticide use is 10% of WHAT?
- We aren't reassured by the claim that NAP's pesticide use is only 10% of total RRPD pesticide use—if in fact that is true. The public has good reason to expect that parks designated as "natural areas" should contain less pesticide than other park areas, such as golf courses, lawns, flower gardens, and landscaped areas.

Based on public records requests, we have the following information about the number of pesticide applications by the Natural Areas Program (See Attachment A):

Number of pesticide applications by the Natural Areas Program

Active Ingredient	2008	2009	2010	Percent Increase
Triclopyr (Garlon)	17	16	36	
Glyphosate (Roundup)	7	6	31	
Aminopyralid/Imazapyr (Milestone/Habitat)	2	2	2	
Total	26	24	69	265%

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We learn from these official reports of NAP's pesticide use which are required by the City's IPM Ordinance, that NAP's pesticide use has increased 265% since 2008. Therefore, the only information provided by the DEIR regarding NAP's pesticide use is inadequate and inaccurate because it is eight years old and pesticide use by the Natural Areas Program is increasing significantly from year to year, 265% in the past three years alone.

We also learn from these official reports of NAP's pesticide use that several other statements in the DEIR are inaccurate:

- The DEIR claims that *"Garlon is being phased out from use in Natural Areas and is only used for invasive plants in biologically diverse grasslands due to its target specificity."* (DEIR, page 365)

  According to the official reports of NAP's pesticide use, Garlon (active ingredient Triclopyr) was used more often than any other pesticide in all three years, including the most recent year. This FACT is inconsistent with a claim that Garlon is being "phased out."

  The statement that Garlon is *"only used for invasive plants in...grasslands"* is contradicted by this statement in the DEIR:

  "Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon) (DEIR, page 386)

- The DEIR claims that Glyphosate is the "primary product used." (DEIR, page 365). This statement is inaccurate. Official reports of NAP's pesticide use prove that Triclypyr was used more often than Glyphosate in all three years for which we have data.

04 (Cont.)

2. Pesticide use by the Natural Areas Program frequently violates San Francisco's IPM Ordinance

In lieu of providing any information about the actual use of pesticides by the Natural Areas Program, the DEIR claims that the mere fact that these pesticide applications comply with San Francisco's IPM Ordinance ensures that there will be no significant impact on the environment from its pesticide use:

"Pesticide use...would adhere to the IPM Program. As a result, water quality impacts from herbicide and pesticide use as part of programmatic projects would be less than significant." (DEIR, page 365)

There are two problems with this claim:

- NAP has been granted exceptions to the IPM Ordinance to use toxic chemicals that are not used by other agencies in San Francisco: Imazapyr and Triclopyr.
  - Garlon (Triclypyr): Tier I, Most Hazardous. Use Limitation: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injections are not feasible and only with use of a respirator. HIGH PRIORITY TO FIND ALTERNATIVE." (San Francisco IPM policy 2011)
  - Habitat (Imazapyr): Tier II, More Hazardous. Use Limitation: "Preferred alternative to triclopyr for use on invasive weeds in natural areas such as broom, cotoneaster, or Arundo grass." (San Francisco IPM policy 2011)
- Even after having been granted these exceptions, NAP has frequently violated the IPM Ordinance. Many of these violations have been reported to the Department of the Environment by the public and are therefore a part of the public record:
  - NAP's report of pesticide use is frequently incomplete: targets for applications, locations of applications, etc., are frequently missing from NAP's reports. (See Attachment A)

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05 (Cont.)

- We have photographs of notices of pesticide applications for which there are no corresponding entries on the official record of pesticide use maintained by the Department of the Environment. This suggests that the official reports of NAP's pesticide use are not complete. These photographs have been sent to the Department of the Environment.
- NAP's notices of pesticide application are frequently missing the date of application, thereby making it impossible for the public to know when the area is safe to enter. Photographs of these incomplete notices have been sent to the Department of the Environment.
- NAP used Imazapyr in 2008 and 2009, prior to its approval for use by San Francisco's IPM policy in 2011.
- NAP **sprayed** Garlon (Triclopyr) prior to 2011 when only "dabbing and injection" were approved application methods by the IPM policy.
- NAP sprayed Garlon (Triclypyr) in 2011 without using a respirator, as required by the IPM Ordinance in 2011. (see Attachment B)
- NAP sprayed herbicides containing Glyphosate in the water of Lake Merced which is officially designated red-legged frog habitat in violation of US Fish and Wildlife regulations which ban the use of many herbicides, including Glyphosate, from designated habitat for red-legged frogs and other endangered amphibians.
- Volunteers working in the natural areas are not authorized to use herbicides because they have not been trained and do not have the proper equipment with which to safely apply herbicides. Some of these unauthorized volunteers have been seen spraying herbicides without posting the required notification of pesticide application. These incidents have been reported to the Department of the Environment.

3. The DEIR makes inaccurate statements regarding the toxicity of the pesticides used by the Natural Areas Program

06

The DEIR contains little information regarding the toxicity of the pesticides being used by the Natural Areas Program. What little information it provides is entirely inaccurate:

> *"[Garlon] degrades quickly in the environment and has low toxicity to aquatic species (Dow2009)."* (DEIR, page 365)

The following are the accurate statements regarding biodegradability and toxicity to aquatic life quoted directly from the Material Safety Data Sheet which is mandated by the federal government and prepared by the manufacturer of the product (Dow) based on laboratory studies conducted by the Environmental Protection Agency which are also mandated by federal law (see Attachment C):

> *"Persistence and Degradability*
> *Chemical degradation (hydrolysis) is expected in the environment.* ***Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.***"
> (emphasis added)
>
> *"Ecotoxicity*
> ***Material is highly toxic to aquatic organisms*** *on an acute basis..."* (emphasis added)

This flagrant misrepresentation of the toxicity of Garlon is appalling. The DEIR contains no accurate information about the toxicity of any of the pesticides used by the Natural Areas Program. In the only case in which it provides any information, it resorts to egregious lies.

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4. The DEIR provides no information about the increased use of pesticides that will be required to implement the SNRAMP

The DEIR's claim that NAP's herbicide use will have no significant impact on the environment is apparently based on historic data from 2004 (which it does not share with the reader) and an assumption that historic use was in compliance with San Francisco's IPM Ordinance. As we have shown, data from 2004 does not describe NAP's present use, NAP is granted exceptions for most of its pesticide use, and NAP has a substantial public record of violating IPM policy.

However, the DEIR is supposed to evaluate the environmental impacts of implementing the SNRAMP. It is therefore obligated to look forward, not backward. The DEIR tells us nothing about NAP's use of herbicides in the future as a result of the implementation of the SNRAMP.

07

This is the most significant failing of the DEIR because destroying thousands of trees will require the use of more pesticides. Most of the non-native trees that will be destroyed will resprout if their trunks are not sprayed immediately with Garlon. This initial application of Garlon is often insufficient to kill the roots of the tree. Repeated applications are often required to kill the roots of the tree.

The DEIR acknowledges the need to use Garlon on the stumps of trees that have been destroyed: *"Treatment of tree stumps with San Francisco-approved pesticides (such as Roundup and Garlon)* (DEIR, page 386)

However, the DEIR provides no information about how much more pesticide must be used as a result of destroying thousands of non-native trees. We turn to the University of California at Berkeley for this information. UC Berkeley has been clear-cutting all non-native trees from its properties for over 10 years. Several years ago it applied for grant funding from the Federal Emergency Management Agency (FEMA) to continue its eradication of all non-native trees from its property. It submitted the attached letter with its application to FEMA (obtained with a FOIA request) to document the cost of poisoning all of the stumps of the trees with Garlon which it predicts must be done twice per year for 10 years. (See Attachment D) Both UC Berkeley and East Bay Regional Park District are on record in their "vegetation management plans" that Roundup is not capable of preventing the resprouts of trees. Garlon is the only pesticide known to be effective for this purpose. The Material Safety Data Sheet documents that Garlon is a "Hazardous Chemical" which is very toxic to aquatic life, slightly toxic to birds, and biodegrades slowly in the environment. (See Attachment C)

Conclusion

The final Environmental Impact Report for the SNRAMP must:

05 (Cont)
- **Provide specific and current data about pesticide use by the Natural Areas Program**

06 (Cont)
- **Provide accurate information about the toxicity of the pesticides being used by the Natural Areas Program**
- **Quantify, evaluate and mitigate the increased pesticide use that will be required as a result of destroying thousands of trees that will resprout unless their stumps are treated with pesticides.**

07 (Cont)
If this information is provided in the final Environmental Impact Report it is unlikely that the EIR will be in a position to claim that there will be no significant impact on the environment resulting from the implementation of the SNRAMP. The animals that live in our parks and the humans who visit them therefore deserve the mitigation required to ensure their health and safety. Furthermore, CEQA law requires such mitigation.

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October 24, 2011

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Attachment A

APPLICATION NUMBER	Application Comments	PESTICIDE	Amount Used	Units/a ied	TARGET PEST	EPA Number	HOW APPLIED	APPLICATOR	DATE OF APPLICATION	DATE OF NOTIFICATION	SITE MANAGER	NOTIFIER
GARLON												
17642	Monocot city	GARLON 4	2	fl ozs	broadleaf weeds	62719-40-ZB-62719	Spray	DE MEO, LICIA	16-Jan-08			
17643	Poison Oak / Oxalis	GARLON 4	2	fl ozs	broadleaf weeds	62719-40-ZB-62719	Spray	HAYES, DYLAN	16-Jan-08			
17699	pine lake	GARLON 4	1.8	fl ozs	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN	14-Feb-08			
17700	bayview hill	GARLON 4	13.2	fl ozs	cape ivy	62719-40-ZB-62719	Spray	HAYES, DYLAN	26-Feb-08			
17701	twin peaks	GARLON 4	5.4	fl ozs	ovalis	62719-40-ZB-62719	Spray	annese	28-Feb-08			
17761	east grassland	GARLON 4	8	fl ozs	ovalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOLPH (RANDY)	6-Mar-08			
17762	twin peaks	GARLON 4	21.6	fl ozs	ovalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTOPHER	6-Mar-08			
17763	mt. Davidson	GARLON 4	16	fl ozs	ovalis	62719-40-ZB-62719	Spray	CAMPBELL, CHRISTOPHER	8-Mar-08			
17764	Glen canyon	GARLON 4	10	fl ozs	ovalis	62719-40-ZB-62719	Spray	ZEBELL, RANDOLPH (RANDY)	7-Mar-08			
17765	Mc Laren Quail run	GARLON 4	10	fl ozs	ovalis-burdover	62719-40-ZB-62719	Spray	DE MEO, LICIA	7-Mar-08			
17883		GARLON 4 ULTRA	2	fl ozs	stumps	62719-527	Spray	ANNESE, THOMAS (TOM)	13-Jun-08			
18121		GARLON 4 ULTRA	7.5	fl ozs	weeds	62719-527	Spray		1-Oct-08			Lisa Wayne
18122	Mt. Davidson	GARLON 4 ULTRA	10	fl ozs	stump treatment	62719-527	Spray		7-Oct-08			Lisa Wayne
18123	Mt. Davidson	GARLON 4 ULTRA	30	fl ozs	stump treatment	62719-527	Spray		22-Oct-08			Lisa Wayne
18124	sharp park	GARLON 4 ULTRA	12	fl ozs	stump treatment	62719-527	Spray		28-Oct-08			Lisa Wayne
18125	ggp/ow	GARLON 4 ULTRA	12	fl ozs	stump treatment	62719-527	Spray		30-Oct-08			Lisa Wayne
18160		GARLON 4 ULTRA	14	fl ozs	eucalyptus saplings	62719-527	Spray		25-Nov-08	20-Nov-08		Lisa Wayne
		TOTAL GARLON 2008	179.5									
18242	ovalis	GARLON 4 ULTRA	2	fl ozs	weeds	62719-527	Spray		30-Jan-09			LISA
												WAYNE
18273		GARLON 4 ULTRA	4.8	fl ozs	ovalis	62719-527	Spray		4-Feb-09	15-Jan-09		LISA
	Brooks park, Orcaba											WAYNE
18274	rocks	GARLON 4 ULTRA	4.8	fl ozs	ovalis	62719-527	Spray		10-Feb-09	15-Jan-09		LISA
												WAYNE
	BAYVIEW HILL											LISA WAYNE and KIRRA SWENERTON
18275		GARLON 4 ULTRA	28.5	fl ozs	ovalis	62719-527	Spray		19-Feb-09	15-Jan-09		LISA
18276	Corona	GARLON 4 ULTRA	9.6	fl ozs	ovalis	62719-527	Spray		27-Feb-09	15-Jan-09		WAYNE
18329	twin peaks	GARLON 4 ULTRA	3.6	fl ozs	ovalis	62719-527	Spray		5-Mar-09	02-Mar-09		Lisa Wayne
18330	Glen Canyon	GARLON 4 ULTRA	6	fl ozs	poison oak	62719-527	Spray		12-Mar-09	02-Mar-09		Lisa Wayne
18331	Glen Canyon	GARLON 4 ULTRA	3	fl ozs	OXALIS	62719-527	Spray		13-Mar-09	02-Mar-09		Lisa Wayne
	Glen Canyon above											
18332	steep	GARLON 4 ULTRA	3	fl ozs	OXALIS	62719-527	Spray		19-Mar-09	02-Mar-09		Lisa Wayne
18333	bayview hill	GARLON 4 ULTRA	5.5	fl ozs	OXALIS/ invasive pea	62719-527	Spray		27-Mar-09	22-Mar-09		Lisa Wayne
18476		GARLON 4 ULTRA	14.4	fl ozs	weeds	62719-527	Spray		2-Jul-09			Lisa Wayne
18477		GARLON 4 ULTRA	10	fl ozs	weeds	62719-527	Spray		14-Jul-09			Lisa Wayne
18510		GARLON 4 ULTRA	2	fl ozs	acacia resprouts	62719-527	DAUBER		18-Aug-09			Lisa Wayne
18511		GARLON 4 ULTRA	6	fl ozs	broadleaf weeds	62719-527	Spray		20-Aug-09			Lisa Wayne
18583	Mclaren	GARLON 4 ULTRA	3	fl ozs	fennel	62719-527	Daubber		1-Oct-09			Lisa Wayne
18584	Mclaren	GARLON 4 ULTRA	3	fl ozs	fennel	62719-527	Daubber		1-Oct-09			Lisa Wayne
		TOTAL GARLON 2009	109.2									
18667	Mt Davidson	Garlon	2	fl ozs	ovalis - grasslands	627-1940	Backpack sprayer	Lisa Wayne	3-Feb-10		10,000 sq ft	
18729	Twin Peaks	Garlon	19	fl ozs	ovalis	627-1940	Backpack sprayer	Jan Campos, Kirra Swenerton	18-Mar-10			
18726	Twin Peaks	Garlon 4	10.5	fl ozs	N & S peak, scott's garden, top of Mission bowl	62719529	Backpack sprayer	Kirra Swenerton	4-Mar-10			
18727	Twin Peaks	Garlon 4	7.2	fl ozs	Mission Ridge & bowl, ovalis	62719529	Backpack sprayer	Kirra Swenerton	17-Mar-10			
18730	Mt Davidson	Garlon 4 Ultra	9	fl ozs	Mt Davidson/ Cape Ivy	62719 527	Backpack sprayer	Ryan Gerlach	15-Mar-10			
18731	Mt Davidson	Garlon 4 Ultra	3.6	fl ozs	ovalis	62719 527	Backpack	Ryan Gerlach	16-Mar-10			

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18732	Twin Peaks	Garlon 4 Ultra	8	fl ozs	Algerian ivy	62719 527	Backpack	Beg	17-Mar-10				
18733	Twin Peaks	Garlon 4 Ultra	9	fl ozs	oxalis	62719 527	Backpack	Beg	17-Mar-10				
18734	Mt Davidson	Garlon 4 Ultra	3.6	fl ozs	oxalis	6271940	Backpack	Beg	18-Mar-10				
18728	Grandview	Garlon 4 Ultra	3.6	fl ozs	oxalis narrow leaf replant	62719 527	Backpack	Kirra Swenerton	19-Mar-10				
18725	McLaren	Garlon 4 Ultra	3.6		East of amphitheater flat wet meadow	62719 527	Backpack	Christopher Campbell	24-Mar-10	2500 sq ft			
	Glen Canyon/ O' Shaughnessy	Garlon 4 Ultra	8.5	fl ozs	O'Shaughnessy roadside, delivale to Malta	62719 527	Backpack	Zebell	8-Apr-10				
	Glen Canyon/ Fox meadow, paths, hemlock patch	Garlon 4 Ultra	12.5	fl ozs		62719 527	Backpack	DeMeo/ Swenerton	8-Apr-10				
	Glen Canyon/ Fox meadow	Garlon 4 Ultra	5	fl ozs	Poison oak, broom, english ivy, hemlock	62719-527	Backpack	DeMeo L	22-Apr-10				
	O'Shaughnessy	Garlon 4 Ultra	3	fl ozs	Scotbroke	62719-527	Backpack	Campbell, Chris	22-Apr-10	0.5 acres			
	Twin Peaks	Garlon 4 Ultra	3.6	fl ozs	Fennel along Burnett	62719-527		(Shelterbelt) Garcia/ Wilson	26-Apr-10	0.25 acres			
	Twin Peaks	Garlon 4 Ultra	8	fl ozs	Cotoneaster (stump treatment)	62719-527			26-Apr-10	0.5 acres			
	Oak Woodlands (GGP)	Garlon 4 Ultra	4.5	fl ozs	Cotoneaster/mayten/ tree of heaven	62719-527		(Shelterbelt) Garcia/ Wilson	30-Apr-10				
	Twin Peaks	Garlon 4 Ultra		fl ozs	Cotoneaster	62719-527	Backpack	(Shelterbelt) Garcia/ Wilson	30-Apr-10				
	McLaren	Garlon 4 Ultra	8	fl ozs	Gazania and fennel - Vis Valley overlook	627-1940	Backpack	K Swenerton	19-May-10				
	McLaren - University Hill	Garlon 4 Ultra	3.6	fl ozs	Above asphalt path at University and Woodsey, fennel	62719-0537	Backpack sprayer	Lisa De Meo	17-Jun-10				
	McLaren - trynizalia (?) area	Garlon 4 Ultra	15	fl ozs	Gazania and fennel between 2 palms and grasslands	62719-0537	Backpack sprayer	Lisa Wayne	17-Jun-10				
	McLaren	Garlon 4 Ultra	9	fl ozs	Fennel - south of Mansell, east of Visitacion	62719-527	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10				
	Bayview	Garlon 4 Ultra	24	fl ozs	Fennel- grasslands	62719-527	Backpack	Ryan Gerlach, Ventura Garcia	23-Jun-10				
	McLaren	Garlon 4 Ultra	8		S of Mansell Forest	627-1940	Dauber stump treatment	K Swenerton	16-Sep-10				
	McLaren (Geneva)	Garlon 4 Ultra	1	fl ozs	Geneva R dge fennel	627-1940	Dauber (cut and daub)	Dylan Hayes	13-Oct-10				
	Twin Peaks	Garlon 4 Ultra + spraytech oil	15	fl ozs	Poison Oak, Fennel - P/O along path and fennel above Crestline	62719-527	Backpack	Ryan Gerlach, Ventura Garcia, Ben Adamo	29-Jun-10				
	Bayview	Garlon 4 Ultra + spraytech oil	2	fl ozs	Fennel along steep access rd	62719-527	Backpack	Ryan Gerlach	29-Jun-10				
	Bernal	Garlon 4 Ultra + Spraytech oil	4	fl ozs	fennel on north-facing slope	62719-527	cut stump	Ryan Gerlach, Venny Garcia	23-Aug-10				
	Twin Peaks	Garlon 4 Ultra + Spraytech oil	78		Slope above Burnett: French Broom, Cotoneaster	62719-527	Cut stump	Ventura Garcia, Ben Adamo, Paul Wilson, Jake Hanower	20-Oct-10				
	Glen Park	Garlon 4 Ultra + Spraytech oil	2.5	fl ozs	Slope above Burnett: French Broom, Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie Prescott	21-Oct-10				
	Glen Park	Garlon 4 Ultra + Spraytech oil	27	fl ozs	Monocot City: French Broom, Cotoneaster	62719-527	Cut stump	Paul Wilson, Shellie Prescott	22-Oct-10				
	RPD-Glen Park Natural Areas	GARLON 4UL	1	fl ozs	Weeds misc	627195237AA52719		Hayes, D	4-Nov-10				
	RPD-Golden Gate Park-SEC 2	GARLON 4UL	4	fl ozs	Weeds-misc	627195237AA52719		Hayes, D	12-Nov-10				
	RPD-Twin Peaks	GARLON 4UL	8	fl ozs	Weeds-misc	627195237AA52719		Gerlach, Ryan	24-Nov-10				
	RPD-Twin Peaks	GARLON 4UL	10	fl ozs	Weeds-misc	627195237AA52719		Garcia, Shelter Belt	16-Dec-10				
		Total GARLON 2010	**340.169**										
ROUNDUP													
17698	landscape	ROUNDUP PRO DRY	1.8	ozs	cape ivy	524-505	Spray	HAYES, DYLAN	14-Feb-08				
17767	twin peaks- erharta west grassland	ROUNDUP PRODRY	4	ozs	arctotheca	524-505	Spray	DE MEO, LICIA	7-Mar-08				
17768	brooks	ROUNDUP PRODRY	9.8	ozs	weeds	524-505	Spray	HAYES, DYLAN	11-Mar-08				
17769	Edgehill erharta	ROUNDUP PRODRY	8	ozs	weeds	524-505	Spray	ZEBELL, RANDOLPH (RANDY)	20-Mar-08				
17770	Brooks erharta	ROUNDUP PRODRY	4.8	ozs	weeds	524-505	Spray	HAYES, DYLAN	20-Mar-08				
17862		ROUNDUP PRO HERBICIDE	2	fl ozs	stumps	524-475-ZA-524	Spray	ANNESE, THOMAS (TOM)	13-Jun-08				
		RODEO AQUATIC HERBICIDE (Glyphosate, Dow)	2.6	fl ozs									
17766	Mc Laren marsh area				arctotheca	524-343-AA-524	Spray	DE MEO, LICIA	7-Mar-08				

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		TOTAL ROUNDUP 2008	33										
18399	grazeria	ROUNDUP PRODRY	1.6	ozs	weeds	524-505	Spray			19-May-09		Lisa Wayne	
18400	hawk hil	ROUNDUP PRODRY	4.8	ozs	weeds	524-505	Spray			26-May-09		Lisa Wayne	
18578	upper grassland	ROUNDUP PRODRY	8.4	ozs	weeds	524-505	Spray			1-Oct-09		Lisa Wayne	
18579	billy goat hill	ROUNDUP PRODRY	0.8	ozs	weeds	524-505	Spray			8-Oct-09		Lisa Wayne	
18580	edgehill	ROUNDUP PRODRY	9	ozs	weeds	524-505	Spray			9-Oct-09		Lisa Wayne	
18581	Mclaren	ROUNDUP PRODRY	4.8	ozs	weeds	524-505	Spray			29-Oct-09		Lisa Wayne	
		TOTAL ROUNDUP 2009	27.4										
18735	Pine Lake	Aquamaster	16		Pine Lake/ cape ivy	524-343	Backpack sprayer	Mark Heath		11-Mar-10	2%		
	Lake Merced	Aquamaster	8		Ludwigia	524-343		JC		14-Jul-10	2%		
	Lake Merced	Aquamaster	2		Impound lake - Ludwigia	524-343	Backpack sprayer	R Zebell		2-Sep-10	2%		
	Glen Park	Aquamaster + Spraytech Oil	22		Site C above Silver Tree. French Broom and Poison Oak	524-343	Backpack sprayer	Ventura Garcia, Ben Adamo		15-Oct-10	2 oz/ gal		
	Glen Park	Aquamaster + Spraytech Oil	30		Moncott Cirly; French Broom, Cotoneaster	524-343	Cut stump	Ventura Garcia, Ben Adamo		15-Oct-10	50%		
	Twin Peaks	Aquamaster + Spraytech Oil	8		Slope above Burnett. Jupiter's Beard	524-343	Backpack sprayer	Ventura Garcia, Ben Adamo, Paul Wilson, Jake Harrower		20-Oct-10	2%		
	Mclaren	Roundup Pro	3.6		Arctotheca - Upper meadow, Yosemite Marsh	524-475	Backpack sprayer	L. DeMeo		9-Sep-10	2%		1000 sq ft
	Glen Canyon, Fox Meadow	Roundup Pro [Max]	6.4		Fox Meadow - Poison oak and mustard	524-579	backpack sprayer	Licia De Meo, Dylan Hayes		3-Aug-10	2%		
	Sharp Park	Roundup Pro [Max]	1.3		Pampas grass	524-579	hand sprayer	Kirra Swenerton		26-Aug-10	2%		
18668	Mt Davidson	Roundup Pro Dry	1		erhata - grasslands - edge of forest	524-505	Backpack sprayer	Christopher Campbell		3-Feb-10	0.50%		10,000 sq ft
18722	Mt Davidson	Roundup Pro Dry	3		Erhata	524 505	Backpack	Reg		18-Mar-10	1%		
18724	Mclaren	Roundup Pro Dry	6.0		Upper Yosemite Marsh - arctotheca, Kikuyu burdlover	524 505	Backpack sprayer	Licia DeMeo/ Christopher Campbell		24-Mar-10	2%		5000 sq ft
	Hawk Hill	Roundup Pro Dry	3		slope -erhata	524-505	Backpack	Zebell, R		22-Apr-10	1.50%		
	Glen Canyon/ Fox meadow	Roundup Pro Dry	4.5		Radish, erhata	524-505	Backpack	Swenerton, K		22-Apr-10	2%		
	Edgehill	Roundup Pro Dry	9		Edgehill - planted areas/ erhata	524-505	Backpack hand sprayer	R Zebell, C Campbell		4-May-10	1%		
	Sharp Park	Roundup Pro Dry	1.5		Pampas grass	524-505		Kirra Swenerton		28-Aug-10	2%		
18721	Mt Davidson	Roundup Pro Max	9		Erhata	524 ?	Backpack sprayer	Ryan Gerlach		16-Mar-10	1%		
18723	Glen Canyon	Roundup Pro Max	9.0		Area A - hemlock thistle	524 579	Backpack sprayer	shelterbelt/ Ryan Gerlach		23-Mar-10	1oz/ gallon		
	Twin Peaks	Roundup Pro Max	4		sprayed French Broom that was missed or too small to pull along Burnett	524-579		Shelterbelt/ Gerlach		26-Apr-10	1.56%		0.25 acres
	Oak Woodlands (GGP)	Roundup Pro Max			cape ivy	524-579		(Shelterbelt) Gerlach/ Garcia		?	0.80%		0.5 acres
	Mclaren	Roundup Pro Max	6.8		Fennel - south of Mansell, east of Visitacion	524-579	Backpack	Ryan Gerlach, Ventura Garcia		23-Jun-10	1.5 oz/ gal		
	Bayview	Roundup Pro Max	18		Fennel- grasslands	524-579	Backpack	Ryan Gerlach, Ventura Garcia		23-Jun-10	1.5 oz/ gal		
	Twin Peaks	Roundup Pro Max	1		Patch of erhata off Twin Peaks	524-579	Backpack	Ryan Gerlach		12-Aug-10	1oz/gal		
	McLaren Park	Roundup Pro Max	3		Patch of pampas grass off Visitacion	524-579	Backpack	Verny Garcia		12-Aug-10	2 oz/ gal		
	RPD-Mt Davidson	AQUAMASTER	34.432		Weeds-erhata	524343/524		Gerlach, Ryan		3-Nov-10			
	RPD-Golden Gate Park-SEC 1	AQUAMASTER	14.3646		Weeds-ivy	524343/524		Gerlach, Ryan		4-Nov-10			
	RPD-Mt Davidson	AQUAMASTER	2.8514		Weeds-blackberry	524343/524				4-Nov-10			
	RPD-John McLaren Park	RDUNDUP PR	5.844		Weeds-misc	524579AA524		Taylor, Zack		16-Nov-10			
	RPD-Lake Merced Park	AQUAMASTER	1.893		Weeds-misc	524343/524		Zebell, R		16-Nov-10			
	RPD-Twin Peaks	ROUNDUP PR	0.2435		Weeds-pampas grass	524579AA524		Garcia, Shelter Belt		16-Dec-10			

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	RPD-Glen Park Natural Areas	ROUNDUP PR	4.363		Weeds-misc		524579AA524			Garcia, Shelter Belt		27-Dec-10						
		TOTAL ROUNDUP/ AQUAMASTER 2010	240.102															
OTHER STUFF																		
18088		SAPPHIRE (Penoxsulam fm Dow)	96	fl ozs	english daisy		62719-547	Boom Spray				9-Sep-08						Against diseases - golf courses
18089		HABITAT (Imazapyr from BASF)	5.8	fl ozs	invasive weeds		241-426	Spray				9-Sep-08		Lisa Wayne				
18334	oak woodlands	MILESTONE (aminopyralid from Dow)	10.8	fl ozs	cape ivy		62719-519	Spray				13-Mar-09	09-Mar-09	Lisa Wayne				
18582	lake merced at																	
18736	impound lake Pine Lake	HABITAT (Imazapyr from BASF)	4	fl ozs	ludwegia		241-426	Spray				1-Oct-09		Lisa Wayne				
		MILESTONE (aminopyralid from Dow)	1	fl ozs			62719-537	backpack				11-Mar-10		Mark Heath				
	RPD-Golden Gate Park-SEC 1	MILESTONE	0.5496		Weeds-ivy		62719537AA62719			Gerbich, Ryan		4-Nov-10						

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Mary McAllister

From: "Mary McAllister" <marymcallister@comcast.net>
To: "Lisa Wayne" <Lisa.Wayne@sfgov.org>
Cc: <Chris.Geiger@sfgov.org>; <Ralph.Montana@sfgov.org>
Sent: Wednesday, February 09, 2011 9:03 AM
Attach: twin-peaks-garlon-feb-2011-notice.jpg; spraying-garlon-twin-peaks-feb-2011.jpg
Subject: Violation of City's IPM policy

Dear Lisa, Attached are photos of a pesticide application on February 3rd on Twin Peaks, near the reservoir. According to the corresponding Notice of Pesticide Application, the person was spraying Garlon 4 Ultra. It appears that the person doing the spraying is not wearing a respirator.

As you know, the IPM policy that was approved on January 25th by the Commission on the Environment has approved the restricted use of Garlon 4 and Garlon 4 Ultra as follows: "Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible, and **only with use of a respirator**. HIGH PRIORITY TO FIND ALTERNATIVE." (emphasis added). Therefore, the person photographed spraying Garlon 4 Ultra was not in compliance with the city's IPM policy.

I hope, for the safety of your staff and your sub-contractors, that those who are responsible for spraying this toxic chemical will be informed that they must wear a respirator in the future. As you know, the City's IPM policy classifies this chemical as "Tier I Most Hazardous." The Material Safety Data Sheet for this chemical reports that OSHA classifies this chemical as both an "Immediate" and a "Delayed Health Hazard."

Thank you for your attention to this important matter.

Mary McAllister

10/13/2011

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Attachment C

Dow AgroSciences

Material Safety Data Sheet

Dow AgroSciences LLC

Product Name: GARLON* 4 Herbicide

Issue Date: 03/09/2009
Print Date: 12 Mar 2009

Dow AgroSciences LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
GARLON* 4 Herbicide

COMPANY IDENTIFICATION
Dow AgroSciences LLC
A Subsidiary of The Dow Chemical Company
9330 Zionsville Road
Indianapolis, IN 46268-1189
USA

Customer Information Number: 800-992-5994

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 800-992-5994

2. Hazards Identification

Emergency Overview
Color: Yellow
Physical State: Liquid.
Odor: Gasoline-like
Hazards of product:

WARNING! May cause skin irritation. May cause allergic skin reaction. May cause eye irritation.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects
Eye Contact: May cause eye irritation. Corneal injury is unlikely. May cause pain disproportionate to the level of irritation to eye tissues.

* Indicates a Trademark
* Indicates a Trademark of Dow AgroSciences LLC

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Skin Contact: Brief contact may cause moderate skin irritation with local redness. Prolonged contact may cause moderate skin irritation with local redness. Repeated contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.
Inhalation: Prolonged excessive exposure to mist may cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Effects of Repeated Exposure: In animals, effects have been reported on the following organs: Skin. Repeated excessive exposure may cause adverse effects.
Cancer Information: In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.
Birth Defects/Developmental Effects: For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the minor component(s): Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.
Reproductive Effects: For similar active ingredient(s). Triclopyr. For the minor component(s) In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition Information

Component	CAS #	Amount
Triclopyr-2-butoxyethyl ester	64700-56-7	61.6 %
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %
Ethylene glycol monobutyl ether	111-76-2	0.5 %
Solvent naphtha (petroleum), light aromatic	64742-95-6	0.2 %
Balance		>= 6.7 - <= 19.1 %

4. First-aid measures

Eye Contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Skin Contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.
Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

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Notes to Physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phosgene. Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance.
Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

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General Handling: Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Storage
Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Kerosene (petroleum)	Dow IHG	TWA as total hydrocarbon vapor	10 mg/m3 SKIN
	ACGIH	TWA Non-aerosol, as total hydrocarbon vapor	200 mg/m3 P; Application restricted to conditions in which there are negligible aerosol exposures.
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3 D-SEN

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.
A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.
It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

Personal Protection
Eye/Face Protection: Use safety glasses.
Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

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Engineering Controls
Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Liquid.
Color	Yellow
Odor	Gasoline-like
Flash Point - Closed Cup	64 °C (147 °F) *Closed Cup*
Flammable Limits In Air	**Lower:** No test data available **Upper:** No test data available
Autoignition Temperature	No test data available
Vapor Pressure	0.1 mmHg @ 37.8 °C *Literature* (kerosene)
Boiling Point (760 mmHg)	>= 150 °C (>= 302 °F) *Literature* (initial)
Vapor Density (air = 1)	1 *Literature*
Specific Gravity (H2O = 1)	1.08 *Literature* *Pyknometer*
Liquid Density	1.09 g/cm3 *Calculated*
Freezing Point	No test data available
Melting Point	Not applicable
Solubility in water (by weight)	emulsifiable
pH	6.4 *pH Electrode*
Decomposition Temperature	No test data available

10. Stability and Reactivity

Stability/Instability
Thermally stable at typical use temperatures.
Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Phosgene. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion
LD50, Rat, male 1,581 mg/kg
LD50, Rat, female 1,338 mg/kg
Skin Absorption
LD50, Rabbit, male and female > 2,000 mg/kg
Inhalation

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LC50, 4 h, Aerosol, Rat, male and female > 5.2 mg/l

Sensitization

Skin

Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.

Repeated Dose Toxicity

In animals, effects have been reported on the following organs: Skin. Repeated excessive exposure may cause adverse effects.

Chronic Toxicity and Carcinogenicity

Active ingredient did not cause cancer in laboratory animals. In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.

Carcinogenicity Classifications:

Component	List	Classification
Kerosene (petroleum)	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3
Ethylene glycol monobutyl ether	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3

Developmental Toxicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Active ingredient did not cause birth defects in laboratory animals. For the minor component(s): Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For kerosene: Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive Toxicity

For similar active ingredient(s). Triclopyr. For the minor component(s) In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For kerosene: Limited data in laboratory animals suggest that the material does not affect reproduction.

Genetic Toxicology

For the active ingredient(s): For kerosene: In vitro genetic toxicity studies were negative. For the active ingredient(s): For the component(s) tested: Animal genetic toxicity studies were negative.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: **Triclopyr-2-butoxyethyl ester**

Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Based largely or completely on information for similar material(s). Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient, n-octanol/water (log Pow): 4.09 - 4.49 Measured

Persistence and Degradability

Chemical degradation (hydrolysis) is expected in the environment. Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Stability in Water (1/2-life):

12 h; 25 °C; pH 6.7

6.6 d; pH 5

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OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
18 %	28 d	OECD 301B Test

Theoretical Oxygen Demand: 1.39 mg/mg

Data for Component: **Kerosene (petroleum)**

Movement & Partitioning

Based largely or completely on component information. Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient, n-octanol/water (log Pow): 3.3 - 6 Estimated
Bioconcentration Factor (BCF): 61 - 159; fish

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Data for Component: **Ethylene glycol monobutyl ether**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is high (Koc between 50 and 150).
Henry's Law Constant (H): 1.60E-06 atm*m3/mole Measured
Partition coefficient, n-octanol/water (log Pow): 0.83 Measured
Partition coefficient, soil organic carbon/water (Koc): 67 Estimated

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
95 %	28 d	OECD 301E Test
100 %	28 d	OECD 302B Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
5.2 %	57 %	72.2 %	

Chemical Oxygen Demand: 2.21 mg/g
Theoretical Oxygen Demand: 2.30 mg/mg

Data for Component: **Solvent naphtha (petroleum), light aromatic**

Movement & Partitioning

For the major component(s): Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). For the minor component(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): No test data available:

Persistence and Degradability

For the major component(s): Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). For some component(s): Biodegradation under aerobic static laboratory conditions is low (BOD20 or BOD28/ThOD between 2.5 and 10%).

ECOTOXICITY

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (Pimephales promelas), static, 96 h: 2.2 - 6.3 mg/l
LC50, rainbow trout (Oncorhynchus mykiss), flow-through, 96 h: 0.8 - 0.98 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea Daphnia magna, static, 48 h, survival: 1.7 - 18.8 mg/l

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LC50, water flea Daphnia magna, flow-through, 48 h, survival: 0.43 mg/l

Aquatic Plant Toxicity

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 5 d: 13.3 mg/l

Toxicity to Non-mammalian Terrestrial Species

oral LD50, bobwhite (Colinus virginianus): 1,350 mg/kg
oral LD50, Honey bee (Apis mellifera): > 100 micrograms/bee
contact LD50, Honey bee (Apis mellifera): > 100 micrograms/bee

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 7 d: 910 mg/kg

13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. Transport Information

DOT Non-Bulk
NOT REGULATED

DOT Bulk
Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S.
Technical Name: CONTAINS KEROSENE
Hazard Class: COMBUSTIBLE LIQUID **ID Number:** NA1993 **Packing Group:** PG III

IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
EMS Number: f-a,s-f
Marine pollutant.: Yes

ICAO/IATA
NOT REGULATED

Additional Information

MARINE POLLUTANT (Contains Triclopyr and Kerosene

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

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This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Toxic Substances Control Act (TSCA)
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	2	1

Revision
Identification Number: 50683 / 1016 / Issue Date 03/09/2009 / Version: 8.0
DAS Code: XRM-4714
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available

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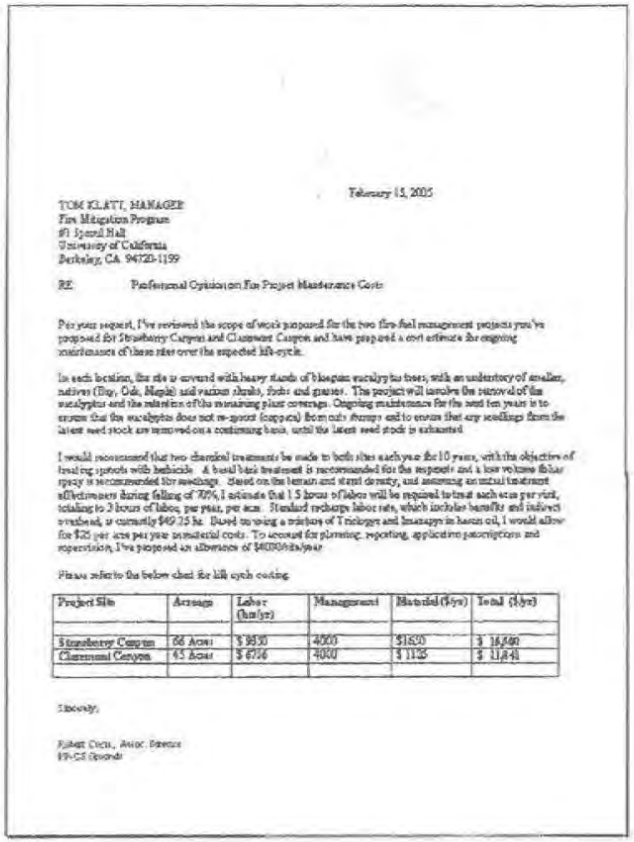
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Dow AgroSciences LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

PROJECT MAINTENANCE COSTS:

The University of California, Berkeley, Associate Director of Physical Plant, Robert Costa, completed an estimate of life-cycle maintenance costs for the 2 UC projects. The letter containing Mr. Costa's opinion is embedded on the page that follows:



February 15, 2005

TOM KLATT, MANAGER
Fire Mitigation Program
#1 Sproul Hall
University of California
Berkeley, CA 94720-1199

RE: Professional Opinion on Fire Project Maintenance Costs

Per your request, I've reviewed the scope of work proposed for the two fire-fuel management projects you've proposed for Strawberry Canyon and Claremont Canyon and have prepared a cost estimate for ongoing maintenance of these sites over the expected life-cycle.

In each location, the site is covered with heavy stands of blue gum eucalyptus trees, with an understory of smaller, natives (Bay, Oak, Maple) and various shrubs, forbs and grasses. The project will involve the removal of the eucalyptus and the retention of the remaining plant coverage. Ongoing maintenance for the next ten years is to ensure that the eucalyptus does not re-sprout (coppice) from cut stumps and to ensure that any seedlings from the latent seed stock are removed on a continuing basis, until the latent seed stock is exhausted.

I would recommend that two chemical treatments be made to both sites each year for 10 years, with the objective of treating sprouts with herbicide. A basal bark treatment is recommended for the sprouts and a low volume foliar spray is recommended for seedlings. Based on the terrain and stand density, and assuming an initial treatment effectiveness during felling of 70%, I estimate that 1.5 hours of labor will be required to treat each acre per visit, totaling to 3 hours of labor, per year, per acre. Standard recharge labor rate, which includes benefits and indirect overhead, is currently $49.25 hr. Based on using a mixture of Triclopyr and kerosene in basal oil, I would allow for $25 per acre per year in material costs. To account for planning, reporting, application prescriptions and supervision, I've proposed an allowance of $4000/mth/year.

Please refer to the below chart for life cycle costing.

Project Site	Acreage	Labor ($/yr)	Management	Material ($/yr)	Total ($/yr)
Strawberry Canyon	66 Acres	$ 9830	4000	$1650	$ 16,680
Claremont Canyon	45 Acres	$ 6706	4000	$ 1125	$ 11,831

Sincerely,

Robert Costa, Assoc. Director
FP-CE Grounds

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Public Comment

Draft Environmental Impact Report for the Natural Resource Areas Management Plan

RE: Support for the Maintenance Alternative

The Significant Natural Resource Areas Management Plan (SNRAMP) which is evaluated by the Draft Environmental Impact Report (DEIR) identifies the Maintenance Alternative as the Environmentally Superior Alternative.[1] This is consistent with CEQA law which requires that the alternative that will have the least negative impact on the environment be identified as the Environmentally Superior Alternative.

My support for the Maintenance Alternative is based on the fact that it is the least destructive of the alternatives presented by the DEIR:

- **The Maintenance Alternative will destroy the least number of trees and existing vegetation**
- **The Maintenance Alternative will require the least amount of pesticide**

In addition to being the Environmentally Superior Alternative, the Maintenance Alternative is also the only viable and sustainable alternative because:

- **The Maintenance Alternative will not require that native plants which are no longer adapted to present conditions be planted where they will not grow**
- **The Maintenance Alternative will not require that the City of San Francisco substantially increase the budget of the Natural Areas Program so that native plant gardens can be expanded**

08

1. The Maintenance Alternative will have less negative impact on the environment

The Natural Areas Program (NAP) has destroyed hundreds of trees in the "natural areas" in the past 15 years. The destruction of these trees has given NAP the opportunity to demonstrate that removing trees is beneficial to native plants. In fact, there is little evidence that the destruction of trees has resulted in successful native plant gardens.

The Pine Lake "natural area" is an example of the destruction of trees which did not result in a successful native plant garden. In 2004, about 25 trees were destroyed at the western end of Pine Lake. I documented that destruction (because the trees were not posted as required by department policy) by testifying to the Recreation and Park Commission and submitting the attached letter on May 4, 2004. (see Attachment A) My testimony is also recorded in the minutes of that meeting.

The area in which the trees were destroyed was then planted with native plants and surrounded by the limbs of the trees that were destroyed. This is what that garden looked like in May 2008, four years later:

[1] This assumes that page 2 is corrected to be consistent with pages 525-526, as the Planning Department has said in writing that it will be corrected in the final EIR.

1

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West end of Pine Lake, May 2008

And this is what that area looks like now:



West end of Pine Lake, July 2011

08 (Cont.)

Little remains from that effort. This is not an isolated example of the results of 15 years of attempting to restore native plants in places where they have not existed for over 100 years. In addition to the 25 healthy trees that were destroyed at the western end of Pine Lake, 132 trees judged as hazardous were destroyed around the lake in 2006 (these tree removals are documented in SNRAMP). The southern and northern shores of Pine Lake have been planted repeatedly. These areas are now dominated by foxtails and non-native nasturtiums which are thriving, despite being eradicated repeatedly.

Other parks have had similar experiences in their "natural areas." Sometimes toxic herbicides are used in the attempts to eradicate the non-native plants. Here is a picture of a field of oxalis in Glen Canyon Park that has been sprayed with toxic Garlon numerous times. There is no evidence that the oxalis has been defeated by this chemical warfare.

2

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Oxalis in Glen Canyon Park, February 2011

08 (Cont.)

According to "UC [Davis] IPM Online"[2], Garlon only poisons the visible part of the plant; it doesn't kill the root of the plant (in this case, the "bulbil"). So, the plant grows back the next year and is poisoned again. Between March and October 2010, the Natural Areas Program and its contractors (Shelterbelt Builders) sprayed Glen Canyon with herbicides 10 times. If this futile effort continues, it will be sprayed again every year, for as long as the public is willing to tolerate this poisoning of its public parks. There is a creek at the bottom of this canyon that is probably being poisoned as well. According to the federally mandated Material Safety Data Sheet for Garlon, it is "highly toxic" to aquatic life. Alongside the creek is a day camp that is attended by children year around. Do their parents realize that this toxic chemical is being sprayed repeatedly in proximity of their children?

More fortunate "natural areas" have essentially been abandoned by the Natural Areas Program. Tank Hill has not been gardened by the NAP staff for several years. It has been spared the spraying of herbicides. However, it is visited by an unsupervised volunteer who hacks at the trees that remain. In other words, so many acres of parkland have been designated as "natural areas" that the staff is unable to garden them and is unable to supervise the volunteers who are free to do whatever they want in them, including mutilate trees.

2. The conditions that supported native plants in San Francisco have changed

One of many questions that was asked during the public comment period for the Initial Study was: is it still possible to sustain native plant gardens in San Francisco, given the radical changes in underlying conditions, e.g., higher levels of Carbon Dioxide, higher temperatures resulting from climate change and urban heat effect, changes in soil as a result of non-native vegetation, etc.?

This is one of many questions that were raised at the time of the Initial Study that are neither acknowledged nor answered by the DEIR. We will therefore ask and answer this question because it is our last opportunity to do so. The evidence that the ranges of native plants and animals have changed is overwhelming. We should not be surprised that the Natural Areas Program has had little success in achieving their goals after 15 years of effort. NAP and its supporters would like the public and the City's policy makers to believe that its lack of success is because they are not adequately funded.

[2] http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7444.html

3

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Even if the City had the resources to substantially increase the staff of the Natural Areas Program—and chose to use them for that purpose--we would not see a substantially different outcome from their efforts. To demonstrate the futility of this effort, we turn to the living roof on the California Academy of Sciences.

When the California Academy of Sciences reopened in Golden Gate Park in August 2008, its "living roof" was considered its most unique feature. Thirty species of native plants were candidates for planting on the roof. They were planted in test plots with conditions similar to the planned roof and monitored closely. Only nine species of native plants were selected for planting on the roof because they were the only plants that were capable of self-sowing from one season to the next, implying that they were "sustainable." A living demonstration of "sustainability" was said to be the purpose of the living roof. [3]

So what have we learned from the living roof about the sustainability of native plants in San Francisco? Two of three of the predominant species on the roof after 2-1/2 years were native. The third—moss--is a "cosmopolitan" species that occurs everywhere. It is not considered native or non-native. It was not planted on the roof and therefore should be considered "invasive" in this context. The Academy's monitoring project has divided the roof into four quadrants. By February 2011, **non-natives outnumbered natives in two of the quadrants.** Although natives outnumbered non-natives in the other two quadrants which are actively gardened, non-natives were also growing in these quadrants.[4]

08 (Cont.)

The consultant hired by the Academy to plan the roof garden, Rana Nursery, advised the Academy to walk the streets of San Francisco and identify the plants growing from the cracks in the sidewalks. These are the plants he advised the academy to plant because these are the plants that are adapted to current conditions in the city. The academy rejected this advice because they were committed to planting exclusively natives on the roof.

The designer also advised the academy not to irrigate the roof, because the point of the roof is that it is a demonstration of sustainability. Again, the academy refused because they knew that without irrigation most of the native plants would be brown during the dry season, roughly half the year. They wanted the public to believe that the plants that are native to San Francisco are beautiful year around.

There is a lesson here for anyone who is willing to learn from it. The living roof is not natural because it is irrigated and intensively gardened (e.g., weeded, fertilized, replanted, reseeded, etc.[5]), yet non-natives not only found their way there on their own, but were dominating it within only 2-1/2 years. Native plants are not sustainable in San Francisco without intensive gardening effort. The living roof on the Academy is a tiny fraction of the acres that have been designated as "natural areas." The Academy is one building in Golden Gate Park. All of Golden Gate Park is about the same acreage as all of the 1,100 acres of "natural areas."

Peter Del Tredici has been telling us this for several years. He is a Senior Research Scientist at the Arnold Arboretum at Harvard University and a Lecturer in the Department of Landscape Architecture at the Harvard Graduate School of Design.

In a recent publication, he advises the managers of public lands in urban areas to abandon their fantasy that native plants are sustainable in urban settings:

[3] http://www.calacademy.org/academy/building/the_living_roof/

[4] *http://www.calacademy.org/pdfs/living-roof-project-results.pdf.*

[5] "High Maintenance Superstar," Linda McIntyre, Landscape Architecture, August 2009.

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> **"The notion that self-sustaining, historically accurate plant associations can be restored to urban areas is an idea with little credibility in light of the facts** that 1) the density of the human populations and the infrastructure necessary to support it have led to the removal of the original vegetation, 2) the abiotic growing conditions of urban areas are completely different from what they were originally; and 3) the large number of non-native species that have naturalized in cities provide intense competition for the native species that grew there prior to urbanization."[6]

Sure, he says, we can grow native plants, but they require at least the same amount of effort as growing any other plant and are therefore just another form of gardening: "Certainly people can plant native species in the city, but few of them will thrive unless they are provided with the appropriate soil and are maintained to the same level as other intentionally cultivated plants."

He concludes that native plant advocates are making a "cultural value judgment:"

08 (Cont.)

> "...people are **looking at the plant through the subjective lens of a cultural value judgment which places a higher value on the nativity of a given plant than on its ecological function**. While this privileging of nativity may be appropriate and necessary for preserving large wilderness areas or rare native species it seems at odds with the realities of urban systems, where social and ecological functionality typically take priority over the restoration of historic ecosystems."

Conclusion

The Maintenance Alternative is the only viable alternative going forward.

- **The Natural Areas Program has had 15 years to demonstrate that destroying trees and spraying our parks with herbicides will enable them to recreate sustainable native plant gardens. They have failed.**
- **NAP has little to show for the destruction of hundreds of healthy trees, the use of gallons of toxic herbicides, and the investment of millions of dollars of taxpayers' money.**
- **At a time of extreme economic sacrifice, it is unseemly to suggest that further destruction of trees, poisons spread and money squandered would be worthwhile.**
- **Furthermore, greater sacrifice of money, trees, and public safety will not result in sustainable native plant gardens.**

Mary McAllister
marymcallister@comcast.net

October 24, 2011

[6] "Spontaneous Urban Vegetation: Reflections of Change in a Globalized World," Nature and Culture. Winter 2010, 209-315.

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Attachment A

Mary McAllister, 2484 21st Ave., San Francisco, CA 94116

May 4, 2004

Commissioner John Murray
Recreation and Park Commission
City and County of San Francisco

RE: Forest Assessment for Stern Grove/Pine Lake Park

Dear Commissioner Murray:

The staff of the Recreation and Park Department has destroyed and/or mutilated many healthy trees (see attached photos) at the western end of Pine Lake Park recently, compromising the windbreak for this heavily forested park of aging trees. Therefore, I am writing to ask that a complete wind study be conducted to determine the impact of the massive tree destruction proposed by the forest assessment that you will consider for approval.

In brief, the tree assessment proposes the following tree removals for this park:

- Removal of 550 hazardous trees (15% of all trees)
- Reduction of overall density of the forest by 50%
- Removal of healthy eucalyptus in several selected areas

I requested only one revision of the proposed plans. I asked that healthy trees not be removed from the western end of Pine Lake Park. This park is essentially a wind tunnel, a windward facing, upward sloping canyon that accelerates the wind. I asked that the windbreak be preserved to the extent possible, i.e., that healthy trees not be removed. Although I spent 6 months negotiating in support of this small request, I was only successful because I appealed to my District Supervisor who in turn asked the Stern Grove Festival Association for their support. The report was finally changed at the request of the Festival Association.

This proved an empty victory. While I was negotiating for the revision of the report, the Natural Areas Program was expanding their native plant garden into the western end of the park in which natives had not previously existed. As you may know, the plants that are native to San Francisco are not shade tolerant. Therefore the trees in this new native plant reserve were destroyed and the surrounding trees were limbed up approximately 50 feet to the canopy. Furthermore, the trees that were destroyed were not posted 30 days in advance, as required by law (Park Code 3.19).

If massive tree failure occurs in this park, resulting in the destruction of property or life, the Recreation and Park Department will be liable for compensation because there is substantial public record that these failures were predicted and could have been avoided by responsible preventive measures. Please note that there are 360 acres of non-native trees in the so-called "natural areas". They are all in jeopardy of being destroyed.

Sincerely,
Mary McAllister

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Public Comment

Draft Environmental Impact Report for Natural Resource Areas Management Plan

RE: Flawed Public Review and Comment Process

The public review and comment process for the Draft Environmental Impact Report (DEIR) for the Significant Natural Areas Resources Management Plant (SNRAMP) was severely compromised by:

1. **A major mistake in the identification of the "Environmentally Superior Alternative" and the refusal to correct that mistake during the public process**
2. **The last minute rescheduling of the public hearing by the Planning Commission which prevented many concerned citizens from commenting at that hearing**
3. **The refusal to inform the public of the extension of the deadline to October 31, 2011**

These errors and policy decisions will materially prejudice the public comment and therefore expose the DEIR to a legal challenge that will require that the process be repeated.

1. **The refusal to correct the mistake in the DEIR about the "Environmentally Superior Alternative"**

The Summary of the DEIR at the beginning of the document says that the "Maximum Restoration Alternative" is the "Environmentally Superior Alternative" (page 2). This is a mistake. The "Maximum Restoration Alternative" is NOT the "Environmentally Superior Alternative." The "Environmentally Superior Alternative" is the "Maintenance Alternative." The correct statement does not appear in the DEIR until the very end of the document:

09

> "**The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative**. Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance Alternative would be the environmentally superior alternative for two reasons. **While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative.** First, the Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. **For these reasons, the Maintenance Alternative is the environmentally superior alternative.**" (DEIR, page 525-526) (emphasis added)

Attached is my email correspondence with Jessica Range, the staff member in the Planning Department responsible for the environmental review process, about this error. Ms. Range acknowledges the error, confirms that the "Environmentally Superior Alternative" is the "Maintenance Alternative," but refuses to correct the error until the public comment period is over. (See Attachment A)

Few readers will read a document that is over 500 pages long. This mistake will therefore mislead the public into supporting the "Maximum Restoration Alternative" which expands the destructive and restrictive aspects of the Natural Areas Program. Furthermore, and perhaps more importantly, this expansion is NOT legal because it violates the requirements of the California Environmental Quality Act (CEQA), which requires that the "Environmentally Superior Alternative" have the least negative impact on the environment of all proposed alternatives:

1

McAllister-3

"§21002. APPROVAL OF PROJECTS; FEASIBLE ALTERNATIVE OR MITIGATION MEASURES
The Legislature finds and declares that it is the policy of the state that **public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects**, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." CEQA Guidelines, page 2 (emphasis added)

This mistake will profoundly prejudice the public review and comment period. The mistake was exacerbated by the refusal to correct the mistake before the public process was complete.

09 (Cont.)

Although the mistake was verbally acknowledged by the staff of the Planning Department at the beginning of the public hearing on October 6th, it was characterized as a "typographical error." The dictionary definition of "typographical error" is: *"an error in printed or typewritten material resulting from a mistake in typing or from mechanical failure or the like."*[1] It is an insult to the public's intelligence to characterize the substitution of an entire phrase ("Maximum Restoration Alternative") for another ("Maintenance Alternative") as a typographical error. Trivializing this error further misleads the public by failing to acknowledge the substantive differences between these alternatives. The "Maintenance Alternative" is at the opposite extreme from the "Maximum Restoration Alternative" in the range of alternatives.

The "Maximum Restoration Alternative" proposes an expansion of the active restoration efforts of the Natural Areas Program to 100% of all acreage designated as "natural areas." This represents a 73% increase in the acres subjected to tree removals, recreational access restrictions, and the planting of endangered plants and animals that could potentially require further access restrictions.

2. The public hearing for the DEIR limited public comment

The public review and comment process was further compromised by the last minute decision to hold the public hearing by the Planning Commission earlier than originally announced. The public hearing was originally announced to begin at 1:30 pm on October 6th. Shortly before the hearing, the starting time was moved up to noon.

10

The public was further confused about the timing of their opportunity to speak to the Commission about the DEIR by the placement of the item on the agenda. The DEIR for the SNRAMP was item number 13 on an agenda with 19 items. The public had no way of knowing when the 13th item would be heard. Many naturally assumed that it would not be at the beginning of the hearing. They were wrong.

The public comment period on the DEIR for the SNRAMP was completed by 2 pm. Many people came to the hearing, hoping to speak, only to find that they had missed the opportunity to do so.

A few people arrived in time to speak, but didn't arrive in time to hear the staff of the Planning Department acknowledge the mistake about the "Environmentally Superior Alternative." Therefore, they wasted their public

[1] Webster's Collegiate Dictionary, Random House, 1991

10 (Cont.)

comment by focusing on an error that the Planning Department had made a commitment to correct. No one showed them the courtesy of telling them during the hearing that the error would be corrected.

There are many neighbors of the so-called "natural areas" who have been following this issue for 15 years. They were deeply committed to speaking and they were deprived of the opportunity to do so by the change in the time of the hearing.

3. The public was not adequately informed of the extension of the deadline for comment

11

The President of the Planning Commission requested at the public hearing on October 6th that the deadline for written public comments be extended to October 31st. No effort was made to inform the public of this extension of the deadline. I asked (in writing) the Planning Department to inform any member of the public that had been informed of the original deadline of October 17th of this extension. That request was refused.

I have been following the destructive native plant restorations in the San Francisco Bay Area for 15 years. I have therefore received several EIRs and EISs for public comment. When there were extensions of the comment deadline, I received written notification of that extension. Based on that experience, I believe it is standard practice to notify members of the pubic who have expressed an interest in an EIR/EIS of an extension of deadlines.

Such refusal to provide the public with notification of the extension of the deadline will further compromise the public review process.

Conclusion

09 (Cont)

The public review and comment process was severely compromised by a serious mistake and by several actions of the Planning Department staff. The appropriate legal remedies for these mistakes are:

10 (Cont)

- **Correct the DEIR by accurately identifying the "Environmentally Superior Alternative"**
- **Distribute the corrected DEIR in the same manner as the original was distributed**

11 (Cont)

- **Announce another public hearing along with the corrected DEIR**
- **Announce another deadline for written public comments that is at least as long as the original period**

The public review and comment period for the DEIR for the SNRAMP has been a stunning display of unfair dealing with the taxpayers who are paying for this project. It is experiences such as this that turn taxpayers into protesters.

Mary McAllister
marymcallister@comcast.net

October 24, 2011

McAllister-3

Attachment A

----- Original Message -----
From: <Jessica.Range@sfgov.org>
To: "Mary McAllister" <marymcallister@comcast.net>
Sent: Thursday, September 22, 2011 10:19 AM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Dear Ms. McAllister,

Please submit your comments to the Planning Department's Environmental Review Officer and we will address your comments in the Comments and Responses document.

Thank you,
Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409
www.sfplanning.org

"Mary McAllister" marymcallister@comcast.net
To Jessica.Range@sfgov.org
09/22/2011 08:18 AM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Ms. Range,

Thank you for your reply. This error will seriously compromise the public comment period because the majority of readers will be unaware of it. The error is made on page 2 of the document and is therefore prominent to readers. Few, if any readers will read the entire document to find the correct statement that does not appear until page 525 of the document, nearly the last page of the document. The error will profoundly prejudice readers to a project alternative that is not preferred by the environmental analysis.

I respectfully request that the document be corrected and recirculated with the correction of the error prominently displayed to readers. When the document has been corrected and recirculated, a new comment period should be announced of equal length to that first announced.

The SNRAMP was approved by the Recreation and Park Department in August 2006. The environmental review has therefore been in process for over five years. It is pointless to jeopardize the environmental review by rushing it after a long delay and a large investment of public funding in its preparation. After five years, another month is an inconsequential further investment in the process.

Without such a remedy, the public comment period will be fatally flawed and will expose the City to legal challenges to both the document and the process used to review and certify it, thereby adding to the expense of the environmental review at a time when public funding is scarce.

Please inform me of the decision to correct this serious error.

Thank you for your cooperation.
Mary McAllister

McAllister-3

----- Original Message -----
From: <Jessica.Range@sfgov.org>
To: "Mary McAllister" <marymcallister@comcast.net>
Cc: <john.bock@tetratech.com>
Sent: Wednesday, September 21, 2011 4:16 PM
Subject: Re: Question about the Draft EIR for the Natural Areas Program

Ms. McAllister,

You are correct in that there is a contradictory statement in the EIR. The discussion on page 525 contains the detailed analysis of which alternative is the environmentally superior alternative. The discussion on page 2 is incorrect and will be revised in the Comments and Responses document. I
am copying the EIR consultant on this email to keep Tetra Tech in the loop.

Thank you for pointing this out.
Regards,
Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409
www.sfplanning.org

"Mary McAllister" marymcallister@comcast.net
To "Jessica Range"
09/21/2011 01:26 PM
Jessica.Range@sfgov.org>
Subject Question about the Draft EIR for the Natural Areas Program

Hello Ms Range,
I have a question about the Draft EIR for the Natural Areas Program. There are two statements in the DEIR that appear to be contradictory. Can you reconcile these seemingly contradictory statements? If not, can you refer me to someone who can?

Page 2: *"The Maximum Restoration Alternative is the Environmentally Superior Alternative."*
Page 525: ***"The Maximum Recreation and the Maintenance Alternatives are the environmentally superior alternatives** because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative."* (emphasis added)

Thank you for your help to under[stand] the DEIR.
Mary McAllister

McCalla-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:12 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Please keep dog play areas open!

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:12 AM ----



Kim McCalla
<kimmccalla@gmail.com>
10/31/2011 07:17 AM

To bill.wycko@sfgov.org
cc
Subject Please keep dog play areas open!

Dr. Mr. Wycko,

The risk of losing a significant amount of dog play areas is very troubling to me. My quality of life, as well as my dogs, is made so my richer with the current open spaces for which I can explore with my dog. In fact, I held off on rescuing a dog for 10 years; until I was able to buy a home of my own. And it wasn't until then that I felt secure and responsible enough to get a dog...which I did 4 years ago. Since then, I have seen so much more of this beautiful city, and the surrounding bay area, because of the adventures we take every weekend. It truly is a wonderful thing to take a walk/hike/run in this wonderful area with your fury friend.

Without the ability to explore these areas with my dog, off leash, I guarantee that I would never have visited most of them. I am one of the many, many, RESPONSIBLE people who have CONTROL over their dog(s), RESPECT the environment we are in, and routinely enjoy these areas.

I implore you to not support a plan that will reduce the amount of off leash dog areas in this city and it's surroundings. When you consider the sheer number of active dog owners in the bay area you quickly realize that the existing off leash open space areas are already at a minimum. One visit to Fort Funston or Crissy Field on any given weekend day (or week day, for that matter) will give you an idea of the massive volume of dogs that enjoy it. Reducing these types of areas will force other areas to become dangerously crowded. 01

Another group of people who will be severely impacted are the dog walkers. What do you think will happen to these professionals when their "office" is reduced so drastically?

I speak from experience when I say that the number of ill mannered dogs and, hence, ill mannered dog owners, are the minority. And I wish for there to be consequences for those folks. Perhaps the threat of fines could be introduced to discourage bad behavior (people who let their dogs out of their site, bring *overly* aggressive dogs, do not pick up their dogs waste, etc). 02

Thanks you for your time to read my concerns,

Kim McCalla

McGinnis-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:28 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR comment

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:29 AM -----



Paula McGinnis <pmcginni111@comcast.net>
10/28/2011 06:12 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR comment

Dear Mr. Wyco,
I oppose the closure of any off-leash dog-friendly park. As a recently retired senior citizen, I am especially interested in keeping (even creating) areas where I can walk for exercise along with my off-leash dog, in contrast to small fenced areas. As the population ages, accessible (i.e. flat enough to walk comfortably) areas for activities become more and more important. Although I do not live in San Francisco, I often visit a resident friend in order to walk together with our dogs. Please do not close any off-leash parks unless scientific studies show that there are significant negative impacts, and don't forget to include the environmental impact created by forcing people to drive farther to get to a park.
Sincerely,
Paula McGinnis
Berkeley, CA

01

Miller-E-1



Chelsea Fordham/CTYPLN/SFGOV
10/28/2011 11:03 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV, Sarah B Jones/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Glen Canyon Park

—Forwarded by Lisa Gibson/CTYPLN/SFGOV on 10/26/2011 10:41 AM—



Bill Wycko/CTYPLN/SFGOV
10/25/2011 01:14 PM

To Lisa Gibson/CTYPLN/SFGOV@SFGOV, Jon Swae/CTYPLN/SFGOV@SFGOV
cc
Subject Fw: Glen Canyon Park

—Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/25/2011 01:14 PM—



"eric" <emiller1@gmail.com>
10/25/2011 01:08 PM

To <bill.wycko@sfgov.org>
cc
Subject Glen Canyon Park

Dear Mr. Wycko,

01 As a Glen Park resident, homeowner, and parent I am horrified at many of the key elements planned by your department for Glen Canyon Park. As I read the impact report your department published I am appalled at the surrealistic objectives you and your fellow bureaucrats have established for the park. Your plan is the apex of SF governmental absurdity - in the midst of the starkest economic crisis since the Great Depression, massive SF budget deficits, reduction in essential services, and cuts in programs for our children you are going to spend our taxes to chop down 120 beautiful Eucalyptus trees and an unspecified number of Willow trees, close "social trails," deny access to rocks my kids like to climb, make "pools inaccessible to the public," so you can plant "native" grasses, reintroduce a damselfly, and install larval host plants, etc.?!? It seems you feel Glen Canyon Park is your department's petri dish instead of a city park? Your plans have been challenged as absurd and misguided by a Distinguished Professor of Evolution and Ecology at UC Davis and other well informed scientists, ecologists, and citizens and yet you will proceed?

It seems your plan and your attitude, if not the very existence of your job (SF could probably better benefit from an extra fireman or policeman) are a clear example of local government gone wrong. The vast majority of Glen Park citizens are not aware of your plans to waste tax revenue on what can be best described as a misguided micro-ecology experiment on our park. The group of parents whose children play in the park are unaware of your specific plans—I have no doubt they anticipate an rational improvement of the park and playground. A chance encounter with a local ecologist is the only reason I'm aware of your plan—with the deadline for final commentary looming it seems you may get your way.

Miller-E-1

If you proceed with this buffoonery I will take it upon myself to go door-to-door in Glen Park, canvass the annual GP festival, work the parent Montessori and soccer team network, gather petition signatures, and conduct whatever other civic action is necessary to ensure the political hack who oversees your department is never elected again. If it is possible to float a petition to defund your obviously out-of-control department I will do that as well.

My natural bias is to trust my local government to make sound choices and establish rational priorities – your plan has violated that trust.

Sincerely,

Eric Miller

Miller-E-2

From: eric <emiller1@gmail.com>
Sent: Wednesday, May 23, 2012 9:22 PM
To: Wider, Lori
Cc: Wycko, Bill; Range, Jessica
Subject: RE: Significant Natural Resource Areas Management Plan Draft EIR

Dear Ms. Wider -

Given that we have limited time before the current comment period expires, we would like to focus the City's attention on the big picture. The bottom line is that the City has failed to address our due process concerns. Our review of City requirements was meant to be illustrative, not exhaustive, and to emphasize that where significant private property interests are at stake (e.g., where construction or tree removal is planned on neighboring properties), notice to affected residents is required. This notice is required not only by local law, but also as a matter of constitutional law. In our initial letter, we offered examples of concrete ways in which San Francisco property owners will be impacted by the City's proposed project. There may be other impacts not detailed in our letter. For multiple legal reasons, we believe the City is obligated, in light of the magnitude of the project and the severity of the impacts, to notify city residents (especially affected property owners and park users) about the project with sufficient time to allow them to be involved in decision making.

01

We understand from your recent responses that you are unwilling to: (1) modify the April 27th notice to more clearly set forth the impacts of the proposed project; (2) notify property owners within 150 feet of affected parks; (2) post notice in and near the affected parks; (4) hold a public hearing on the project; or (5) or extend the notice period beyond June 11th.

We believe your response is deficient and we are considering our political and legal options in this regard. In the meantime, we would like to request that the City provide us with a list of property addresses located within 150 feet of affected parks, so that we can attempt to contact such property owners ourselves prior to expiration of the current notice period. We also would like to request that the City allow members of the SFFA to post the City's notice of the project in and near affected parks.

Please respond to these requests by close of business on May 25.

Thank you for your responsiveness in this matter.

Eric Miller

Miller-J-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Don't reduce or close
Date: 10/04/2011 05:12 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 05:13 PM -----

"Jennifer Miller" <millerjen@aol.com>

To <bill.wycko@sfgov.org>
cc

10/04/2011 05:02 PM Subject Don't reduce or close

01 I want to add my voice to the objection of closing all DPAs in Management Areas 1 and 2. If they, and those spaces like them, SF will become an even more difficult place to live in. The desirability of living in this city is closely tied to the ability to escape with my dog in not only 'non-urban' spaces but the variety of environments to do so. In my experience, those people that respect the non-dog people, environment, and picking up after their dogs are the vast majority. Like in any group, there are careless people (with kids, cars, bikes, etc) and education is an ongoing process!

Jennifer Miller
San Francisco

Miller-N-1

RECEIVED
OCT 17 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

October 10, 2011

Bill Wycko
Environmental Review Officer
Planning Dept
1650 Mission St
SF CA 94103

Dear Sir

In reference to the Natural Areas program desire to limit or deny the presence of people with dogs, I am very concerned that any group would wish to deny another groups right to freedom of recreation. We have co-existed peacefully. We, the dog owners, do not wish to deny the NAP their rights, and I sincerely hope that we can both peacefully continue to enjoy our rights as we have in the past.

01

We are a peaceful group. Many of us have gardens and respect all growing things (except some weeds)

Sincerely

Norma A Miller

NORMA A MILLER
246 Athens Street
San Francisco CA 94112

Miller-N-2



Bill Wycko/CTYPLN/SFGOV
06/04/2012 05:53 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP Plan

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/04/2012 05:53 PM ——



Norma Miller <normam20@msn.com>
06/02/2012 03:54 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc Melinda McMurray <lindymcm@aol.com>, "selbygang@att.net" <selbygang@att.net>
Subject NAP Plan

01

In meetings with several individuals and one group of friends, I learned that none of them had heard of NAP's plans either by direct contact or by public means; i.e. Newspapers or television.

It seems too important and far-reaching a plan to be carried out without general public input. I hope we will be able to be well-informed before action is taken and irreversible harm is done to our environment,

Mills-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:09 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:10 PM ----



Claire Mills
<clareble@yahoo.com>
10/31/2011 03:37 PM

To bill.wycko@sfgov.org
cc Mark Farrell <FarrellStaff@sfgov.org>
Subject NAP EIR

Dear Mr. Wycko,

As an environmentalist with a degree in Environmental Studies, a member of the Sierra club and avid city parks against the SF Recreation and Parks Department's plans to destroy 18,000+ trees and reintroduce "native" and er their stead. This plan would limit the SF humans' and their pets' access to the parks we pay tax dollars to RECR

01 The SF Recreation and Parks Department should remove "Recreation" from it's title if this plan goes forward. If planted and their areas then closed off for recreation, it seems this would not be under the mission of a city recre but under a natural preservation zone. Such an area would not make sense to put in a densely populated city env

02 The EIR's arguments to remove off leash dog areas are not solid and ignore the actual usage of these areas by the EIR's analysis is incomplete and bases many arguments on "potential" negative impacts not on actuality. Who is sunshine and inclement weather 365 days a year? People with dogs are.

When I got my degree in Environmental Studies and Geography at San Francisco State in 1989, there were great Native Plant Society and their unbalanced views of nature in city areas. I remember a story among other well-ci group of fanatics which was that one member was disgusted with the British for bringing some non-native specie California and therefore snuck poison ivy into England for revenge. I am terrified that members of the Native Pl infiltrated the Rec and Parks Dept of our great city and have put forward such an incompatible plan with our Urb With the health department's focus on obesity, how can a plan like this that limits access to recreation areas be ac acquire dogs to get them out into nature, get them exercising and get them socializing. It's scientific fact that do blood pressure in people. Shouldn't we try to improve life where we live instead of reduce it's quality? The SPC off leash areas to keep aggression down in dogs. The dog community in San Francisco is well known and provic belonging and community to many neighborhoods. To repeat a statistic I'm sure you know, there are more dogs children. This reflects the importance of dogs in the lives of the city's inhabitants, voters, tax payers or however EIR's are to take into consideration the impact on the communities that surround the areas in question and this or I ask how can a dog chase a ball on a leash? I have suffered some immobility issues over the last year due to foc medical procedures. When I had my foot in a boot for 4 months and could barely walk a couple blocks on a goc areas I could drive to to let my dogs run free, I could not have managed. I could walk to pick up after them but t provide exercise was medically not recommended or possible. We must think of the handicapped. My experien heart to the needs of people with mobility issues with service dogs. Those dogs also need exercise.

03 If an alternative must be chosen, please support the Maintenance or Maximum Recreation Alternatives and pleas CITY parks, not Yosemite.

Mills-1

01
(cont.)

For a final more globally based environmental question, how can a country that "scolds" Amazonians, Guatemal tearing down trees for subsistence needs like fuel and/or to grow food have the guts to rip down trees that keep c the word "native" which seems a very disputable word. I must contest this proposal.

Thank you and I hope you truly consider the views of this city's most populous residents, the dog owners.

Claire Mills
2820 Greenwich Street #2
San Francisco, CA 94123

Milstein-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 12:30 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 12:30 PM----



Prabha Milstein <p2mil@sbcglobal.net>
05/16/2012 10:35 AM

To bill.wycko@sfgov.org
cc
Subject NAP

Dear Mr. Wycko:

I live on Mt. Davidson in the city. I have been very upset with the constant reapplication of pesticides, as I walk my dogs there. I also am upset at all the trees that have been felled in the last two years. This is one of the very few places left in the city that is still a forest, a little refuge. My husband went out and talked to some of the folks from Parks and Rec while they were spraying pesticides, as well as cutting back thickets. They told him that the SF Forest Alliance was an extremist group. Perhaps it would be helpful if others knew just what the NAP's purpose was, as well as the fact that the city has a budget crisis and this is an enormous waste of taxpayer money. Thank you for your time.

01

Sincerely,
Prabha Milstein, LMFT
415.200.8093
www.pmilsteintherapy.com
p2mil@sbcglobal.net

Miner-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:26 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Writing in support of maintenance alternative

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:27 AM ----



Laura Brunow Miner <lbrunow@gmail.com>
10/29/2011 02:22 PM

To bill.wycko@sfgov.org
cc
Subject Writing in support of maintenance alternative

01 Hi Bill! As a responsible dog owner in SF without a backyard, dog walkers and dog parks are a necessity in my life. Please consider the Maintenance Alternative to the City Parks Plan to maintain more space for our furry friends. Thanks!

LBM

Minsuk-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:21 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: comments on NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:21 AM ----



"Sue Minsuk" <sue.doggie.doright@gmail.com>
10/30/2011 11:06 AM
Please respond to <sue@doggie-do-right.com>

To <bill.wycko@sfgov.org>
cc
Subject comments on NAP EIR

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

02 I am a dog owner, like so many other San Francisco residents and also a professional pet dog trainer. I have been walking and training dogs in the proposed restricted areas for over 15 years. The Natural Areas Program already plans to eliminate dog play areas in San Francisco city parks, and if it is expanded, it could eliminate large swaths of off-leash dog walking areas at McLaren Park and Bernal Hill. I walk my dogs in these parks and appreciate the fact that they are large enough that I can get some exercise while also exercising my dogs. If these large off-leash areas are made smaller or eliminated, it will negatively impact me and thousands of other dog enthusiasts in San Francisco.

Meanwhile, there is currently no way for San Francisco residents to propose new dog play areas in city parks. Thus the NAP could take away our current areas and leave us with no way to propose new dog play areas.

San Francisco is a city with limited open space. I rely on the open spaces we do have to get out into the outdoors and get some exercise. We cannot afford to give up recreational space in San Francisco to make way for more native plants. Less recreational space will negatively impact the quality of life in our city.

03 I urge you to implement the maintenance alternative and not to implement the maximum

Minsuk-1

03 (Cont.) restoration alternative or any other alternative that will take away recreational space in San Francisco city parks.

Sincerely,

Sue Minsuk
Doggie Do Right Dog Training
415-786-9157
sue@doggie-do-right.com

Monagle-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:21 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: GGNRA

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:22 AM -----



Patricia Monagle
<mizmonagle@sbcglobal.net>

10/30/2011 09:22 AM

To "Bill.wycko@sfgov.org" <Bill.wycko@sfgov.org>
cc
Subject GGNRA

01 It will bring such great sadness to so many people and families to have these areas closed off to people and their dogs. So much of the world has been walled off in my 70-year lifetime. We need to be able to walk, hike and take our dogs with us so we can still feel our relationship to the Earth. These are almost sacred places for us, and our lives will greatly impoverished without them.
Sent from my iPad

Moseley-1

RECEIVED
OCT 17 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

October 10, 2011

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: Support of DEIR for Significant Natural Resources Area Management Plan (SNRAMP)

Dear Mr. Wycko:

01 I am writing to give my support to the Draft EIR for the Natural Areas Program. I believe the findings are adequate, accurate and complete and should be accepted by the San Francisco Planning Department.

I have been a volunteer with SF Park and Recreation/Natural Areas Program since 2004. I am familiar with many of the City's Natural Areas such as Bayview Hill, Glen Canyon and Twin Peaks where I have participated in habitat restoration. I look forward to my volunteer days with the Natural Areas Program staff and other committed volunteers. It is time that this plan be adopted and implemented for the good of the whole city.

I think the report addresses impacts where possible as well as proposes practical mitigation measures. The plan lays out a reasonable path for natural resources management for The City and is consistent with other city departments, mandates and plans.

I appreciate having the opportunity to comment on this important issue. I hope it is passed favorably.

Regards,

Elizabeth A Moseley

Beth Moseley
136 Guerrero #303
San Francisco, CA 94103

Moyer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:17 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR / No reduction of off-leash areas

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:17 PM ——



Leigh Moyer <leighmo@sbcglobal.net>
10/31/2011 01:56 PM
Please respond to Leigh Moyer <leighmo@sbcglobal.net>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc Leigh Moyer <leighmo@sbcglobal.net>
Subject NAP EIR / No reduction of off-leash areas

Dear Mr. Wycko,

I am a SF resident, and I have two small dogs, which were both rescued from shelters. I walk daily with my two dogs on Bernal Hill, after I finish work. My dogs are well behaved, under voice command, and I pick up after my dogs. In addition to this being my main form of exercise, there is also a social aspect to walking on the hill, and I have made many wonderful friends and acquaintances by walking my dogs. I adamantly oppose any change in the off-leash area in this park for the following reasons:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

02 2) The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas).

03 3) The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

04 4) The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered.

05 5) I support the Maintenance Alternative, which EIR identifies as being environmentally superior alternatives.

Thank you for taking the above into consideration.

Sincerely,

Leigh Moyer

Mundy-1

October 4, 2011

Mr. Wycko,

01 I am in favor of expanding and opening new dog off leash play areas.

Thank you,
Al Mundy
406 Myra Way
SF 94127

Muniz-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Don't close the Bernal Dog Park
Date: 10/05/2011 09:06 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 09:07 AM -----

Laurel Muniz <lmunizsf@gmail.com>

10/05/2011 06:34 AM

To bill.wycko@sfgov.org
cc
Subject Don't close the Bernal Dog Park

Dear Mr. Wycko:

I am opposed to the closure of the DPA on Bernal Hill. I don't own a dog, but I love walking the hill and meeting friends and fellow Bernal residents that do have dogs. The Bernal DPA is a safe and beautiful place to bring dogs and it must be protected. Kids, dogs, residents- young and old, all mixing together. It's refreshing to see such activity in the middle of an urban area.

01

If the Bernal DPA is reduced in size as purposed, there will be no space for all of this activity. Dogs and their guardians will have no choice but to walk the concrete surfaces in our neighborhood and a years-long tradition of meeting on the hill will be gone.

The Bernal DPA is our URBAN PUBLIC SPACE! Please don't isolate members of our community by closing this area. Keep the Bernal DPA open and free for all to enjoy. Please do not reduce the size of this DPA. Our community needs every inch of this space.

Laurel Muniz
Bernal Resident

Murphy-B-1

Bob Murphy
325 - 14 TH AVENUE
SANTA CRUZ, CA 95062

(831) 475-6037
(831) 475-1942 FAX

RECEIVED
OCT 14 2011
CITY & COUNTY OF S.F
PLANNING DEPARTMENT
M E A

October 13, 2011

San Francisco Planning Department
Attn: Bill Wyco, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department:

The constant avalanche of so-called do-gooders who are trying to end the glorious life of the Sharp Park Golf Course is almost laughable. This majestic piece of gorgeous land has been wonderfully open and available for thousands of people, and many more animals for so many years.

All kinds of interesting animals and a wild variety of birds have had the run and flight of the place for a long, long, time. The fact that some of these players are retired old gentlemen chasing a dream or lovely ladies trying to dodge a little housework or some dirty dishes for an hour or two makes beautiful old Sharp Park even more a treasure than ever before.

Driven by political ideas or the foibles of misguided values, some folks in this day and age just like to take nice things away from people just to show how dedicated they are to their specific causes.

Sharp Park has been there for eighty years, much longer than most of the complainers, and it has produced wonderful fun and exercise for many thousands of people....and, provided marvelous open space for millions of birds (and a good number of "birdies", too), wonderful ambiance and nesting areas.

What better balance could there ever be between birds, animals and a few folks chasing their golf balls and staying well out of the way for all the wild life?

01

God Bless Sharp Park. It is a glorious combination for man, bird, and beast!!!

Sincerely,

Bob Murphy

Bob Murphy

Murphy-D-1

2945 Ulloa St.
San Francisco, CA 94116
October 31, 2011

Bill Wycko
SF Planning Department
Natural Areas Management Plan
1650 Mission St. Suite 400
San Francisco, CA 94103

RE: Significant Natural Resource Areas Management Plan Draft EIR

Dear Mr. Wycko:

We support the draft EIR for the Significant Natrual Resource Areas Management Plan. It makes sense on a number of levels. The San Francisco elements need to be approved because they will guide the restoration of a very small part of our parklands and open spaces within the City.

01 We agree that trees need to be removed in limited numbers. For example at Lake Merced restored areas need to be opened to light so native species can survive. In many cases those trees are eucalyptus which impact soil chemistry and block light from coastal scrub. In other cases the trees may be pines or cypress growing on slopes that are shading out native vegetation. Often these trees sprouted from seeds burried by Western Scrub Jays, so they are not part of a planned parkland. These trees also fall when they reach maturity and cause significant erosion. The plan for removal of selected trees is appropriate and necessary, not only at Lake Merced but in other natural areas.

02 We encourge the removal of Sharps Park Golf Course from the plan. The golf course should be considered in much more detail. In fact, the failure to include the option to remove the entire golf course and restore it to nature should have been included, even if it were not the preferred alternative. The failure to do so suggests a failure in the CEQA process.

Thank you for your attention to this matter.

Very truly yours,

Dan and Joan Murphy

Nagle-1

Mr. Taylor Gowan Nagle
720 Junipero Serra Blvd
San Francisco, CA 94127
(415) 715-8816

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
Email: bill.wycko@sfgov.org

October 31, 2011

REP: Comment to Draft EIR / Natural Areas Program

Dear Mr. Wycko,

I am writing today to comment on the Draft EIR. In particular my family opposes the Maximum Restoration Alternative and supports the Maintenance Alternative

I was born in San Francisco in 1968 and have lived here my whole life. My extended family resides here and I have recently had a child who I plan to raise on the west side of San Francisco. My son and I love the trees and forests of this area; we hike on Mount Davidson, walk in Stern Grove and enjoy the peaceful respite that the dense forests give from the hustle and bustle of the city. The trees and urban forests have shaped my existence during my life here, and I would hate to see them drastically change.

I became aware of the NAP program and their plans to restore native habitat only recently when I observed some cleared areas at Pine Lake in Stern Grove. The cleared and newly planted area was struggling and I wondered why this was done since the nearby forest was flourishing. This piqued my interest and since then I have researched the NAP program and reviewed the Draft EIR, so I feel I have a good understanding of what is at stake here.

01

While I understand NAP's rationale in restoring native habitat in general, I disagree with their aggressive plan to remove non-native trees and brush in the majority of open spaces in the city. I object to their practices, including the spraying of voluminous amounts of herbicides to prevent non-native plants from returning. The areas where they have done their restoration appear to be failing in many instances; to allow the restorations to proceed on a city-wide scale would be in effect rewarding failure.

There are budget concerns as well; can San Francisco truly afford to spend the money to clear and re-plant the amount of forested area envisioned by the NAP EIR? We should spend money on schools, homelessness and a plethora of other pressing matters before we pay to clear forested hillsides.

A compromise is in order; I think NAP should be allowed to do native restorations in un-forested areas where they have less clearing to do. Please leave the older trees and forested areas alone so that the next generation of San Francisco families can enjoy them as much as I have.

Sincerely,

Taylor Nagle

Naima-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:12 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comment on NAP EIR

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:12 PM ——



Reza Naima
<reza@reza.net>
10/31/2011 03:22 PM

To bill.wycko@sfgov.org
cc
Subject Comment on NAP EIR

Bill,

Hi, I've been living in SF in the lower haight for 8 years now, and have recently opened a business downtown. My dog and I frequent duboce park, alamo square, crissy field, fort funston, and other offleash dog areas. The large presence of off-leash dog play areas was a very important factor in my decision to move to San Francisco.

I am writing in response to the solicitation for comments on the proposal to reduce the off-leash dog play areas. I am very opposed to the reduction of off-leash and would like you to consider the following.

- I feel that biggest negative factor affecting the parks is the maintenance staff of the parks, and the presence of dogs - especially at night - have made the parks a much safer environment by keeping drug dealers, and other unsavory individuals out of the parks (thanks to the responsible owners).
- Examples I've seen of the problems caused by maintenance staff at the parks:
  - No automated sprinkler system has been installed at duboce park and thus someone needs to turn the sprinklers on/off manually. I've found the park flooded many times by having the sprinkers not turned off
  - Drainage has been a huge problem at duboce park, and although the park service promised to do something about it years ago, no solution has been deployed. the park has recently been aerated, but this is a stop-gap solution and it should have happened years ago.
  - The excessive amount of rain from last year caused the ground to be soft (thanks to the lack of drainage). The maintenance staff would mow the lawn after heavy rains constantly, causing huge trenches to form in the grass from the wheels of the mower digging into the ground. My dog suffered a hip injury as he fell into one of these trenches while chasing after a ball.
  - Additionally, when the ground becomes damaged, and holes form which can be dangerous to individuals and dogs who can trip in them, they are not filled for weeks.

01

Naima-1

01 (Cont.)
- A gardener sprayed pesticide/herbicide at a local park that a friend frequents and did not post any signage. The position got into my friend's dog's system and almost killed him.
- There have been reports in the papers of unionized garden workers not planting plants and instead giving them out to friends while taking the day off

02
- If the fear is that dogs will damage plants, wouldn't adding fencing or other means of isolating dogs from vegetation be a more effective solution than to ban off-leash dogs?
- The NAP EIR provided no evidence that dogs have an impact on plants and wildlife. Is this all from wild speculation or is there any proof that can substantiate such a dramatic change in the city policy.
- Quite the opposite, the NAP EIR does not take into account scientific studies that show off-leash dogs have little impact on plants and wildlife

03
- the NAP EIR does not take into account the damage caused by people or children

04
- any reduction on the number of off-leash play areas will put more of a strain on the remaining areas. There are more dogs in SF than children (so I've been told) and dogs need places to play. People, like myself, move to SF because it provides an urban environment that is dog friendly. Taking these away (potentially up to 80% given the wording of the proposal) will cause a huge strain on the remaining 20%, making them into unsustainable mud pits.

05
- I'm also shocked that the NAP is planning on cutting down 18,000 healthy trees because they are not-native. Sounds very much like something that happened in germany many years ago to non-native peoples. why? are you going to replace them with 18,000 native trees?

Thank you,
Reza Naima
229 Steiner St

Nelson-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: NAP EIR and off-leash dog areas
Date: Monday, October 31, 2011 4:19:00 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:20 PM -----

Tiffany Nelson <tcn5000@yahoo.com>
10/31/2011 04:17 PM

Tobill.wycko@sfgov.org
cc
SubjectNAP EIR and off-leash dog areas

Dear Mr. Wycko,

I am writing in regard to the NAP EIR and the potential impact on off-leash dog areas. I am a dog owner, live and vote in San Francisco, and enjoy the public parks with my dog, neighbors and friends.

01 I am a member of SFDOG. I fully support UC Professor Arthur Shapiro's analysis of the NAP EIR. In addition, the NAP EIR offers no concrete evidence that dogs negatively impact plants or wildlife. Use of the term "may" in the report reveals the weakness and inadequacy of the report.

02 The NAP EIR's analysis of the impact on dog play areas is inadequate. The NAP EIR's definition of dogs as a "nuisance" discloses its bias against dogs and ignores the scientifically proven benefits that dogs bring to society and nature as an integral part of the environment. Dogs serve humans and nature in numerous, beneficial ways.

03 The NAP EIR fails to recognize the further restrictions on public access to areas planted with "native" and endangered species of plants.

04 Finally, the NAP EIR would have a negative impact on San Francisco's economy with the loss of jobs (e.g., professional dog walkers), more dogs being surrendered to the city shelter for lack of adequate venues for off-leash exercise, and loss of international status as a dog friendly tourist destination.

05 I fully support the Maintenance or Maximum Recreational Alternative and urge you to do the same.

Thank you,

Tiffany Nelson
28th Ave and Clement St.
San Francisco

Norton-1

RECEIVED
NOV 01 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

Bill Wycko
Environmental Review Officer
Planning Dept.
1650 Mission St
San Francisco, CA 94103

Donald Norton / Nancy Sack
4750 25th St
San Francisco, CA 94114
415.309.9502

October 27, 2011

Dear Mr. Wycko,

01 As a concerned citizen and owner of a well-trained dog (puppy 1&2, SFSPCA animal assisted therapy , SFSPCA agility 1&2) it is of vital importance that we maintain the status quo of current off-leash dog areas in San Francisco. By reducing the current size and/or number of off-leash dog play areas, 1) the potential to introduce crowding (an environment where dogs can often get aggressive) and/or 2) Force owners to utilize marginal areas which could end up causing more degradation of NAP areas; grows.

02 As such, I support the "Maintenance Alternative" which Parks & Recreation has designated the environmentally superior option.

Best Regards,

Donald Norton

Nancy Sack

Oliva-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:10 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Significant Natural Resource Areas Management Plan separate out from Sharp Park

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:10 AM -----



Veronica Oliva <veronicaoliva@sbcglobal.net >
10/31/2011 08:24 AM

To bill.wycko@sfgov.org
cc
Subject Fwd: Significan Natural Resource Areas Management Plan separate out from Sharp Park

Begin forwarded message:

From: Veronica Oliva <VERONICAOLIVA@SBCGLOBAL.NET>
Date: October 31, 2011 8:23:45 AM PDT
To: john.rahaim@sfgov.org
Cc: Linda.Avery@sfgov.org
Subject: Significan Natural Resource Areas Management Plan separate out from Sharp Park

RE draft EIR for Significant Natural Resource Areas Management Plan

Dear Mr. Rahaim,

I'm writing to recommend that the Sharp Park and golf course be separated out from the Natural Areas plan.

01 I recommend this so that San Francisco's natural areas can get the stewardship they need without the potentially significant delay the Sharp Park golf course issue could bring.

Thank you for your attention.

Best regards,

Veronica Oliva
33 Seward Street
San Francisco CA 94114
tel 415.337.7707
veronicaoliva@sbcglobal.net

Olliphant-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Please don't restrict off leash access for dogs
Date: 10/05/2011 10:43 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 10:43 AM -----

"Hugh Olliphant" <hugh@wednesdays.com>

To <bill.wycko@sfgov.org>
cc
10/05/2011 10:12 AM Subject Please don't restrict off leash access for dogs

Bill,

I needn't tell you about the positive impacts dogs have on our community. Dog owners make our city's parks safer (e.g. look at the history of Dolores Park). I'm writing to encourage you to think through alternatives to closing off leash dog runs, particularly given that the draft environmental-impact statement by the Golden Gate National Recreation Area has already shown no direct link between dog walking and any environmental damage in GGNRA lands.

01

Thanks,
-H

Hugh Olliphant
225 Murray St, SF, CA 94112
650 814 7476

O'Neill-1

Date: October 21, 2011

RECEIVED
OCT 25 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Mr. Bill Wycko
Environmental Review Officer
Planning Department
1650 Mission Street
San Francisco, CA 94103

Dear Mr. Wycko -

I understand there is currently under review a proposal by the Natural Areas Program of the Recreations and Parks Department to expand the areas impacted by "Natural Areas Habitat Restoration."

I strongly object to this on several fronts.

01 First, as always, this plan would seriously restrict off-leash dog-walking areas available. I am a 64-year old woman who walks daily in McLaren Park with my two dogs. It is a matter of health and well being for us all that we can walk up and down hill for considerable distances. My doctor is always pleased to hear that I am getting this regular exercise - my dogs are inspiration, companion and, should it be necessary, protector. To deny them access to the wonderful open space we now enjoy in McLaren Park would be to deny me an important avenue for maintaining my health. I am sure this is true for many people throughout San Francisco.

Also the fact that there are an estimated 110,000 dogs in San Francisco means there is an ongoing and significant need for off-leash areas and a considerable constituency in support of them. Surely, it is obvious it is far better for dogs, people and our city streets that there are off-leash areas for them to get their exercise. To paraphrase Cesar Milan, "A tired dog is a happy and obedient dog." Nothing allows them to expend their energy in such a happy, healthy way as a good off-leash romp.

02 Finally, putting aside the important considerations regarding why off-lease areas, which this plan would restrict, are so important to dogs and their owners, I question the validity of expansion of the Natural Areas Program on it's face. It seems to me that the Natural Areas Program has as its ultimate goal a restoration of San Francisco to its "natural" state, which they define as limited to flora and fauna dating from a time before major settlement. In order to recapture this environment, they propose:

1. Restricting use of our parks to large segments of San Francisco's population,
2. Destroying healthy living trees and plants because they came into the environment after the time the Natural Areas Program has deemed 'natural' and therefore permissible*, and
3. Introducing toxins into the environment in order to destroy plants and trees not meeting their criteria.

It seems to me they want to turn the City's parks into museums to a time past, rather than living, evolving environments for this City's citizens to enjoy. Let's face it, our lovely Golden Gate Park exists largely outside of the parameters of the "Natural Areas."

It is my understanding they currently are involved in many open areas of San Francisco. While I do not wish to expel them from those areas, I strongly object to their goals being the controlling vision for San Francisco's parks.

Thank you,

Elizabeth O'Neill
312 Athens Street
San Francisco, CA 94112

(* Note: I know there are proponents of "Natural Areas" who would destroy every Eucalyptus tree in San Francisco. One of their claims is that Eucalyptus trees prevent anything else from growing. Well, I walk every day through a Redwood grove in McLaren Park and not much else grows there either. However, it is a lovely place to be. And, I assume given their age, the Redwoods would escape the Natural Areas ax.)

Otto-1

863 Elizabeth Street
San Francisco, CA 94114
October 17, 2011

RECEIVED
OCT 31 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

Mr. Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Draft EIR, Natural Areas Program

Dear Mr. Wycko:

I have lived in San Francisco since 1988 and bought my first home in Glen Park in 1992. Since then I have been a devoted Glen Canyon Park visitor. In fact, I walk in Glen Park almost every morning.

I have never given public comment before about anything in San Francisco. I am a consultant and extremely busy. However, I am so bothered by the use of pesticides by the Natural Areas Program of Park and Recreation that I had to get involved. I have been actively trying for the past year to stop the Natural Areas Program from using Tier 1 and Tier 2 pesticides to "kill" non-native plants.

In San Francisco, the Board of Supervisors legislated that all San Francisco officers, boards, commissions, and departments of the City and County implement the Precautionary Principle in conducting the City and County's affairs. The Precautionary Principle states, "where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the City to postpone cost effective measures to prevent the degradation of the environment or protect the health of its citizens."

01

And yet, the Department of the Environment and the Natural Areas Program justify using Tier 1 and Tier 2 pesticides even though they lack full scientific certainty about how safe they are to use. For Garlon 4 Ultra, a Tier 1 pesticide, the Department of the Environment has told me directly that while there is a study that has been conducted that raises serious concern, the methods of the study are not strong enough to justify outright banning of Garlon 4 Ultra.

I know of so many people, very close friends, who have been diagnosed with cancer in San Francisco. We are all too familiar with corporate claims that there is not strong enough proof that the products they make can be directly linked to cancer. That was the similar case with tobacco. How many people had to get sick and die before the government put restrictions on the sale of tobacco because there wasn't enough proof? There simply is not enough money to test every pesticide thoroughly, and every new variation of a pesticide, to stay ahead of the harm that might be caused.

Otto-1

As citizens, all we can rely on is the information that the San Francisco Department of the Environment and the manufacturer of the pesticides tell us. For Garlon 4 Ultra, the Department of the Environment limits its use "only for targeted treatments of high profile or highly invasive exotics via dabbing or injections. May use for targeted spraying only when dabbing or injection are not feasible and only with use of a respirator."

The Natural Areas Program sprays the whole hillside of Glen Park Canyon with Garlon 4 Ultra to get rid of oxalis, commonly known as clover.

02

The manufacturer of Garlon 4 Ultra publishes in their Material Safety Data Sheet that it degrades slowly in the environment, fails tests for ready biodegradability, is "highly toxic" to aquatic life and "slightly toxic" to birds.

In Glen Park Canyon, along the stream, there are signs heralding this riparian community and how it serves as a resting spot for migratory birds. How ironic that the Natural Areas Program then uses pesticides that are "highly toxic" to aquatic life and "slightly toxic" to birds.

The Precautionary Principle is supposed to be there to protect all of us. I worry about the wildlife that live in Glen Canyon Park and rely on the vegetation to survive. I worry about the pre-school children who come and play in the park everyday. I worry about all the dogs who run on the trails and eat the grasses. And I worry about my city that I love so much ignoring the repeated concerns of its citizens and refusing to alter course.

This doesn't feel like a truly democratic process to me.

I am vehemently opposed to the recommendations of the draft Environmental Impact Report for the Natural Areas Program. The Natural Areas Program has not effectively demonstrated its ability to:

03

1. kill the non-native invasive species it poisons each year – it grows back each spring
2. comply with regulations on how to administer the poisons – they are frequently caught applying the poisons without adequate notice or using appropriate respirators
3. create a sustainable native plant garden without relying on toxic pesticides.

I cannot understand how we would then turn around and give the Natural Areas Program more authority over more land to continue with these same practices.

Sincerely,

Nancy Otto

Pattillo-1

PGA design INC
LANDSCAPE ARCHITECTS

CELEBRATING 30 YEARS

October 27, 2011

Bill Wycko
Environmental Review Officer
Planning Department
City of San Francisco
1650 Mission Street, Ste 400
San Francisco, CA 94103-2479

RE: **Sharp Park Golf Course – Historic Resource Evaluation**

Dear Mr. Wycko,

I have reviewed Appendix C of the DEIR for the *Significant Natural Resource Areas Management Plan: Sharp Park Golf Course* and question the determination of eligibility for listing on the National Register of Historic Properties (NRHP). On page 5-4 the author suggests that Sharp Park Golf Course has historic significance under Criterion A and C under the NRHP and Criterion 1 and 3 for the California Register of Historic Resources (CRHR). Criterion C/3 requires that "a property embody the distinctive characteristics of a type, period, or method of construction that represents the work of a master, or that possesses high artistic values". Based on the number and extent of alternations that have taken place since the period of significance (1929 – 1932) I question the validity of finding Sharp Park eligible as a historic resource.

Bulletin 18 "How to Evaluate and Nominate Designed Historic Landscapes,"[1] states "As defined by the National Historic Preservation Act of 1966 and the National Register criteria, to be eligible for the National Register a designed historic landscape must possess significance ..... and integrity of location, design, setting, materials, workmanship feeling and association." Sharp Park Golf Course lacks integrity.

01 The *Historical Resources Evaluation Report* (HRER) prepared by Tetra Tech, Inc. describes many alterations made to the course since 1932. Comparing the course layouts depicted in the two exhibits included in the Evaluation Report[2] one finds very few similarities between how the course was designed and how it exists today.

[1] National Park Service, "How to Evaluate and Nominate Designed Historic Landscapes," *National Register Bulletin No. 18*, p. 6.
[2] The original Sharp Park Golf Links plan prepared by Mackenzie, Hunter & Egen (Figure 3) and the aerial of the Existing Golf Course (Figure 2).

Chris Pattillo Cathy Garrett Christopher Kent
444 - 17th Street Oakland CA 94612
Tel 510.465.1284 Fax 510.465.1256

Pattillo-1

1. The original hole 1 (now hole 11) was a long, straight shot. The reconfigured hole doglegs to the right.
2. The original hole 2 (now hole 12) was a dogleg that wrapped around the south end of the course. Hole 12 is now a lot shorter with no dogleg.
3. The original holes 3, 4, and 8 were destroyed in a big storm and not replaced.
4. The original hole 5 offered multiple fairway options – a unique design feature of Mackenzie. Hole 17 which replaced 5 is a single straight shot.
5. The original hole 6 that ran east-west at the north boundary no longer exists.
6. The original hole 7 appears to be similar to current hole 16 identified on Figure 2 as having been built after 1941, after the period of significance.
7. The original holes 9 and 10 each offered double fairways. The replacement holes 13 and 14 eliminated these special features.
8. The original hole 11 – a short run - appears to be similar to current hole 15.
9. The original hole 12 was a long straight shot. It has been replaced by hole 18 that is longer with a dogleg.
10. The original holes 13, 14 and 15 were on the east side of the county road and generally paralleled the road running north-south. Today this area has four holes that all run east-west.
11. The original hole 16 was a dogleg left replaced by hole 3 a straight shot.
12. The original hole 17 ran east-west and was a long shot with a dogleg. Hole 8, a short, straight fairway replaced it.
13. The original hole 18 was a dogleg. This hole has been replaced by hole 2, a straight shot.

01 (Cont.)

In summary only hole 11 (now hole 15) is similar to the original design. The layout of the remainder of the course has been substantially altered. The change to the order of how the holes are played is significant as it materially alters the sequence and nature of views the player experiences making it unlike what was intended by the designer. Other major changes implemented since the period of significance include:

A. Elimination or reconfiguration of several sand traps.
B. Construction of a seawall in 1941 to prevent flooding of the golf course. This eliminated views to the beach and Pacific Ocean and the essence of the links design concept.
C. Filling a portion of the lagoon as part of the reconfiguration of hole 10.
D. Installation of concrete golf cart paths along the back nine holes in 1996 where none existed previously.
E. Culverting of water features on five holes and the elimination of water hazards – an important component of the original design.
F. Installation of a 4000-gallon pump to help with annual flooding of Laguna Salada.
G. Alternations made between 1985 and 1994 to accommodate female players such as shortening of the fairways.

01 (Cont.)

Pattillo-1

Adding together all of these alterations it is apparent that Sharp Park Golf Course lacks sufficient integrity to qualify as a historic resource under criterion C/3. The course no longer reflects the work of Alister Mackenzie. The land use remains a golf course but otherwise there are few similarities between the course that existed during the period of significance and what remains today.

The Evaluation Report notes that Alister Mackenzie attained status as a master golf course architect. Appendix C on page 4-7 notes, "George Shackelford, in his book *Grounds for Golf*, describes Mackenzie as a master designer and offers that Mackenzie's secret to creating unique courses was his talent for routing." Regrettably, today nothing remains of Mackenzie's unique routing. He continues to explain that his work "was known for its original and distinctive bunkers, with irregular shapes and each with its own design." And "Distinctive bunkering, the use of small hillocks around greens, and exciting hole locations were Mackenzie's trademark".

Another of Mackenzie's trademarks was his talent for working with natural landform and subtlety integrating his courses with a site's topography to take full advantage of the unique qualities of each site. Quoting from the HRER, "Mackenzie felt that the success of golf course construction depended entirely on making the best use of natural features and devising artificial ones indistinguishable from nature." The HRER continues with, "..... while many architects try to create a special course, Mackenzie could figure out how best to fit holes into a property and situate a golf course to evoke a comfortable, settled, connection to the ground. His course routings are always functional and original but rarely do they fight the contours of the property."

01 (Cont.)

In summary, defining characteristics of Mackenzie's design style included unique course routing, a talent for adapting a course to fit the land, an ability to offer challenge to players of varying skill levels, distinctively designed bunkers, and inclusion of multiple fairway options – offering advantage to those to took greater risks in their play. The vast majority of these features have been eliminated from the course. According to Wexler, in a recently published article "no appreciable trace of his strategy remains in play."[3]

Unfortunately, Sharp Park Golf Course began to fail even before the course opened in 1932 because Mackenzie failed to fully understand the forces of nature at this site. Page 4-3 of the Evaluation Report notes that the opening was delayed twice due to "drainage problems on the course due to winter rains." Shortly after the course opened a major storm washed out a large portion of the course and necessitated construction of the seawall in 1938 intended to prevent similar damage in the future. This type of damage has continued – as recently as 1982 a major storm wiped out several holes. In 1990 another breach killed many of the cypress trees on the course. Few of the golf courses designed by Alister Mackenzie remain intact today. It would be ironic and misplaced if this course – one that represents a failure in design – became a lasting representative of his life's work by being officially designated as a historic property.

[3] Dr. Alister Mackenzie, "Sharp Park Golf Course", Pacifica, CA page 113

Pattillo-1

01 (Cont.)

The determination of historic significance is tied to a site's level of integrity. According to *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*[4] "The historic integrity of a cultural landscape relates to the ability of the landscape to convey its significance." And "Historic integrity is assessed to determine if the landscape characteristics and associated features, and the spatial qualities that shaped the landscape during the historic period of significance, are present in much the same way as they were historically." Emphasis added.

The guide continues, "Historic integrity is determined by the extent to which the general character of the historic period is evident, and the degree to which incompatible elements obscuring the character can be reversed". In the case of Sharp Park Golf Course the changes to the course were not the result of the normal evolution of a living landscape – maturing trees and other plantings, but rather major changes that were forced to solve functional problems that resulted from flaws in the original design – a failure to fully understand the power of nature and it's ability to wreak havoc. The changes made to Sharp Park Golf Course cannot be reversed because doing so would recreate the conditions that necessitated that the alterations be made in the first place.

Page 5-2 of the HRER notes, "Because landscape features change over time, a landscape need not retain all of the original features it had during its period of significance, but it must retain the essential features and characteristics that make its historic character clearly recognizable."

In essence for a site to meet the criteria of historic significance most of the designed features must look as they did during the period of significance. This may be true for the Clubhouse and maintenance building which are not addressed here, but it is not the case at Sharp Park Golf Course and no doubt explains why "None of the state or national registers identified Sharp Park Golf Course as a historical resource" as noted on page 4-1 of the HRER.

By making the finding that the existing golf course represents a historic resource under criterion C/3 it seems that Tetra Tech failed to appreciate not only the subtleties of golf course architecture but its essential features. Just because there was a golf course present in 1932 the fact that there is still a golf course present today, does not qualify the current course as a historic resource.

[4] A Guide To Cultural Landscape Reports: Contents, Process and Techniques by Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, US Department of the Interior, National Park Service, Cultural Resource Stewardship and Partnerships, 1998.

Pattillo-1

01
(Cont.)

Sharp Park Golf Course lacks integrity. While a golf course at this site is consistent with the historic land use, that fact is insufficient evidence for a finding of historic significance. Failure to demonstrate significance voids eligibility for historic resource status. I urge you to consider this as you plan for the future use of Sharp Park.

Sincerely,

Chris Pattillo, ASLA
Historic Landscape Architect
President, PGAdesign inc

Perrins-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:21 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: My comment on the Natural Areas Program Environmental Impact Review

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:21 AM ----



Georgie Perrins <georgie@puppethorse.com>
10/30/2011 10:19 AM

To bill.wycko@sfgov.org
cc
Subject My comment on the Natural Areas Program Environmental Impact Review

Bill Wycko, Environmental Review Officer

SF Planning Department

1650 Mission Street, Suite 400

San Francisco, CA 94103

bill.wycko@sfgov.org

Dear Mr Wycko:

01 I'm writing to respond to the Natural Areas Program Environmental Impact Review. I strongly oppose the expansion of the Natural Areas Program and support the maintenance alternative described in the EIR.

02 I am a dog owner and resident of San Francisco for the past 11 years. I appreciate the recreational space we have in the city to exercise my dog and to feel these health benefits myself, especially at Bernal Hill. We adopted our dog from the San Francisco SPCA and by nature of her herding breed she is a high energy dog that requires considerable running daily. We see this exercise as maintaining her good health and is the secret to her behavioral well-being. Like most residents in this city we do not have our own garden and completely rely on the recreational space of parks for exercise for canine companion. If the dog play areas described in the The Natural Areas Program are to be eliminated in San Francisco city parks, where will we go with our dogs? And will this be a continuing trend where we will loose more areas in the future? The reality is that San Francisco is a city of dogs, and dog lovers who are largely responsible contributing citizens. Please consider alternative areas to our recreational space to grow more native plants. Together we can support both efforts.

I appreciate your time and consideration.

Sincerely,

Georgina Perrins

Perry-A-1



Bill Wycko/CTYPLN/SFGOV
05/31/2012 02:55 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Don't cut trees on Mt. Davidson

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/31/2012 02:55 PM ——



Andrea Perry <andrea.marie3@comcast.net >
05/31/2012 01:17 PM

To bill wycko <bill.wycko@sfgov.org>
cc sfforestnews@gmail.com
Subject Don't cut trees on Mt. Davidson

Dear Mr. Wycko:

I became aware of the NAP's intention to cut down many of the healthy and beautiful trees on Mt. Davidson from the local paper, and some fliers. My husband and I are both completely against it, and are disgusted by this plan. First, as residents of Westwood Highlands, located on the south side of Mt. Davidson, we can't even understand how this idea could have ever been considered a good one. The beautiful trees, and the smell of Eucalyptus are wonderful and add to the beauty of this mountain and the park.

01 With all the government "wasteful" spending going on not only in the federal, but state government as well, I would think that there are better ways to spend local taxpayers money.

Don't do it.

Feel free to call us if you want more information regarding our thoughts on this particular matter.

Andrea & Arie Perry
118 Cresta Vista Dr
San Francisco, CA 94127
415.494.5552

Perry-J-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Don't close the Bernal & other Dog Parks
Date: 10/11/2011 05:06 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/11/2011 05:06 PM -----

John Perry
<bensdad415@yahoo.com>

10/09/2011 07:28 AM

Please respond to
John Perry <bensdad415@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Don't close the Bernal & other Dog Parks

Dear Mr. Wycko:

I am opposed to the closure of the DPA on Bernal Hill, McLaren, and Lake Merced.

We have lived in Bernal Heights for 13 years, just a block from the Hill down Wool Street. We have three dogs and two kids, and our entire family relies on access to this incomparable recreation space. It is integral to our urban quality of life.

01

With more dogs than children currently living in San Francisco, we need to find ways to encourage healthy, sustainable use of our open spaces, not restrict dogs to more confined sites. A whole host of problems will come of that kind of crowding.

Please keep Bernal, McLaren, and Lake Merced open to dogs and people.

John Perry
Bernal Resident

Pfister-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:50 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Significant Natural Resource Areas Management Plan DEIR - Comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:50 AM -----



pri <nopuedo@earthlink.net>
10/31/2011 10:00 AM
Please respond to
pri <nopuedo@earthlink.net>

To bill.wycko@sfgov.org
cc
Subject Significant Natural Resource Areas Management Plan DEIR - Comments

Page 141

Pine Lake Park

01 PL-7c & PL-7b are inadequate measures to protect the lake from dogs. Dogs do not read signs and cannot be made aware of a prohibition of entering the lake. The leash law must be enforced in this area of the park. Many park visitors with dogs have a tradition of ignoring the leash law and this can only be changed through enforcement.

I would also like to see measures enacted to reduce run off into the lake, incluidng from dog feces through enforcement of the statute requiring picking up after dogs.

Pages 143 ff

III.I.23 Sharp Park (SP)

02 The Recommended Management Actions that do not involve extensive ecological restoration seem half-baked and unlikely to be successful. Is there any scientific basis for believing that these specific actions will protect endangered species? Pumping, building mounds, educating golf course staff, and monitoring water levels and species do not seem to be actions for which implementation is realistic. These types of actions seem to me apologies and cover frequently found in EIS plans for not really addressing the problem of endangered species.

My suspicion seems to be supported by the opinions of specialists who submitted declarations as part of a lawsuit:

http://wildequity.org/entries/3177

The analysis of Sharpe Park done by Wild Equity (www.wildequity.org) seems to be thorough and science based. Although I can understand that some golfers have an affinity for the golf course, it seems that a cost benefit analysis does not support maintaining the golf course for such a specialized use, especially given many other golfing alternatives in the area.

Pfister-1

02 (cont). It appears that any alternative that does not involve extensive ecological restoration is not science based. The Plan should acknowledge that support for other alternatives is political in nature.

03 Nature in the City (www.natureinthecity.org) advocates separating Sharp Park from the Natural Areas Plan to avoid tying up the Plan in litigation. If this is necessary to avoid typing up the Plan, then I support this Action because I believe that those making legal challenges to the current recommended Actions in Sharp Park based on endangered species statutes will succeed.

I also support Nature in the City in the following:

04 - For the purposes of the SNRAMP DEIR, recreation should include community stewardship. This would change the balance of purported recreational impacts.

05 - That the recreation and maintenance alternatives are the "environmentally superior alternatives" and neither the restoration nor the proposed project are, is, apparently, an unfortunate paradox of CEQA, where biodiversity is considered no more important than aesthetics or recreation within the human environment.

06 - The true impacts (and benefits!) of the maximum restoration alternative cannot be properly evaluated against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about recreation impacts or biological benefits can be made because there is no substance to the alternative. It is totally general.

Page 155

IV.A.5 San Francisco Dog Policy

07 "The SFRPD welcomes dogs on leashes in most of its parks; dogs are allowed off-leash in 19 designated areas."

Off-leash dogs are an important threat to biological diversity in the parks. There needs to be more enforcement of the leash law to limit off-leash activity to the designated areas.

Charles Pfister
San Francisco, CA

Pittin-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:37 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments - NAP EIR

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:37 PM ——



Renee Pittin
<rpittin@gmail.com>
10/31/2011 04:32 PM

To bill.wycko@sfgov.org
cc
Subject Comments - NAP EIR

Dear Mr. Wycko,

Thank you for the opportunity to comment on the Natural Areas Program EIR.

Errors and assumptions in the EIR demonstrate that there is a basic lack of research underlying this EIR, and this is not a basis for going forward with the plan.

For example, assumptions are made regarding the impact of dogs, whereby it is stated that "Dogs may be impacting plants or wildlife", while there is no evidence given or reference made to any studies which state that such impacts *are* being made or felt. These hypotheticals are then used as fact, and the EIR then seeks to remove dogs' *continuing* impact, while the initial impact has never been demonstrated or justified by statistical, scientific, or other reasonable basis. The City cannot truncate a primary form of recreation, walking in our local parks and open spaces with our off-leash dogs, on the basis of hypotheticals and unproven assumptions.

01

Dogs are generally regarded as nuisances in this EIR, and I find this position to be a very big problem indeed. The parks and the Dog Play Areas already created were established based on proven need. Indeed, there were to be more DPAs created after Rec and Park studied the issue, following the sunsetting of the Dog Advisory Committee (DAC). Rec and Park has never made this study, and has never come out with a plan for more off-leash areas. The NAP EIR seems to have been written in a vacuum, without consideration of the recreational requirements being met by already established DPAs, or the need for more space for off-leash and other forms of recreation. San Franciscans need more space for recreation, not less.

I have another very great concern with the NAP, which is its use of pesticides and herbicides. As a resident of Upper Noe Valley, I often walk in Glen Canyon. So do thousands of others, day after day. And yet, Glen Canyon is one of the areas where the NAP uses herbicides and pesticides, again and again. Rec and Park itself recognizes that "visitors, kids and dogs might come in direct contact with the weed [killer]", but their only solutions are to "limit the areas" where they spray and to seek other solutions, which they state they have not found. (SF Recreation & Parks Department, "Significant Natural Resource Areas Management Plan

02

Pittin-1

Overview", n.d., p. 4).

The NAP applied Garlon, a Tier I (most hazardous!) pesticide, in its "Natural Areas" 36 times in 2010 (up from 16 times in 2009). It used Roundup or Aquamaster, Tier II (hazardous) pesticides, 42 times in 2010, up from 7 times in 2009. Not only are we - adults, seniors, kids and dogs - affected by these chemicals, so are all the critters living in the NAP open spaces. In Glen Canyon, the coyotes, racoons, skunks and other wildlife have no place to go and no place to hide when these poisons are laid down, which then become part of the environment.

02 (Cont.)

While such applications are legal, they are neither safe nor right. The NAP should be reduced in scope, so that manual methods of weeding and maintenance can be used, not toxic chemicals. The native plants in Sutro Forest are not doused with chemicals; this is the direction that the NAP should go. With a smaller area, the NAP could use environmentally appropriate methods, not spraying and daubing with herbicides and pesticides.

03

The NAP EIR does not recognize the other needs and uses for San Francisco open space, and does not reflect the pressures which are created also by possible changes in the GGNRA, our other recreational space. We cannot dedicate our recreational and open spaces primarily to creating a plant museum from an arbitrary "pre-European" era when all was "natural" and "native". The EIR, in its focus on expansion, also does not reflect the possibility of reducing the NAP program so that the San Franciscan population - people and wildlife - are no longer subject to the effects of NAP chemical warfare.

04

I ask that the EIR be redone to reflect the realities of recreation and alternative uses of our shared open spaces, and to reduce the toxicity of our already all-too-polluted urban environment. A new, science-based EIR should be prepared for consideration.

Sincerely,

Dr. Renee Pittin
671 28th Street
San Francisco, CA 94131

Popoff-1

Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:10 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR Comment

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:11 PM ----

Georgette Petropoulos
<georgettekp@sbcglobal.net>

10/31/2011 03:29 PM
Please respond to
Georgette Petropoulos
<georgettekp@sbcglobal.net>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject NAP EIR Comment

October 31, 2011

Bill Wycko, Environmental Review Officer
SF Planning Dept.
1650 Mission St., Suite 400
San Francisco, CA 94103

Dear Mr. Wycko,

We are life-long San Francisco residents and have owned dogs as since the 1960s. During those many years we have enjoyed walking with our dogs in many of the varied locations this city has to offer: Golden Gate Park, Pine Lake Park, Mt. Lake Park, Ft. Funston, the Presidio, Lake Merced, Sutro Park, Lands End, Buena Vista Park to name a few.

01 One of the joys of living in San Francisco is the availability of so many dog-friendly areas, both on and off leash. Since we live in the western part of the city, most of our walks take place there. It's a huge concern to me that so many dog play areas are being threatened by the Rec and Park Department's proposed Natural Areas Program. I have been a member of the years of both the Sierra Club and the League of Conservation voters, so I am very aware of the impact on the environment of various activities. However, I don't believe that restricting off-leash recreation in this urban setting and replacing it with "natural" flora is the best decision

02 The NAP EIR does not show evidence proving that dogs have an adverse impact on wildlife in natural areas, nor does it take into account studies that show dogs have little or no impact on plants and wildlife.

03 One thing that seems to be missing from many decisions being made regarding dogs and recreation in and around this city is that San Francisco is an URBAN area, not a wilderness area. We also have more households with dogs than children. It's not just about the dogs, it's also about the people who own the dogs and walk their dogs for exercise and recreation. My observation has been that

Popoff-1

03 (Cont.)

the majority of dog owners are very conscientious and work together to keep areas clean and safe. Restricting the currently available areas will adversely impact the remaining Dog Play Areas. The dogs are not going away.

We do not believe it is in the best interest of the residents of San Francisco to implement this restrictive plan.

Sincerely,
Michael Popoff
Georgette Petropoulos
656-39th Ave.
San Francisco, CA 94121

Potts-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 09:39 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: city parks

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 09:39 AM----

Jason Potts
<wheelspin68@yahoo.com>
05/16/2012 07:58 AM
Please respond to
Jason Potts
<wheelspin68@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject city parks

I have lived in San Francisco for almost 30 years. Years ago I lived at the base of Mt. San Bruno and used to go for daily hikes after work until one fine afternoon I came around the corner to find the entire mountain had been clear cut. I have only been back one time since. In my humble opinion the park and the beautiful tails that once threaded along under the eucalyptus grove was completely ruined do to that plan to restore the mountain to it's original habitat.

01 Now all these years later I live in Glen Park just one block away from the canyon, where my two daughters go to Glenridge co-op nursery school, needless to say after 10 years of living here i have come to find out that the city plans to cut down the eucalyptus there now and start the application of pesticides to prevent unwanted growth in the canyon. I can't begin to tell you how upset this has made me.

What is next? Golden Gate Park started as sand dunes, will it be returned to it's original state too?

Please do not let this happen!

Thanks for your time and consideration,
Jason Potts

Jason Potts
Photography
P.415 595-7397
F.415 334-2851
wheelspin68@yahoo.com

Pruitt-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:08 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR Comments

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:09 PM ----



Beth Pruitt
<prooproo@yahoo.com>
10/31/2011 04:00 PM
Please respond to
Beth Pruitt
<prooproo@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc "Eric.L.Mar@sfgov.org" <Eric.L.Mar@sfgov.org>
Subject NAP EIR Comments

Dear Mr. Wycko,
Cc: Supervisor Eric Mar

As an environmentalist and professor of engineering at Stanford who educates our next generation of engineers to design products and environments with sustainability in mind, and as a member of the Sierra club and avid city parks user, I'm writing to oppose the SF Recreation and Parks Department's plans to destroy 18,000+ trees and reintroduce "native" and endangered small plants in their stead. This plan would limit the SF humans' and their pets' access to the parks we pay tax dollars to RECREATE within. San Francisco prides itself (up to now) for having one of the highest population of dog owners/guardians of any city and it was exactly the welcoming attitude of the city and its parks to pets that attracted us to rent then buy in San Francisco. If the parks become less accessible, then San Francisco becomes a less attractive place to live and recreate.

01

The SF Recreation and Parks Department should remove "Recreation" from it's title if this plan goes forward. If restricted plants are planted and their areas then closed off for recreation, it seems this would not be under the mission of a city recreation and parks department but under a natural preservation zone. Such an area would not make sense to put in a densely populated city environment.

02

The EIR's arguments to remove off leash dog areas are not solid and ignore the actual usage of these areas by the city's inhabitants. The EIR's analysis is incomplete and bases many arguments on "potential" negative impacts not on data. Who is present in the parks in sunshine and inclement weather 365 days a year? People with dogs are.

With the health department's focus on obesity, how can a plan like this that limits access to recreation areas be accepted? People often acquire dogs to get them out into nature, get them exercising and get them socializing. It's scientific fact that dogs help reduce stress and blood pressure in people. Shouldn't we try to improve life where we live instead

03

Pruitt-1

of reduce it's quality? The SPCA argues that dogs need off leash areas to keep aggression down in dogs. The dog community in San Francisco is well known and provides great sense of belonging and community to many neighborhoods. To repeat a statistic I'm sure you know, there are more dogs in San Francisco than children. This reflects the importance of dogs in the lives of the city's inhabitants, voters, tax payers or however you want to describe us. EIR's are to take into consideration the impact on the communities that surround the areas in question and this one does not.

03 (Cont.)

I ask how can a dog chase a ball on a leash? I have suffered some mobility issues over the past year due to injuries (as do many of our dog owning residents, especially the elderly or disabled, a large dog owning population in my observation), and if I had not had access to areas where my dog could run free, the situation would have been inhumane. While I could get around enough to pick up their waste, providing the necessary exercise was medically not recommended or possible.

04

If an alternative must be chosen, please support the Maintenance or Maximum Recreation Alternatives and please remember these are CITY parks, not Yosemite.

Thank you and I hope you truly consider the views of this city's most populous residents, the dog owners.

Beth Pruitt
618 47th Ave
San Francisco, CA 94121

Quinn-1



Bill Wycko/CTYPLN/SFGOV
10/24/2011 01:13 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: quinn@cruzio.com

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/24/2011 01:13 PM ——



Chris Quinn <quinn@cruzio.com>
10/24/2011 11:50 AM

To bill.wycko@sfgov.org
cc
Subject quinn@cruzio.com

I am commenting on the NAP EIR.

First off, I suggest the San Francisco Government take a page out of what other local government agencies in the bay area are doing and adopt a public dialogue process. The process has strengthened the communities who have adopted it (Cupertino, Redwood CIty, San Carlos - to name a few) and given the economic shifts of our time, building community is what is needed most. I am no expert on public dialogue processes, only a fan. For more info, please refer to www.publicdialogue.org - web site for the Public Dialogue Consortium, or reach out to the Communications department at San Francisco State University.

01 That said, my request is the maintenance alternative of the EIR be adopted. It is the most realistic and healthy option.

02 Also, do not restrict off leash access for dogs. Exclusion is not going to solve any problem. History shows, however, it always does. San Francisco is a tolerant, inclusive city, which is what makes this city feel more European than most. Go to London, off leash is the norm at all the wonderful parks. The experience increases the inhabitation of the parks, which are beautiful, and the gross of people and spread of dogs makes them safe and lovely. Restricting off leash access is simply discriminatory. Look at who is out there walking dogs. The majority are older people. Notice the sense of community this builds. These people are out getting exercise, meeting people, building community. Please, take actions that strengthen unity and community rather than tear it apart.

Thanks

Chris Quinn
2147 42nd Avenue
San Francisco, CA
94116

Radetsky-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: dog play areas: Please reduce the number and size
Date: 10/03/2011 05:52 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/03/2011 05:52 PM -----

Ruth Radetsky
<Ruth@Radetsky.org>

10/03/2011 05:49 PM

To bill.wycko@sfgov.org
cc
Subject dog play areas: Please reduce the number and size

01 I used to love walking on Bernal Hill, but I have had too many encounters with agressive dogs with irresponsible owners, and no longer walk on Bernal Hill. I read on SFGate that the city is considering reducing or eliminating off-leash dog play on Bernal Hill. Please, please take this step. The city needs to consider the needs of people first, and animals second. There may be fewer play areas for dogs in the city than dog-owners would like, but dogs don't belong in the city, people do, and there are certainly too few outdoor play areas for people!

It is irresponsible to own a big dog in the city, and it is not surprising that people who are irresponsible enough to own a big dog in the city are not responsible enough to train their dogs to be safe sharers of the city's parks.

Thank you.

--
Ruth Radetsky
Math and Statistics teacher
Balboa High School
San Francisco, California, USA.

Radetsky.org

Raffaelli-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:24 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SFNAP review comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:25 AM -----



Paulo Raffaelli
<pauloraff@gmail.com>
10/29/2011 07:10 PM

To Bill.wycko@sfgov.org
cc
Subject SFNAP review comments

To Mr Wycko:

I am a long-time San Francisco resident - since 1990 - and a dog owner. When my spouse and I purchased a house in the city, we chose one due to its proximity to a park with off leash dog play areas. All of our dogs have been rescues, and tend to be larger than the average dog, those being harder to find homes for. If there had been no suitable park available, we would have moved out of the city, despite both owning businesses in the city.

01 I oppose, in the strongest terms, any expansion of the Natural Areas program at the expense of existing off-leash areas. Areas which are off-leash areas are multi-use; I see other people who are not dog owners using the park, and we all co-exist nicely. Designating the off-leash areas as Natural Areas would affect more people than just the dog owners.

It is disturbing to me that there is no way to propose new dog play areas, should any curtailment occur, and in any case the approval process is sure to take years and leave dog owners who own dogs now without recourse.

02 With this in mind, I ask you to implement the maintenance alternative and not the maximum restoration alternative or, for that matter, any alternative which reduces recreational space in our city. I would point out that adding recreational areas in Crocker Amazon playground has done wonders for the tenor of the park. It's a popular and welcoming spec compared to what it was five years ago.

Thank you,
Paulo Raffaelli

Rafferty-1

Patrick Rafferty
29 Bemis St.
San Francisco, CA 94131
415.584.3110
patrickraf@aol.com

RECEIVED
OCT 27 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
MEA

October 23, 2011

Mr. Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
Suite 400
San Francisco, CA 94103

RE: Draft Environmental Impact Report for Natural Areas Management Plan

Dear Mr. Wycko,

I am writing on behalf of the Friends of Fairmont Park, an organization of neighbors who live in the area of the park. We have worked over the last few years with the San Francisco Parks & Recreation's Natural Areas Program to help restore our natural area. Under the supervision of the Natural Areas Program we have assisted with the implementation of the plan to help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas. The plantings and improvements we have accomplished are consistent with several directives, including the Recreation and Open Space Element (ROSE), the Public Utilities Commission (PUC) water saving mandates, and the City's Sustainability Plan.

The Natural Areas Program is an innovative management plan to safeguard our City's Natural Areas. Under the leadership of Christopher Campbell and Lisa Wayne we have embraced the goal of returning Fairmont Plaza to a thriving eco system. We realize this goal will take time, but through our on going work parties and the guidance from Parks & Recreation we are enjoying the positive changes in our green space.

The Plan is the most cost effective method for managing resources and protecting these areas for future generations. It also engages the neighborhood in ongoing maintenance of the plaza. Our group has been inspired by the improvements and we are in discussions to work with the Parks Trust to set up an account to fund further restoration work in the park.

01

The plan provides clear direction to the City on how to prioritize management and restoration of our Natural Areas. Recently the Parks & Recreation in conjunction with the Natural Areas Program worked with PG&E to mitigate potentially disfiguring addition of power lines in our natural area. I have every confidence that they will have the same influence when the AT&T boxes tentatively scheduled for this green space are up for approval. These are but two examples of how they looked at a range of alternatives and the potential impacts for both natural and recreational amenities of the City's Natural Areas.

02

The Draft Environmental Impact Report for SNRAMP is an adequate, accurate and complete review of the plan. Our group looks forward to our ongoing work parties to improve Fairmont Park.

Sincerely,

Patrick Rafferty

Randt-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: city life for dogs and pet owners
Date: 10/04/2011 05:37 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 05:13 PM -----

bill randt <randt_bill@hotmail.com>

10/04/2011 04:38 PM

To <bill.wycko@sfgov.org>
cc
Subject city life for dogs and pet owners

Bill Wycko
Environmental Review Officer, San Francisco Planning Department
1650 Mission St., Suite 400, San Francisco, CA 94103

Dear Mr. Wycko,

01 I'm a pet/dog owner in the city of San Francisco, and I understand that there are park areas that may be closing soon--or are up to discussion regarding closure. I won't be able to attend the meeting on October 6, but I want to note my support for dog parks in the city: both on-leash and off-leash areas (for dogs under voice command); the GGNRA's newest policy amendments to reduce spaces for dogs has been very disconcerting as a pet owner. Places like Muir beach and other notable spots in the Bay Area may soon become off limits.

If the city has some agenda against pets, I hope it would reconsider its efforts. If the city is concerned about erosion control and restoring natural habitats, then I would hope some thoughtful balance would be struck. (However, I don't always believe that erosion is from overuse by pets.) If the city is going to close access to parks or pets, then it should consider making the areas off-limits to those who deface, destroy, and vandalize our local park facilities. I think those individuals do more harm to a healthy city.

I'm not sure why the city wants to reduce or close certain DPAs, but if it's due to budgetary constrains, then perhaps a volunteer resource could be put into place, including getting local groups (e.g., Boy Scouts of America) involved for service projects. I read Jennifer Scarlett's piece on SF gate. She stated: "Closing all DPAs in Management Areas 1 and 2 would virtually eliminate DPAs at Bernal Hill, Buena Vista, Golden Gate Park Southeast, and McLaren-Shelley Drive. And if closing some DPAs leads to greater usage in the remaining play areas, "any observed impacts of dog use on sensitive natural communities" would be addressed by closing or reducing *those* DPAs." I wish the city would reconsider restrictions to those areas.

I will await the outcome of the decisions, and my voting powers that be will go toward those who I see as dog-friendly. The city needs more dog parks, not fewer. Thank you for your attention to this.

Sincerely,

Bill Randt

Ray-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:07 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR Comments from the Director of San Francisco Wildlife Hospital

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:08 PM ----



Jamie Ray
<jamie_ray@comcast.net>
10/31/2011 04:01 PM

To bill.wycko@sfgov.org
cc
Subject NAP EIR Comments from the Director of San Francisco Wildlife Hospital

October 31, 2011

Dear Mr. Wycko,

My name is Jamie Ray, I am the founder and director of San Francisco's first and only wildlife hospital, San Francisco Rescued Orphan Mammal Program (SFROMP.org)

SF ROMP was founded in 2001 with the following mission statement: Dedicated to preserving and enhancing San Francisco's rich biodiversity and increasing public appreciation of our native wildlife.

SF ROMP rehabilitates injured and orphaned wildlife under license of the California Department of Fish and Game, works on state and local issues that effect wildlife, and provide educational programs about the wildlife we share our environment with, including a helpline that helps residents peacefully coexist with wildlife. SF ROMP has worked with Recreation and Parks Capital Improvements Division on wildlife management plans, mitigation measures for wildlife effected by projects, and planted thousands of plants that provide habitat for wildlife in our local parks. I define habitat plants as those plants that provide the best food and/or shelter value for wildlife. With very few pockets of park space that has not been trail blazed by people and dogs, it is my view that the best policy is to promote the planting of plants that provide the best habitat for wildlife, and in particular, dense and/or thorny plants that provide wildlife with protection from people and dogs, and safe nesting and denning sites. When habitat plants are also aesthetically pleasing, as they often are, this is a win-win for everyone. We're so fortunate in San Francisco to be able to grow drought tolerant plants from Mediterranean regions, Australia, New Zealand, South Africa and even the cloud forest regions of Central and South America! The list of SF native plants is a short one to be sure. The list of native trees contains four species, including two that need to grow in or near water. (willow and buckeye) Oak and a native plum tree are the only other trees native to San Francisco. To limit planting to these few plants is a net loss for wildlife and the enjoyment of park goers.

Thank you for supporting the No Project Alternative.

01 I support the No Project Alternative. NAP jurisdiction should not be expanded beyond the areas of their detrimental activities. Most plants require at least one or two summer waterings to establish. The NAP policy to not water any of the plants they install is instrumental in the monumental failure of many of their planted areas.

02 The Natural Areas Program defines "natural areas" as areas planted only with plants that grew here when San Francisco was all sand and sand dunes. Before our city was built. Before our lush parks were created. This narrow definition of what is "natural" is absurd. A natural area should be defined by the amount of wildlife it supports. By this definition, our parks are natural areas.

Ray-1

02 (Cont.) Why on earth would we want to return our parks to sand with tiny sand dune plants and coastal scrub when our parks have such incredible natural beauty and support such an incredible diversity of wildlife?

03 San Francisco is a bird watcher's paradise. The hawks and owls that nest in monterey cypress and pine trees cannot nest in any of the four (tediously slow growing) San Francisco "native" trees.
Pines and Cypress are the backbone trees of our parks. They're not only beautiful, but provide habitat for countless species of wildlife. Removing these trees because they're "not native" would be criminal.

04 Removing the plants that generations of gardeners have planted and tended to return these areas to sand, planted only with "native" coastal dune plants would decrease wildlife biodiversity. NOT increase wildlife biodiversity.

We should not remove any existing vegetation (never mind 1100 acres, 1/3 of our parklands) to return these acres back into sand, with only coastal scrub plants.

05 I love the lush vegetation in our parks and do not want ANY of it removed for any reason - but particularly for the ridiculous reason that a radical group (funded with my tax dollars) defines "natural" as only what was here before the city of San Francisco was built, and before our beautiful parks were created.

06 As SF's population continues to grow and more large housing developments are planned, demand for recreation and relaxing in our parks increases.
The Natural Areas Program fences off the areas that they first denude then plant with insignificant / tiny dune plants to create their plant museums.
Spending tax dollars to take away recreation areas from residents is outrageous.

I would like more Rec and Park gardeners to be hired and less staff positions paid to the Natural Areas Program, who are intent on removing the lush vegetation that I enjoy in our parks.

Thank You

Sincerely,

Jamie Ray, Director
SF ROMP wildlife rehabilitation

Rehling-1



Bill Wycko/CTYPLN/SFGOV
05/16/2012 09:41 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP draft EIR

History: This message has been forwarded.

----Forwarded by Bill Wycko/CTYPLN/SFGOV on 05/16/2012 09:41 AM----



Lu Rehling
<lurehling@gmail.com>
05/15/2012 05:42 PM
Please respond to LuRehling@gmail.com

To bill.wycko@sfgov.org
cc "sean.elsbernd" <Sean.Elsbernd@sfgov.org>, mayoredwinlee@sfgov.org
Subject NAP draft EIR

Hello, Bill Wycko--As Environmental Review Officer for the city, I expect that you already are aware of concerns about the NAP draft EIR. I want to add my voice to those of many others who feel that the draft EIR does not accurately represent either NAP's agenda or the likely outcomes of its plans.

01 What NAP plans to do is not sound environmental stewardship, as claimed, but a damaging course of action that could do lasting harm to beloved and much-used urban forests and other recreation areas within the city. The draft EIR minimizes and misleads, not addressing some critical concerns and misrepresenting others, without consideration of the full range of expert opinion and without sufficiently considering community, ecological, and property impacts. The draft EIR does not acknowledge how reduction of trails and of dog-friendly acreage will affect the community, nor does the EIR accurately represent the potential consequences of using toxic pesticides on the health of children. Of course, these pesticides also threaten wildlife directly, and that wildlife also is threatened by the other changes to habitat that the NAP plan includes. The draft EIR does not appropriately address legitimate concerns about erosion, loss of windbreak and shade, and aesthetic consequences of NAP's plans. The draft EIR seems too informed by the voices of NAP staffers protecting their office and their budget and not sufficiently informed by those outside of NAP, but familiar with the areas and issues under discussion. I hope that you will seek out more sources and listen to them objectively, while bearing in mind the well-being of all residents and the importance of managing our parkland in a balanced way.

02 One other thing: I live in Miraloma Park, just opposite the Stanford Reservoir which is just below Mt. Davidson Park. I should have been notified about NAP's plans and, specifically, about the methods that NAP would take to impose its extremist vision on my neighborhood and others in the city. Therefore, I also want to bring your attention to that failure to properly inform the public, especially those living in areas most affected by NAP's plans.

03 Thanks for listening. I am copying the mayor and the supervisor for this district on this message.

Rehling-1

03
(Cont.)

so that they also will be aware of my concerns. Although the supervisor has been quoted in the *SF Chronicle* as dismissing the concerns of citizens such as me for being so much "rhetoric" and implying exaggeration, the fact is that approval of the EIR as it stands would privilege NAP to execute its misguided plan as it saw fit and on its own discretionary time frame. That seems reason enough to me to sound an alarm. Of course, the huge cost of NAP's plans at a time when the budget should be managed most carefully also is a real shame.--Lu Rehling

Lu Rehling
751 Rockdale Drive
San Francisco, CA 94127
650-208-8678 (cell)
LuRehling@gmail.com

Reichardt-1

Bill Wycko, Environmental Review Officer, Planning Department
1650 Mission St,
San Francisco, CA 94103

RECEIVED
OCT 27 20..
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

October 9, 2011

Dear Mr. Bill Wycko,

I am writing in regards to the National Areas Program's proposed EIR.

01 I support the Maintenance Alternative in the EIR. While I am a hundred percent for the betterment of the natural areas in the City of San Francisco, the EIR identifying the Maximum
02 Restoration Alternative as the "Environmentally Superior Alternative" is contradictory to the rest of the evidence presented in the document. I am particularly disappointed to learn that the NAS management plan calls for the destruction of healthy trees even after failed attempts to sustain the native plants. It seems unreasonable to spend any more of taxpayers' money to bring back the plants that simply don't do well in these places that are surrounded by populated urban areas.

03 The fact that this is an urban city also brings to question the toxic herbicides that are used in the natural areas concerned, as this might cause troubling health risks to park users including seniors and children. The plan that calls for the restrictions of trail access in the City also doesn't seem to take into account the recreational needs of its residents, whose health clearly depends on the activities these parks provide. The closing of legal off-leash spaces will also pose a tremendous threat to the behavioral health of dogs that live within the city limits, which are estimated 150,000 total and more than that of the estimated 120,000 children in the City. With the proposed GGNRA plan to close 90% of the off-leash access out of that 1% now available to dogs, keeping city parks open is all the more important to counter the negative effects that the federal government's plan may trigger.

Although I am unfamiliar with the financial costs that are associated with the four alternatives in the EIR, I trust that the SF Recreation and Park Department will allocate the appropriate funding to make the Maintenance Alternative possible. Thousands of people as well as their dogs' health depend on this park. Please do not take it away.

Thank you for your consideration.

Sincerely,

K Reichardt

Kathy Reichardt

Reque-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Restricting Dog Play Areas
Date: 10/03/2011 04:38 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/03/2011 04:38 PM -----

Peter Reque <petereque@gmail.com>

10/03/2011 02:13 PM

To bill.wycko@sfgov.org
cc
Subject Restricting Dog Play Areas

Dear Sir,

01 I urge the city not to further restrict the areas where dogs are allowed to run free. Far and away the majority of dogs are pleasant and friendly. A few dogs have been badly trained, but they can be (slowly) removed from the parks. And some people just don't like dogs, or are worried about small children. These folks can easily avoid the free dog areas, there's a lot more park space just for people. I'm not a dog owner/guardian, but I do like dogs.

Thank you,
Peter Reque
1073 Bush St
SF, CA 94109

RileyHoppes-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:11 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off-Leash Policy

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:11 AM -----



Donna Riley <dlrdlh@pacbell.net>
10/31/2011 07:28 AM

To bill.wycko@sfgov.org
cc David.Campos@sfgov.org
Subject Off-Leash Policy

01

Dear Bill - I'm a 17-year San Francisco resident, and for the last 8 years, I've lived in Bernal Heights. My dog and I enjoy Bernal Hill daily, and we frequent many other city parks. Dog owners are some of the most responsible citizens in our city. We clean up after ourselves and our dogs, and we take time via cleanup days to catch those few piles that we may have missed. We respect our community and our parks and cherish them more than any other San Francisco citizens. It's not a good use of police time to chase after and ticket dog owners. There are far more significant issues to take up police and park service time, money and energy.

Of all of my political representatives, Supervisor Campos is the only one who never responds to emails with significant issues. Nonetheless, I'm copying him in here. It may sound cliche, but I have a dog, I'm active in my community, and I vote. The policy you propose is unreasonable, unenforceable, poorly conceived and not in the interests of the majority of San Franciscans. Thank you for your consideration.

Regards -

Donna Riley Hoppes
128 Montcalm St.
San Francisco, CA 94110
415 920 9861
dlrdlh@pacbell.net

Risk-1

May 19, 2012

RECEIVED
MAY 21 2012
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
Natural Area Management Plan
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Deficiencies in DEIR, Significant Natural Resource Areas Management Plan (SNRAMP): Mt. Davidson

Dear Mr. Wycko:

We bought our home in Miraloma Park in 1972 and raised our family here. One of our favorite activities has always been to walk the trails through the Mt. Davidson Forest. So it came as quite a shock to us to learn that the San Francisco Recreation and Parks Department plans to remove large numbers of trees from the forested side of the mountain.

01 We were first informed of those plans in February 2012 on a walk led by local historian Jacquie Proctor. It was most disconcerting for us to be told that the NAP plan has been under consideration since 1997, was finalized in 2006, and that the plan's DEIR is currently under review. Even though we were the ones who would be most affected by those plans, the Recreation and Parks Department has never organized any community informational meetings in our neighborhood or posted any signs on the main forest trail entrances to notify us of those plans.

Here are our major objections to the Natural Areas Plan for Mt. Davidson:

02 * The plan would replace 1600 or more mature and healthy trees in the middle third of the 30-acre Mt. Davidson Forest with "native scrub and grassland habitats." (MA-1c, MA-2c and MA-2e on the attached SNRAMP map) Native plant enthusiasts already have access to the entire open eastern slope of Mt. Davidson. This past year a huge swath of trees was removed by the Water Department when they installed the new pipeline to the water tank at the top of the mountain. We do not want any more sections of the forest to be removed.

03 * According to the NAP plan, some 'non-native trees' would be removed and replaced with 'native' species. But there is no guarantee that those new trees will be planted in the same location, or even on Mt. Davidson. And there is a strong likelihood that 'native' trees such as scrub oaks may not survive on the windy western slope of Mt. Davidson. If there are hazardous or unhealthy eucalyptus trees that need to be removed, we ask that they be replaced with Monterey Cypress, a beautiful non-native tree that already thrives in this location.

Risk-1

04 * Contrary to statements in the DEIR, we believe that removing 1600 trees would have a significant negative impact on the Mt. Davidson Forest. It would mean increased wind exposure, increased erosion, reduced carbon dioxide absorption, and loss of animal and bird habitat. And it would certainly alter our woodland hiking experience.

05 * Each year the Natural Areas Program relies on the use of larger and larger quantities of four toxic herbicides classified by the City as Tier I (Most Hazardous) and Tier II (More Hazardous) to prevent "invasive" plants from re-establishing themselves. All of these chemicals have been associated with serious health problems in animal and human populations. The DEIR does not specify how much pesticide will be used to maintain Mt. Davidson as a "Natural Area." On our recent walks we saw several signs posted to notify the public that Imazapyr had been applied in the area. This is a new pesticide. What is known about it is that it does not degrade so it travels through the environment. It's a neurotoxin that can cause irreversible eye damage. And it has been banned in the EU since 2002.

06 * The DEIR does not include any cost estimate for implementing the SNRAMP and does not explain how it will be funded. We object to spending scarce park funds on the Natural Areas Program when other essential services are being cut, Recreation Directors have been laid off, and fees are being charged for use of formerly free Park facilities.

07 In summary, we object strongly to the Significant Natural Areas Management Plan proposals for Mt. Davidson and to the lack of community involvement in the drafting of those plans. We also contend that the Draft Environmental Impact Report of the SNRAMP is deficient in many respects.

Thank you for extending the comment period for the DEIR. We know that most of our neighbors are as concerned about the future of Mt. Davidson as we are. We value the Mt. Davidson Forest as a quiet sanctuary in the midst of our dense urban area. Please help us to keep it that way.

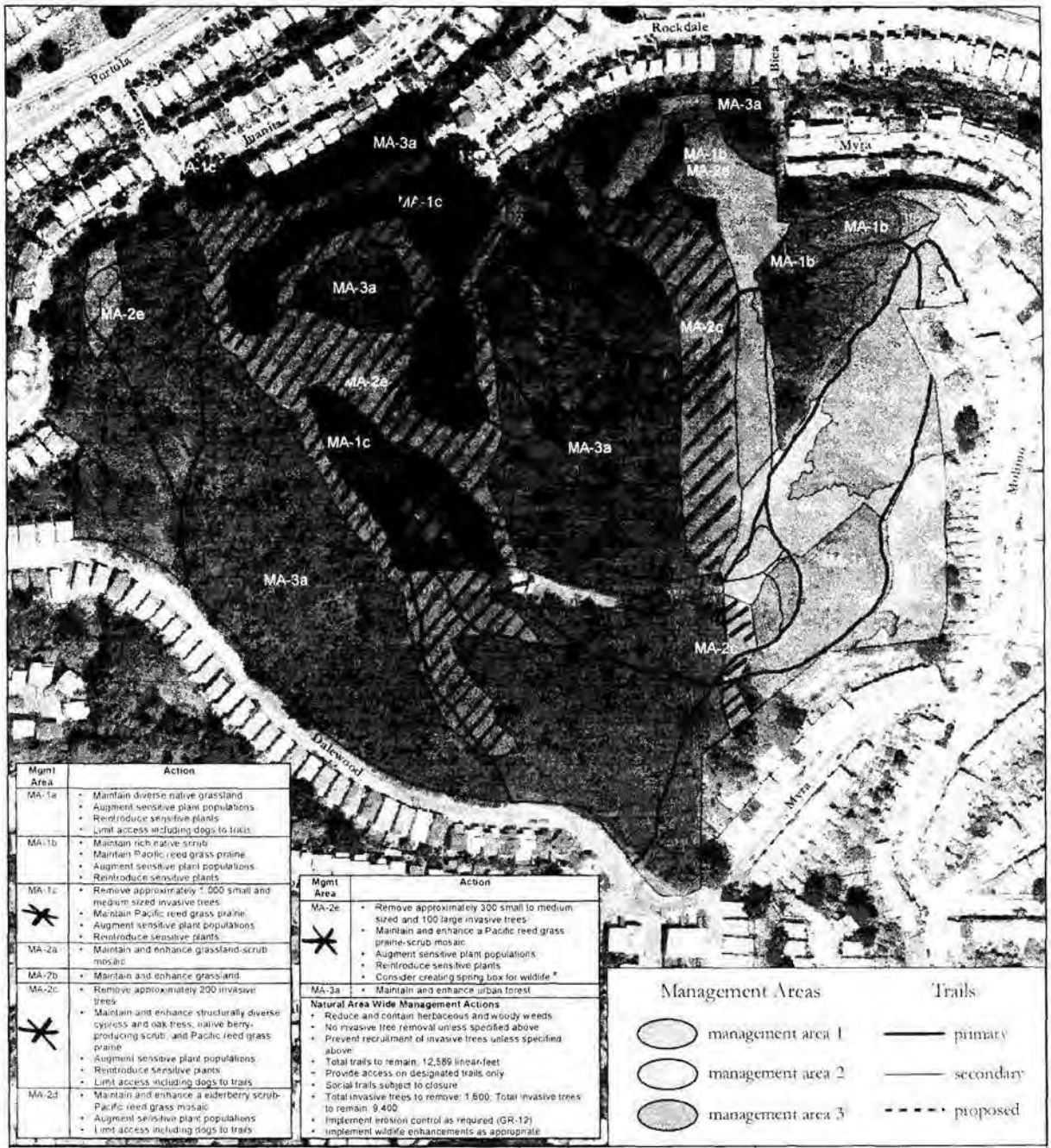
Sincerely,

Jane J. Risk

Jerry M. Risk

Jane and Jerry Risk
64 El Sereno Court
San Francisco, CA 94127

Risk-1



Mgmt Area	Action
MA-1a	• Maintain diverse native grassland • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-1b	• Maintain rich native scrub • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-1c	• Remove approximately 1,000 small and medium sized invasive trees • Maintain Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants
MA-2a	• Maintain and enhance grassland-scrub mosaic
MA-2b	• Maintain and enhance grassland
MA-2c	• Remove approximately 200 invasive trees • Maintain and enhance structurally diverse cypress and oak trees, native berry-producing scrub, and Pacific reed grass prairie • Augment sensitive plant populations • Reintroduce sensitive plants • Limit access including dogs to trails
MA-2d	• Maintain and enhance a elderberry scrub-Pacific reed grass mosaic • Augment sensitive plant populations • Limit access including dogs to trails

Mgmt Area	Action
MA-2e	• Remove approximately 300 small to medium sized and 100 large invasive trees • Maintain and enhance a Pacific reed grass prairie-scrub mosaic • Augment sensitive plant populations • Reintroduce sensitive plants • Consider creating spring box for wildlife *
MA-3a	• Maintain and enhance urban forest

Natural Area Wide Management Actions

- Reduce and contain herbaceous and woody weeds
- No invasive tree removal unless specified above
- Prevent recruitment of invasive trees unless specified above
- Total trails to remain: 12,589 linear-feet
- Provide access on designated trails only
- Social trails subject to closure
- Total invasive trees to remove: 1,600; Total invasive trees to remain: 9,400
- Implement erosion control as required (GR-12)
- Implement wildlife enhancements as appropriate

Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GIScience (SFSU GIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc's Street Map 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002; Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 20, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science (SFSU IGIS); revised August 22, 2005.

FIGURE 6.2 - 5

MANAGEMENT AREAS AND TRAIL PLAN

Mt. Davidson

Significant Natural Resource Areas Management Plan

San Francisco, California

Rodriguez-1



Bill Wycko/CTYPLN/SFGOV
10/27/2011 11:22 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Keep our parks for DOGS AND PEOPLE

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 11:23 AM ----



Marilyn Ines Rodriguez
<mirstudio@comcast.net>
10/27/2011 10:25 AM

To bill.wycko@sfgov.org
cc
Subject Keep our parks for DOGS AND PEOPLE

To whom it may concern:

Re: NO LEASH LAW

01 I am a responsible dog owner. I represent 99% of all dog owners. There is only a small percentage that gives us a bad name, as in any area. If my dog can't run around free, I don't know how I would be able to consume her energy? Dogs need to RUN freely! Secondly, these walks are as much for my dog's health as they are for mine.
Please lets keep our parks for all, dogs and people.

Thank you,
Marilyn I. Rodriguez

Marilyn Ines Rodriguez
Master Sculptor

Rodriguez-1



415-948-3099
mirstudio@comcast.net

For more information about Fine Art Sculptures, Family & Pet Portraits,
Sculpture Classes and upcoming Book please visit http://www.marilynrodriguez.com

Rogers-1

October 31, 2011

Alder Landscape Architecture
Glenn Rogers, ASLA
3425 Alemany Blvd.
San Francisco, CA 94132
Phone/fax 415 333 9317

SF Planning Department
Bill Wycko
Natural Areas Management Plan
1650 Mission Street, Suite 400
San Francisco CA 94103

Dear Sir,

01 I would like to ask you to realize the importance of the 'Significant Natural Resource Areas Management Plan' for the City of San Francisco, please. With over 150 to 250 species being lost daily to extinction, preserving of our wild area or natural habitats, is essential. San Francisco, as you know, has many species of plants found no where else. Along with these unique plants are fauna that depend on them exclusively, i.e. the 'Hairstreak Butterfly'. Therefore, preserving these wild areas is even more important.

02 May I suggest, so that San Francisco's biodiversity is not threatened, that you separate the 'Sharp Park ' project from the 'San Francisco Natural Areas Plan', please. Furthermore, I believe there should be professional management of our City's natural areas and a program of ecological restoration for the City, also.

In passing, I would like to state that golf courses environmentally are very destructive to the land. The tremendous quantities of water to keep a golf course alive is unsustainable, not to mention, the heavy use of fertilizers to keep the turf green, is destructive. Fertilizers, when they are part of rain water run off, can cause algae blooms in bodies of water, can pollute water causing it to become toxic and can cause other environmental damages. Most importantly, however, is that the grass monoculture, provides no habitat for fauna. Really, isn't it time for golf courses to be realized to be what they are, an energy trap, where all the work and effort to keep the golf courses desirable, is destroying the environment in so many ways!

I hope you will consider these suggestions. Thank you for your time.

Sincerely,

Glenn Rogers, ASLA
Landscape Architect
License 3223

Roman-1



Bill Wycko/CTYPLN/SFGOV
10/27/2011 11:22 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: GGNRA Dog Policy

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 11:22 AM -----



"J. Roman" <cartman743@sbcglobal.net>

10/27/2011 10:31 AM
Please respond to "J. Roman" <cartman743@sbcglobal.net>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject GGNRA Dog Policy

Please support off-leash dog walking in the GGNRA and NOT limit current areas.

I walk my dog daily, yes daily rain or shine, in either Crissy Field or Land's End. We enjoy walking together off-leash. My dog is trained to remain nearby and to respond to my recall. I pick up her waste and we keep to the trails.

01 The NAP EIR does not convince me putting dogs on leash will have a favorable impact nor does off-leash walking have any unfavorable impact. In addition, I've observered much unfavorable impact by people using these areas such as walking through native plants without regard as well as other negative items such as loud music or leaving behind trash. It seems that their are many negative aspects attributed to off-leash dog walking and dog owners that simply are not true or untested.

Confining all dogs to smaller off-leash areas will not be tenable. There simply does not seem to be enough land devoted to be able to accomodate all the dogs in the city during reasonably used times. Off-leash space is needed and some workable manner can be accomodated.

Please contact me if you need any more detail. I am happy to share.

Jonathan Roman
San Francisco, CA 94121

Rosenthal-1

1616 Taylor Street, Apt.#3
San Francisco, Ca 94133-3635
yb09nr@yahoo.com
October 6, 2011

RECEIVED
OCT 07 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: DEIR SNRAMP

Dear Mr. Wycko:

As a thirty year resident of San Francisco, a volunteer with the Natural Areas Program for the last eight years, and a member of the Yerba Buena Chapter of the California Native Plant Society, I have been patiently waiting for the DEIR of the SNAMP to be released. I am very familiar with the issues the DEIR addresses because I spend twenty hours a month working in the natural areas of our parks.

After reading the report in detail, I believe the DEIR to be adequate, accurate, and complete. It is not a radical plan and lays out a reasonable, conservative approach to natural resources management, and considers a broad range of potential impacts to our City's resources.

01 The report should be accepted for the following reasons. It proposes mitigation measures to address impacts where possible. It is based on detailed studies and scientific experts. It is consistent with several directives: the Recreation and Open Space Element (ROSE), the Public Utilities Commission (SFPUC) water saving mandates, and the City's Sustainability Plan. It also looks at a range of alternatives and discusses the potential impacts for both natural and recreational amenities of the City's Natural Areas, which are in dire need of the protection this management plan addresses.

This report is long overdue. I hope it will be implemented in a timely manner.

Thank you for the opportunity to express my opinion,

Nancy G Rosenthal

Nancy Rosenthal

Rotter-E-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:20 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Draft EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:21 AM -----



"Belgrave House" <neff@belgravehouse.com>
10/30/2011 03:00 PM

To "Bill Wycko" <bill.wycko@sfgov.org>
cc
Subject Draft EIR

October 30, 2001

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: Draft Environmental Impact Report for the Natural Areas Resource Management Plan

Dear Mr. Wycko:

01 Contrary to what it says on page 2 of the Summary of the EIR, the preferred alternative of the EIR is the Maintenance Alternative. And we agree with that choice.

We live between two "natural areas" at either end of Belgrave Avenue. Tank Hill and the Interior Greenbelt have both seen the work of NAP—where many non-native trees have been destroyed and replacement trees (on Tank Hill) have either not survived or have achieved no real growth. In fact, NAP no longer works on Tank Hill, though neighbors were volunteering to keep an eye on whether they were living up to their promise not to remove any more eucalyptus trees until replacement trees had grown.

02 In the Interior Greenbelt many healthy, young trees were destroyed to develop a trail under the auspices of the Natural Areas Program. So claims that only dead, dying, diseased trees would be destroyed for implementation of the management plan are totally untrue.

03 And we know that the claim that every destroyed tree will be replaced by a native tree is not possible because we've seen what happened on Tank Hill.

Rotter-E-1

04 There is no way the NAP could expand their efforts to another 42% of the parkland in San Francisco, which is what the Maximum Restoration Alternative would require. The city does not have the resources, nor should it have the will, to destroy healthy trees that flourish here—just because they aren't native.

On Tank Hill we enjoy the native wildflowers that thrive under the non-native trees, and we are grateful that no pesticides are being used there to "correct" the situation.

Thank you for your consideration.

Elizabeth W. Rotter
190 Belgrave Avenue
San Francisco, CA 94117-4228
415.661.5025

Rotter-P-1

Mr. Bill Wycho
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

10-19-2011 RECEIVED

OCT 21 2011

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

RE: Draft Environmental Impact Report for the Natural Areas Resource Management Plan

Dear Mr. Wycho:

The purported reason for the creation of the Natural Areas Program (NAP) within the Recreation and Parks Department (RPD) was to provide ecological and scientific management for selected areas of parkland within San Francisco. The essential work of NAP has been an attempt employ restoration ecology to restore lands in their control to an imagined condition at some time in the past (before a European presence?). If this program was to preserve 'native' plant species within the evolving ecological environment I believe there would be little opposition. However, NAP demands that the evolutionary nature of the environment be destroyed, that is to say Eucalyptus and other 'non-native' plants have to go. Wholesale habitat restoration and conversion is neither scientific nor environmentally sound. That program requires destruction of massive numbers of healthy trees, eradication of large areas of animal habitat, applications of hazardous herbicides over long periods of time.

01 In the Draft Environmental Impact Report (DEIR) that is now under consideration, four different alternatives are given: Proposed Project, Maximum Recreation, Maximum Restoration, Maintenance. ONLY the Maintenance Option is a supportable ecological program, as the DEIR states:

> "The Maximum Recreation and Maintenance Alternatives are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative. Between the Maximum Recreation Alternative and the Maintenance Alternative, the Maintenance Alternative would be the environmentally superior alternative for two reasons. While the two alternatives have the same number of significant and unavoidable impacts under CEQA, the Maintenance Alternative has fewer potential environmental effects than the Maximum Recreation Alternative. First, The Maintenance Alternative would not create new trails, the construction of which could result in impacts to sensitive habitats and other biological resources. Second, over time the Maximum Recreation Alternative would result in Natural Areas with less native plant and animal habitat and a greater amount of nonnative urban forest coverage. The Maintenance Alternative, on the other hand, would preserve the existing distribution and extent of biological resources, including sensitive habitats. For these reasons, the ***Maintenance Alternative is the environmentally superior alternative***." (page 525/6, emphasis added.)

02 We had the good fortune to read a letter (10-6-11) to you on this matter from Professor Arthur M. Shapiro, Distinguished Professor of Evolution and Ecology at UC Davis. We hope you will have read his letter to gain some understanding of the long range environmental issues at stake. The NAP program of massive tree removal, animal habitat destruction, extensive herbicide use is not a sound policy under the conditions of global environmental changes that have been evident for many years. We ignore this at great peril.

The California Environmental Quality Act (CEQA) Sec. 21002 states:

> "...it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environments effects of such projects, ..."

In simple language only the Maintenance Alternative is a legal alternative.

03 One alternative for San Francisco not proposed is shutting NAP down, or redirecting NAP in a direction of co-habitation, preserving 'native' plants in an evolving environment.

Sincerely,

Paul E. Rotter

Paul Rotter
190 Belgrave Avenue
San Francisco, CA 94117

Saino-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:21 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off-leash access comment on Natural Areas Program (NAP) plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:22 AM -----



Celia Saino
<celia.saino@gmail.com>
10/30/2011 09:33 AM

To Bill.wycko@sfgov.org
cc
Subject Off-leash access comment on Natural Areas Program (NAP) plan

01 I am writing to request that the proposed change of off-leash access to San Francisco parks such as Bernal be modified to allow off-leash access but increase signage warning dogs and people about sensitive plant areas. To demonstrate the benefits of raising awareness rather than legally restricting access, please read the following summary of two very different experiences I had in local parks.

Pulgas Ridge Open Space Preserve in San Mateo:
About a year ago I was walking my dog in the Pulgas Ridge Open Space Preserve in San Mateo. I had walked in the park a couple of times before with my friends and their dogs. We are all literate women who kept out dogs on leash until one of us who used the park frequently told us that we were in an off-leash area. On this particular day, a man walking in the park had warned us that a ranger was ticketing for letting dogs off-leash in the restricted areas, and we payed particular attention to the signs to try to make sure we were leashing the required areas. A park ranger appeared during out walk and told me that she was giving me a ticket for having my dog off-leash. I explained that I and my friends were all trying to observe the rules, and that none of us had seen any signs noting the end of the off-leash area. The ranger stated the the signs were clearly marked and was unsympathetic even though we pointed out that if three women who were all trying to observe the signs had repeatedly missed them even after walking in the parks many times. I received a fine of over $200 and refuse to go back to the park because I still don't understand where the boundaries of the off-leash areas are, and my experience was so negative that I don't want anything to do with the park.

Bernal Heights Park
I was walking my dog in Bernal Heights Park a few months ago. A city employee doing plantings told me that she had a dog herself, and petted my dog. She pointed out the plantings she had just put in, and asked me politely to keep my dog out of that area. I was happy to comply. My dog and I stayed out of the restricted area as requested.

I regularly visit Bernal Heights Park but would visit it much less frequently if I had to constantly worry that if my dog chased a ball or another dog for a few seconds outside the designated area that I would receive another huge fine. If the sensitive areas were clearly marked, I would be happy to steer my dog away from those areas. I understand that plants are important too, and would be happy to help protect those areas if I had better information that was clearly marked.

Thank you,
--Celia Saino
San Francisco, CA 94114

Salamone-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:27 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Please help the dog owners of SF

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:28 AM -----



Lisa Salamone <gesparky9@sbcglobal.net>
10/29/2011 10:01 AM

To bill.wycko@sfgov.org
cc
Subject Please help the dog owners of SF

Dear Mr. Wycko,

01 I am sure that you have heard all of the comments from hundreds of dog owners in Sf but here is just one more. I adopted my dog over six years ago during a time when both of my parents were quite ill and ultimately passed away. The breaks that my dog and I took at Fort Funston and Chrissey Field beach walk together for a run off leash was liberating for both of us and quite literally helped us to remain strong for my parents.
Please help us not lose this most magnificent gift to allow us all to be free. I do understand with a great gift comes great responsibility to be good custodians of the land which I am. I will also continue to be vigilent and outspoken to those that I see breaking the rules.
Please help us to save this gift for the 99% who do a good job instead of removing it for the 1% who are just not careful people.

Yours sincerely ,
Lisa Salamone

Saltzer-Lamb –1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:44 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: city dogs deserve the space to run and play

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:44 AM ----



saltzerlamb@comcast.net
10/31/2011 11:00 AM

To bill.wycko@sfgov.org
cc
Subject city dogs deserve the space to run and play

Hi Bill,

01 As a San Francisco resident (and a City employee), I would like to ask you for your help in supporting the Maintenance Alternative plan as an answer to the issue facing SF dog owners and walkers.

Thank you,

Vicki Saltzer-Lamb
Glen Park resident

Schlund-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:41 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:42 AM -----



"Claus Schlund \(HGM\)" <claus@HellGateModels.com >
10/31/2011 11:36 AM

To <bill.wycko@sfgov.org>
cc
Subject NAP comments

Hi,

I'd like to post a few comments regarding the NAP program

01 (1) NAP reduces the amount of space available for off-leash dog recreation. The dog population is increasing, so this is a clear step in the wrong direction

02 (2) The NAP program makes use of herbicides - this is an unhealthy and unwise decision for land that is designated for park and recreational use

03 (3) The NAP program removes non-native vegitation, including mature trees. While these plants and mature trees might not be native, they are beautiful and desirable. It does not seem clear why replacing them with native species is a desirable goal.

04 (4) The NAP program will produce an ongoing maintenance burden - since the pre-existing native species were displaced by the current non-natives, it seems logical that once planted native species will once again be displaced in a matter of time unless ongoing maintenance is applied. Maintenance = dollars last time I checked. Is this a good use of our limited funds?

Thanks for your time - CLaus Schlund
Bernal Hts

Schmoll-1



Jeanie Poling/CTYPLN/SFGOV
10/31/2011 01:06 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Plan Draft EIR

----- Forwarded by Jeanie Poling/CTYPLN/SFGOV on 10/31/2011 01:06 PM -----



Gisela Schmoll <g@schmolldesign.com>
10/31/2011 12:42 PM

To jeanie.poling@sfgov.org
cc
Subject Natural Areas Plan Draft EIR

01 I am writing to you to ask you in support of the main goals of the Natural Areas Plan. Also, I am urging you to separate out Sharp Park from the Natural Areas Plan so that we can move forward with restoring and preserving San Francisco's natural areas and biodiversity.

gisela schmoll
g@schmolldesign.com
415.474.3467 tel
415.871.0534 cell on skype

Scott-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 01:18 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments on Natural Areas Program

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 01:19 PM -----



"Jan Scott" <jan@qb-soft.com>
10/31/2011 12:10 PM

To <bill.wycko@sfgov.org>
cc "Carmen Chu" <Carmen.Chu@sfgov.org>, "David Campos" <David.Campos@sfgov.org>, "David Chiu" <David.Chiu@sfgov.org>, <Eric.L.Mar@sfgov.org>, <Jane.Kim@sfgov.org>, "John Avalos" <John.Avalos@sfgov.org>, "Malia Cohen" <Malia.cohen@sfgov.org>, <Mark.Farrell@sfgov.org>, "Scott Weiner" <Scott.Weiner@sfgov.org>, <Sean.Elsbernd@sfgov.org>, <Ross.Mirkarimi@sfgov.org>, <mayoredwinlee@sfgov.org>
Subject Comments on Natural Areas Program

01 Expanding the Natural Areas Program as has been proposed is a wrong-headed idea that will waste scarce budget dollars and will not serve a majority of city residents.

02 The NAP attempts to turn the clock back to a time when San Francisco was primarily sand dunes. Most of us enjoy our parks with large non-native, but healthy trees. Not enough money is allocated to maintenance of the existing natural areas, resulting in high use of herbicides and weedy unattractive areas. Why does anyone want more of that?

03 Native Areas are off-limits to people, dogs, and almost any type of recreation. The new proposal could close up to 80% of the legal off-leash space in SF city parks. Added to the new dog management proposal by the GGNRA, the limits on dogs would be severe and unwarranted considering the number of people who wish to walk their dogs in city parks and pay to maintain those parks.

04 While I am not opposed to preserving existing areas of natural habitat, I am strongly opposed to cutting down non-native trees, using heavy doses of herbicides, destroying existing non-native areas that are home to birds and animals that have adapted, and removing large areas of our parks from recreational use by people and dogs.

Thank you,
Joanne Scott
40-year resident and voter, San Francisco

Sebastian-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Monday, November 07, 2011 9:30 AM
To: Bock, John
Subject: Fw: Save current off leash areas for Dogs

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

---- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/07/2011 09:30 AM ----

Bill Wycko/CTYPLN/SFGOV
11/07/2011 09:27 AM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Save current off leash areas for Dogs

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/07/2011 09:28 AM ----

Sandi Sebastian <ssebasti@byer.com>
11/04/2011 02:01 PM

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc: "sandi@vinlan.com" <sandi@vinlan.com>
Subject: Save current off leash areas for Dogs

Dear Mr. Wycko...,

Please save current off leash areas for Dogs. Also add more since there is not enough.
There are many dog owners that follow rules and there have been more & more places posted in neighborhood parks: No Dogs Allowed.

01

Thank-you,
Sandi Sebastian

Shapiro-1

UNIVERSITY OF CALIFORNIA, DAVIS
Department of Evolution and Ecology

October 6, 2011

RECEIVED
OCT 07 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Mr. Bill Wycko
Environmental Review Office
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: DRAFT EIR, NATURAL AREAS PROGRAM

Dear Mr. Wycko:

Consistent with the policy of the University of California, I wish to state at the outset that the opinions stated in this letter are my own and should not be construed as being those of the Regents, the University of California, or any administrative entity thereof. My affiliation is presented for purposes of identification only. However, my academic qualifications are relevant to what I am about to say. I am a professional ecologist (B.A. University of Pennsylvania, Ph.D. Cornell University) and have been on the faculty of U.C. Davis since 1971, where I have taught General Ecology, Evolutionary Ecology, Community Ecology, Philosophy of Biology, Biogeography, Tropical Ecology, Paleoecology, Global Change, Chemical Ecology, and Principles of Systematics. I have trained some 15 Ph.D.s, many of whom are now tenured faculty at institutions including the University of Massachusetts, University of Tennessee, University of Nevada-Reno, Texas State University, and Long Beach State University, and some of whom are now in government agencies or in private consulting or industry. I am an or the author of some 350 scientific publications and reviews. The point is that I do have the *bona fides* to say what I am about to say.

At a time when public funds are exceedingly scarce and strict prioritization is mandatory, I am frankly appalled that San Francisco is considering major expenditures directed toward so-called "restoration ecology." "Restoration ecology" is a euphemism for a kind of gardening informed by an almost cultish veneration of the "native" and abhorrence of the naturalized, which is commonly characterized as "invasive." Let me make this clear: *neither "restoration" nor conservation can be mandated by science—only informed by it.* The decision of what actions to take may be motivated by many things, including politics, esthetics, economics and even religion, but it cannot be science-driven.

01

In the case of "restoration ecology," the goal is the creation of a simulacrum of what is believed to have been present at some (essentially arbitrary) point in the past. I say a simulacrum, because almost always there are no studies of what was actually there from a functional standpoint; usually there are no studies at all beyond the merely (and superficially) descriptive. Whatever the reason for desiring to create

Shapiro-1

such a simulacrum, it must be recognized that it is just as much a garden as any home rock garden and will almost never be capable of being self-sustaining without constant maintenance; it is *not going to be a "natural," self-regulating ecosystem.* The reason for that is that the ground rules today are not those that obtained when the prototype is thought to have existed. The context has changed; the climate has changed; the pool of potential colonizing species has changed, often drastically. Attempts to "restore" prairie in the upper Midwest in the face of European Blackthorn invasion have proven Sisyphean. And they are the norm, not the exception.

The creation of small, easily managed, and educational simulacra of presumed pre-European vegetation on San Francisco public lands is a thoroughly worthwhile and, to me, desirable project. *Wholesale habitat conversion is not.*

A significant reaction against the excesses of the "native plant movement" is setting up within the profession of ecology, and there has been a recent spate of articles arguing that hostility to "invasives" has gone too far—that many exotic species are providing valuable ecological services and that, as in cases I have studied and published on, in the altered context of our so-called "Anthropocene Epoch" such services are not merely valuable but *essential.* This is a letter, not a monograph, but I would be glad to expand on this point if asked to do so.

01
(Cont.)

I am an evolutionary ecologist, housed in a Department of Evolution and Ecology. The two should be joined at the proverbial hip. Existing ecological communities are freeze-frames from a very long movie. They have not existed for eternity, and many have existed only a few thousand years. There is nothing intrinsically sacred about interspecific associations. *Ecological change is the norm, not the exception.* Species and communities come and go. The ideology (or is it faith?) that informs "restoration ecology" basically seeks to deny evolution and prohibit change. But change will happen in any case, and it is foolish to squander scarce resources in pursuit of what are ideological, not scientific, goals with no practical benefit to anyone and only psychological "benefits" to their adherents.

If that were the only argument, perhaps it could be rebutted effectively. But the proposed wholesale habitat conversion advocated here does serious *harm*, both locally (in terms of community enjoyment of public resources) and globally (in terms of carbon balance-urban forests sequester lots of carbon; artificial grasslands do not). At both levels, wholesale tree removal, except for reasons of public safety, is sheer folly. Aging, decrepit, unstable Monterey Pines and Monterey Cypresses are unquestionably a potential hazard. Removing them for that reason is a very different matter from removing them to actualize someone's dream of a pristine San Francisco (that probably never existed).

Sociologists and social psychologists talk about the "idealization of the underclass," the "noble savage" concept, and other terms referring to the guilt-driven self-hatred that infects many members of society. Feeling the moral onus of consumption and

Shapiro-1

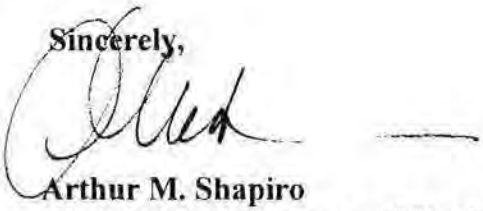
luxury, people idolize that which they conceive as pure and untainted. That may be a helpful personal catharsis. It is not a basis for public policy.

Many years ago I co-hosted John Harper, a distinguished British plant ecologist, on his visit to Davis. We took him on a field trip up I-80. On the way up several students began apologizing for the extent to which the Valley and foothill landscapes were dominated by naturalized exotic weeds, mainly Mediterranean annual grasses. Finally Harper couldn't take it any more. "Why do you insist on treating this as a calamity, rather than a vast evolutionary opportunity?" he asked. Those of us who know the detailed history of vegetation for the past few million years—particularly since the end of Pleistocene glaciation—understand this. "Restoration ecology" is plowing the sea.

01 (Cont.)

Get real.

Sincerely,



Arthur M. Shapiro
Distinguished Professor of Evolution and Ecology

(530)752-2176, fax 752-1449
amshapiro@ucdavis.edu

Sharp-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dog parks
Date: 10/03/2011 05:04 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/03/2011 05:04 PM -----

Alisa Sharp <alisa.sharp@gmail.com>

10/03/2011 04:55 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Dog parks

Dear Bill,

01 As a dog owner and frequent visitor of dog park areas I would like to request that you reconsider the closure of amy such spaces. The dog park space my dog utilizes is an integral part of his socialization.

Thank you for your time.

Best,
Alisa

Shepard-A-1

Jun 11 23 01:49p Shepard 4157530325 p.1

To: Bill Wycko, Environmental Review Officer

Date: June 10, 2012

From Avrum Shepard

Subject: DEIR for the SNRAMP File No. 2005.0912E

Unfortunately, I faxed the wrong copy of my comments on the above subject. The following pages replace my oridinal fax. Thanks.

Avrum Shepard

Shepard-A-1

Jun 11 23:01:49p Shepard 4157530325 p.2

To: Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street
San Francisco, CA 94103-2479

Date: June 10, 2012

From: Avrum Shepard
1037 Portola Drive
San Francisco, CA 94127
(415)661-9255

Via fax (415)558-6409

Subject: Draft Environmental Impact Report for the Significant Natural Resources Area Management Plan (Planning Department File No. 2005.0912E)

01 NAP is fundamentally flawed and misses the point entirely. It is not what San Francisco wants or needs. We want accessible, attractive, safe, and well maintained parks and recreation areas. We need more services that attract and keep families in our city. NAP not only does not provide these vitally needed resources, it sucks funding away from them. Some of the contradictions caused by NAP facing the families in our neighborhood are illustrated by recent activities by RPD.

All playground directors were fired leaving a gap in children's recreation in our city. RPD saw this as a money saving endeavor. We see it as a giving up of one of RPD's most basic functions. At the same time, RPD spends money on NAP, a program that serves very few people. Although the city department name begins with "recreation" they have apparently abandoned the requirement to provide that service.

02 NAP introduced this plan to remove trees, reduce trails and severely restrict access to recreation, repeatedly spray toxic herbicides in areas where children recreate, destroy existing habitat that supports animals which live in our parks, and violate state law governing the use of herbicides. And they spend money on cutting down healthy trees which provide habitat for many animals, instead of spending the money on maintaining trees in parks for citizen safety. For example, in 2003, a study was done to identify the health of the trees in Stern Grove. Many trees were identified as hazardous and in need of maintenance. RPD did not perform the prescribed maintenance on those trees, but did cut down non-native trees. In 2008 a woman was killed by a falling tree branch that had been identified in this study.

03 Bathrooms at playgrounds throughout the city are in pitiful condition. No human wants to go into these horrible pits, but RPD spends money on developing a NAP plan. NAP has been working on this plan for many years instead of providing the services that citizens want.

And how is it that NAP is exempt from the standards established by Proposition C that apply to all other parks?

Shepard-A-1

04 NAP has forged ahead with developing this plan and with few exceptions, excluded citizen involvement. None of the neighborhood organizations west of twin peaks have ever been asked to host a presentation by NAP of their plans, even though Mt Davidson is in our backyard. On the other hand, we were asked to host presentations of RPD bonds in 2008 and currently for the 2012 bond. So each time RPD needs money, they come to us asking for help. They do not involve us in planning for how to spend the money. Please reject the NAP plan and DEIR and demand that RPD be accountable to the citizens of our city and provide needed services.

03 (Cont.) One more thing needs mention. The idea of a city department taking so long to come up with a plan for what it is to do is completely absurd. NAP has been a major section of RPD since 1997. How much money should we spend developing a plan that provides so little return? And how long can we afford to keep the section of a city department functioning without a plan?

04 (Cont.) NAP did finally make a presentation on at the West of Twin Peaks Central Council in May, 2012 of the NAP plan, but only after repeated calls to RPD. After reading the plan and listening to the NAP presentation I voted to oppose the plan and ask for you to do the same.

Shepard-J-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: NAP EIR comments
Date: Monday, October 31, 2011 4:48:00 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:48 PM -----

Jane Shepard <janecshepard@yahoo.com>
10/31/2011 04:44 PM

Tobill.wycko@sfgov.org
cc
SubjectNAP EIR comments

Dear Mr. Wycko,

01 There are so many things wrong with the NAP EIR that one hardly knows where to begin. Let's start with the lack of scientific evidence, just some unknown person(s) observations. The fact that the EIR repeatedly says that dogs "MAY" harm native plant gardens without proof or evidence of any kind is an excellent start. Well, they "MAY" be beneficial too.

02 My biggest concern is what was intended to preserve the few remnants of San Francisco's historical habitat has changed into an ever-expanding program that controls over 25% of our City's parkland and with more areas being closed to the public all the time.

We live at the foot of Mt. Davidson. NAP is closing the trails, fencing off all the views, removing the benches we sit on, cutting down thousands of healthy trees, using poisons to sustain these native plant gardens, and actively ENCOURAGING POISON OAK!!! Where are we supposed to recreate?

What is wrong with this City? We are planning for higher density but taking away parkland where people recreate? NAP calls for "passive recreation". Just how is that supposed to remedy the obesity in this country?

01 (Cont.) I urge you to reject this EIR and send them back to the drawing board to incorporate scientific evidence and to evaluate the impact to other parks when they close all these dog play areas, not just to people with dogs but all people.

Sincerely,

Jane Shepard

1037 Portola Dr

San Francisco, CA 94127

415-661-9255

Simons-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dogs in the Parks
Date: 10/04/2011 09:32 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 09:33 AM -----

Kevin Simons <kevin_simons@yahoo.com>

10/04/2011 07:56 AM

Please respond to Kevin Simons <kevin_simons@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Dogs in the Parks

Mr. Wycko,

Jennifer Scarlett, co-President of the San Francisco SPCA, stated my beliefs perfectly:

01 *It's so important that those of us who share this beautiful part of the world remember the word "share." Dogs and dog people are part of a community of extremely varied interests. For decades, San Francisco has worked to balance and blend those interests—not just informally but under the law. The city's Natural Resource Areas Management Plan could tip that balance away from the needs of the city's responsible guardians and their dogs and undermine their quality of life.*

And, in a real way, others' quality of life as well. How? Urban recreation isn't just a private pursuit; it has civic value. In this case, by fostering everything from wider environmental awareness to physical fitness (who doesn't take obesity seriously these days?); by encouraging dogs to be less anxious and more trainable, to be people-friendly and sociable with their fellow dogs (leading to a safer city); by acknowledging the value of animal companionship; and, in the broadest sense, by sustaining a community that looks out for its animals, adopts them, and insists on humane conditions everywhere.

Kevin Simons
5800 Third Street #1404
San Francisco, CA 94124
(415) 378-2347

Skippy-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dogs in Parks
Date: 10/03/2011 04:38 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/03/2011 04:39 PM -----

Skippy <skippyskippyskippy@gmail.com>

10/03/2011 03:29 PM

To bill.wycko@sfgov.org
cc
Subject Dogs in Parks

01 I am a dog owner and not only should we keep, but we should expand, our dog parks. Dr. Scarlett DMV in the SF Gate today said it best:

Urban recreation isn't just a private pursuit; it has civic value. In this case, by fostering everything from wider environmental awareness to physical fitness (who doesn't take obesity seriously these days?); by encouraging dogs to be less anxious and more trainable, to be people-friendly and sociable with their fellow dogs (leading to a safer city); by acknowledging the value of animal companionship; and, in the broadest sense, by sustaining a community that looks out for its animals, adopts them, and insists on humane conditions everywhere.

--
Tell me, what else should I have done?
Doesn't everything die at last, and too soon?
Tell me, what is it you plan to do
with your one wild and precious life?
~Mary Oliver, "The Summer Day"

Smith-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:48 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: I disagree with closing any more land for native plants

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:49 AM -----



Megan Smith
<megan@sierra.net>
10/31/2011 10:02 AM

To <bill.wycko@sfgov.org>
cc <sfdog@yahoogroups.com>
Subject I disagree with closing any more land for native plants

Dear Mr. Wycko,

01 I appreciate the beauty of native plants and the history behind showing what vegetation grew before the city was here. Also, they make sense for saving water. But please do not close off any more land in San Francisco for this purpose – I think we have enough areas set aside already.

02 This latest plan would cut off traditional uses of parks and trails and we already have so few places to hike. The anti-dog bias seems based on people's opinions and dislike of dogs rather than facts or scientific studies. If you add this plan to the ridiculous and onerous GGNRA plan, dog owners will have no other option than to head to the nearest city parks – which already overcrowded for baseball and soccer games.

03 In my own small back yard, I grow native plants, never use pesticides or fertilizer, allow certain weeds to grow just because of butterflies, let bushes get overgrown for birds, try to grow sunflowers for bees etc. I would like to see more of this type of thing encouraged for the backyards of San Francisco, but I am very much opposed to closing areas where people now go with dogs or with their children (or both!) to devote to more native plant areas.

Thank you for your consideration.

Best regards,

Megan Smith
Little League/soccer mom and dog owner

Stafford-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:49 PM
To: Bock, John
Subject: Fw: NAP EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

---- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:50 PM ----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:27 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:28 PM ----

nancy stafford <nancyn42penguins@sbcglobal.net>
10/31/2011 04:59 PM

To: bill.wycko@sfgov.org
cc:
Subject: NAP EIR

1

Stafford-1

To: Bill Wycko

Environmental Review Officer

I am very concerned about the NAPEIR and the lack of sound science behind it.

01 I support the Maintenance Alternative so more people will be able to use these areas for multiple recreational activities. To designate so much parkland for passive recreation when the population is growing makes no sense. The NAP is the largest user of herbicides and there is nothing "natural" about using so much poison to get rid of an existing ecosystem to replace it with a supposedly more natural one.

Nancy Stafford

Stevenson-1

Jan Stevenson
1341 29th Ave.
San Francisco, CA 94122

SF Park and Recreation Dept.
c/p Park Natural Areas Program
Bill Wycko
Environmental Review Officer, Planning Department
1650 Mission Street
San Francisco, CA 94103

Mr. Wycko and Planning Department:

01 I wish to submit my strong objection to the proposal to limit off lease areas in the San Francisco.

Sometimes it seems to me that rules are created that have the direct opposite effect as are intended. I think every dog walker I have ever used was highly sensitive to the environment, using parks, cleaning up after animals, watching the areas for dangerous situations and generally taking care of the area they use on a regular basis.

I can not tell you how many people I have known that have moved out of the San Francisco area because it felt unfriendly to them in their attempts to raise children.

It begs the question of who do you want left in the city and who is going to use the city?

Animals have been shown to reduce stress and calm heart rates for all ages. It feels like you are driving out animals and children in the city with all these rules.

Please have more consideration for the benefits derived from people being able to keep and excercise animals.

01 (cont.) This seems a little far fetched to me that animals could have such a negative effect on the environment as to want to ban their being able to run loose entirely.

The worst fights I have witnessed were in enclosed dog parks like the one in Golden Gate Park. It makes big dogs predatory, small dogs fearful and owners with dogs that are problems tend to bring their dogs to enclosed areas.

Please don't pass this law.

Thank you

Jan Stevenson

Stewart-E-1



Bill Wycko/CTYPLN/SFGOV
06/04/2012 05:54 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Mt. Davidson Natural Area Plan DEIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/04/2012 05:54 PM ----



ethan stewart
<stewartethan@hotmail.com>
06/01/2012 09:55 PM

To <bill.wycko@sfgov.org>
cc
Subject Mt. Davidson Natural Area Plan DEIR

Hello, my name is Ethan Stewart. My family and I live on Stanford Heights Avenue in Miraloma, and I am writing about the proposed natural area plan for Mt. Davidson. I am opposed to the current plan of healthy tree removal in native plant restoration. The trees that exist there are already part of the urban environment. There is really no such thing as being able to return any area to a "native" habitat, especially when tree removal results in the potential for greater wind erosion, harsher treatment through pesticides to control non-native plants and animals and in fact greater destruction to the Mt. Davidson recreation area through greater potential for non-native species to crowd out any attempts at restoration. If hazardous or unhealthy trees need to be removed, they should be immediately replaced with Monterey Cypress and more amenities (benches, etc.) should be installed near native plant zones. As a frequent hiker to the area, the trees provide habitat for birds, butterflies and other species now living on Mt. Davidson, and should be protected. Additionally, as someone who is concerned about native environments and habitats along with quality of urban living, I am opposed to the plan simply because it seems misguided. Urban environments are by definition non-native and the most reasonable solution is to preserve what makes the area wonderful while doing whatever is possible to minimize damage elsewhere. Attempting to recreate something that may or may not have existed can very well lead to even greater problems. Please consider revising or rejecting the proposed draft for Mt. Davidson. Mahalo for your time and consideration. Ethan Stewart

01

Stewart-M-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Please don't take away our DPAs in Bernal Heights
Date: 10/05/2011 05:35 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 05:35 PM -----

Matt Stewart
<mjfstewart@gmail.com>

10/05/2011 05:28 PM

To bill.wycko@sfgov.org
cc
Subject Please don't take away our DPAs in Bernal Heights

Bill - I live at 171 Coleridge St in Bernal Heights. I'm lucky to have two amazing leash-free parks in Holly Park and Bernal Hill where my dog frolics every single day without hurting a blade of grass. Alas, I saw that a plan's coming up that threatens to undo that.

Please don't take away dog play space from me (and my dog, Otis!).

01 Actually, it'd be useful if you could first explain what the problem is re: Dog Play Areas...I've never heard of anybody saying anything but terrific things about them. Why are people chipping away at these? They're aware that we have more dogs than just about anything else in SF, right?

Every year people try to bend San Francisco into a place that's less special. Look at the crackdown on Bay to Breakers (no floats? really?) and the periodic attacks on leash-free dogs in the GGNRA. I love living in SF for many reasons, but a big one is that this city treats me like an adult. I keep my dog under strict voice control, and so do 99.999% of other dog owners. I have never seen a problem with an off-leash dog in a park - but I have seen an incalculable level of love.

01 (Cont.) Dog Play Areas make San Francisco an amazing place to live. Please, keep them all - or expand them. But don't turn this magnificent city into Brisbane by deleting them.

Thanks-
Matt Stewart
171 Coleridge St.

--
415.867.0999 :: http://matt-stewart.com :: http://twitter.com/mjfstewart

Strasbaugh-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: AGAINST draft Significant Natural Resource Areas Management Plan
Date: 10/04/2011 09:31 AM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/04/2011 09:32 AM -----

lalaweese@aol.com

10/03/2011 07:24 PM

To bill.wycko@sfgov.org, David.Campos@sfgov.org
cc
Subject AGAINST draft Significant Natural Resource Areas Management Plan

Dear Mr. Wycko and Supervisor Campos

01 I am a District 9 homeowner residing at 286 Hamilton St., San Francisco. I am also an 11 year dog volunteer with the San Francisco SPCA. I am outraged that you would consider the huge cuts you proposing for dog play areas in San Francisco. First of all, a reminder: a draft environmental-impact statement by the Golden Gate National Recreation Area has already shown no direct link between dog walking and any environmental damage in GGNRA lands. Second, what do you think is going to happen when you cut these DPAs? There will be more pressure on the surviving DPAs because more dogs will be visiting fewer areas. Is that your ultimate goal? To force dog owners and walkers out of parks altogether? Or, as you put it - is THIS the "environmentally superior alternative." ?

Dogs are NOT the enemy; they are members of people's families WHO LIVE HERE AND PAY TAXES. A well-played and exercised dog is a safer dog. They have learned social interaction with both dogs and people, which makes our city safer. Our shelter and the various dog rescue groups have a proud, ground-breaking tradition of supporting animal companionship and no-kill shelters. Dogs are a fact of life in this city, and this plan would threaten the well-being of everyone.

I take shelter dogs on hikes in McLaren, and citizens have already taken it upon themselves to put up poop bag containers, as they have in many other parks. McLaren is ideal for all kinds of dogs, be they ones that need to be away from other dogs, or dogs that enjoy dog play. And it is free - paid for by my taxes.

Strasbaugh-1

If people are so worried about poop, heck, let's just start shooting seagulls, or pigeons. And what about the trash in parks - should we not allow people in them?

If this plan moves forward, Supervisor Campos, I will be watching very closely to see how you respond. Meanwhile, shame on you Mr. Wycko.

Louise Strasbaugh

louise

Stringer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:20 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: DEIR SNRAMP comments

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:20 PM ——



Lewis Stringer <lewisstringer@hotmail.com>
10/31/2011 04:14 PM

To <bill.wycko@sfgov.org>
cc
Subject DEIR SNRAMP comments

Dear Mr. Wycko:

I am writing to comment on the Draft Environmental Impact Report (DEIR) for the Significant Natural Resource Areas Management Plan (SNRAMP).

01 I am citizen of San Francisco and a supporter of the Natural Areas Program and the goals in the Natural Areas Plan. I am concerned however that because of the ongoing legislation and litigation concerning Sharp Park that it should be separated out from the rest of the environmental analysis of the Natural Areas Plan.

02 I am an ecologist working in similar environments and am concerned that the removal of eucalyptus groves in the MA-3 areas was not fully evaluated. The threat these trees pose in the long term to the goal of preserving biodiversity is significant and the Proposed plan is-in my opinion- inadequate at addressing them.

03 The GGNRA, in their most recent Management Plan, includes community stewardship as a form of recreation in their analysis of alternatives. I encourage you to do the same. Such an evaluation may change the equation that evaluates impacts to recreation, and ultimately lead to a different conclusion of what is an environmentally superior alternative.

Sincerely,
Lew Stringer
425 Buena Vista Ave East
San Francisco,CA
94117

Summer-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:16 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments regarding the NAP EIR

——Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:16 PM——



william summer <wm_summer@yahoo.com>
10/31/2011 02:19 PM
Please respond to william summer <wm_summer@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Comments regarding the NAP EIR

Mr. Wycko,

This email is in response to the NAP EIR, which is an inadequate plan that requires additional work. Buena Vista is my neighborhood park, which I have been walking in for the past 8 years with my dog. The NAP EIR will restrict my and my neighbor's access to this park, as well as a number of others.

01 It's important that the EIR be based on solid scientific evidence, which is not the case here. The NAP EIR asserts a number of times that dogs may be impacting plants or wildlife but does not offering any evidence, past or present, while ignoring scientific studies that show the contrary. Ignoring scientific studies that do not agree with the plan while not providing any evidence of its own is not acceptable.

02 The analysis of the effects of the proposed closures of up to 80% of the Dog Play Areas in the city is incomplete. The impacts on other DPAs, parks, and the impact of park users traveling to the remaining DPAs on the environment have not been considered.

Thank you for your time,

William Summer
San Francisco home owner

Sutch-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:08 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Off leash areas for dogs in San Francico

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:08 PM -----



Jeff Sutch
<jeff.sutch@gmail.com>
10/31/2011 04:00 PM

To bill.wycko@sfgov.org
cc
Subject Off leash areas for dogs in San Francico

Hello,

01 I'm writing to ensure that off leash areas for dogs are included in the voices about how we should manage our natural resources in San Francisco. It should be clear that green areas area crucial to a sociable and healthy city. San Francisco benefits greatly from not only allowing it's citizens to be dog owners, but to increase the health of of pets and the owners. Many dog owners receive their exercise by walking around with dogs and many of our citizens who can't easily make it out of the house due to anxiety or other issues are coaxed from the house and encouraged to walk more and longer. This effect can't be duplicated by on-leash walks. Even breeds that are smaller and normally are considered lap dogs benefit from a long run and impart their health on their owners.

Well exercised dogs are happier, healthier and exhibit a positive impact on the people of a city and their social and mental health. By having legal places for dogs to run you encourage owners to be more proactive about registration and shots through the calming hand of social pressure. Making off-leash illegal or squeezing it into the shadows this will result in more people who are law-abiding citizens today becoming a concern for enforcement later.

Please keep our off-leash areas safe - they are in the city's best interests.

thanks,

-Jeff

Swenerton-1

RECEIVED
OCT 28 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

To Whom It May Concern:

I am writing to express my support for the Significant Natural Areas Management Plan and to comment on the Draft Environmental Impact Report for that plan.

01 The Significant Natural Areas Management Plan is a decade overdue and is based on painstaking research and innovative, cutting edge, sustainable land management practices. It represents a step in the right direction for the Recreation & Park Department, and indeed for the City as a whole. As a professional ecologist involved in urban restoration for the past 13 years, I can personally attest to the overflowing positive impact that the restoration activities this plan proposes can have on the quality of life and ecological integrity of our city. The SNRAMP is the most cost effective way for managing our precious and quickly disappearing natural gems and will help prevent the local extinction of plants and animals, improve habitat for wildlife, increase safety, and improve access and recreational use in Natural Areas.

The SNRAMP is sound and reasonable. In fact, it is based on a decade worth of compromise that fairly takes into account and mitigates for potential impacts to our City's resources. In actuality, the habitat restoration element has been watered down to the point that the long-term sustainable management and control of invasive plants is barely achievable. Its proposed goals are modest, reasonable and balanced.

02 I believe that the SNRAP DEIR is an adequate, accurate and complete review of the plan is based on detailed, comprehensive research and sound scientific studies conducted by experts. My main
03 criticism is the fact that the analysis does not value community stewardship and restoration activities in the Natural Areas as a positive impact on recreation. This omission misses the point that stewardship is a form of recreation and volunteers are park users who improve and value our natural resources. Secondly, it makes no logical sense that the recreation and maintenance alternatives are weighed as "environmentally superior" to habitat restoration of the adoption of the proposed project. The fundamental goals of the proposed project and restoration alternative are to benefit the environment. Environmental review is strangely skewed in this circumstance as it is primarily utilized for projects that intend to cause damage to the environment rather than those that seek to restore and improve it. Therefore, it should be understood that the gravity of the particular environmental impacts of the maximum restoration alternative are far lower and logically preferable to those of the maximum recreation alternative. Restoration and recreation are not mutually exclusive. Community based restoration is a valid and increasing form of recreation.

It is high time the city adopt the SNRAMP. I wholeheartedly support it.

Sincerely,

Kirra Swenerton, M.S.
101 Alpine Terrace
San Francisco, CA 94117

Thayer-1



Bill Wycko/CTYPLN/SFGOV
06/11/2012 12:45 PM

To Irene Nishimura/CTYPLN/SFGOV@SFGOV, Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Mount Sutro development

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 12:45 PM ——



Nick Thayer <nickstron22@gmail.com>
06/08/2012 01:18 PM

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Mount Sutro development

01 Please don't develop Mount Sutro any further. The area needs to maintain its serenity in order to remain a nice destination for people from all around the Bay Area, both for hiking and otherwise.

Thank you for your time and for keeping Mount Sutro one of the few natural areas left in the city.

Nick Thayer

Thomas-1



Bill Wycko/CTYPLN/SFGOV
06/11/2012 03:41 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Areas Plan DEIR for Mt. Davidson

—- Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 03:41 PM —-



Barbara Thomas <miatanyabsta@sbcglobal.net>
06/11/2012 03:34 PM

To Bill Wyco <bill.wycko@sfgov.org>
cc Marieka Thomas <marieka_t@yahoo.com>
Subject Natural Areas Plan DEIR for Mt. Davidson

Thank you for our telephone conversation this afternoon regarding potential negative impacts on Mt. Davidson of implementation of the Natural Areas Program of the S.F. Recreation and Parks Department. As a resident of Miraloma Park for over 40 years, I have become a keen observer of the natural habitat here. Testimony to the health of the mountain ecosystem is the thriving of our highest predators in the food chain, red-tailed hawks and peregrine falcons, which control our rat and squirrel population. We have a natural environment which has evolved over more than 100 years. Nature has done a good job, better than humans can!

If our wild animals' habitat is disrupted, they will flushed out of their homes and into abutting housing, potentially becoming not only pests but also disease vectors and a danger to humans and domestic pets. There is a huge population of dog owners in this neighborhood who daily take their pets outside, and a few "free range" pet cats.

01 I am vehemently opposed to poisoning of the ground to protect newly reintroduced "native species", since the toxins enter animals' food chain and work their way up through many species to top predators. The mountain supports both local birds and flocks of migratory bird species, so the effects of poisoning transcend our city/county boundaries. Also, children and domestic pets can be poisoned. Many dog walkers regularly use this park and need full, safe access.

02 Although there is Franciscan formation bedrock on Mt. Davidson, it is overlaid with many feet of topsoil
03 which is held by eucalyptus tree root systems. Removing wide swaths of these trees could destroy that
04 stability and cause landslides, imperiling houses downhill. Existing underground springs could also be
05 disrupted or re-routed. Wind tunnels would be created by tree removal and pleasant micro-climates would
06 be altered.Poisoned ground water could enter our storm drains and S.F. Bay. Loss of trees would result in less sequestering of carbon dioxide and motor vehicle exhaust products, adversely affecting local air quality.Please help us block this insane program! Sincerely, Barbara Thomas

Thompson-C-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:07 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:08 AM -----



"Clare M. Thompson" <cleoleo@sonic.net>
10/31/2011 08:49 AM

To bill.wycko@sfgov.org
cc SupervisorScottWiener@sfgov.org
Subject

01

Dear Bill Wycko, This is a response from a Glen Canyon Park supporter who has lived in Glen Park for over 26 years and has enjoyed and loved daily walks through Glen Canyon Park. Please, please, please, stop the misguided people who claim to have and share the best interests of most of us who love this park. The park first and foremost belongs to ALL of us; it exists for us all. It is a NATURAL HABITAT and as such should be protected from ruin by the above over earnest small group of very vocal people who want to turn it into another botanical garden. We already have a S.F. Botanical Garden where people can enjoy all kinds of flora(including a large area of native plants of the Bay Area).

Glen Canyon is a home to birds of many kinds. It provides a safe haven to migratory birds. Habitats of this nature are becoming fewer and fewer. We need to be extremely careful that we not be persuaded to citify, if you will, and thus ruin this natural area. Many of us who walk through Glen Canyon on a daily basis have noticed that the willow trees that shelter numerous birds (red tail hawks, owls, and many other creatures) have been unnecessarily cut back severely and almost on a weekly basis. In no time, ALL of us who love this natural habitat will find very little vegetation and beauty to enjoy, relax in, and be inspired by. This is not restoration; it's more like mutilation or destruction.

This is self-serving; this is NOT for the common good.

Thompson-D-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: Dogs: we live in THE CITY. Should we get rid of the buildings too?
Date: 10/05/2011 05:00 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/05/2011 05:00 PM -----

Doug Thompson
<dougthompson67@yahoo.com>

10/05/2011 04:55 PM

Please respond to
Doug Thompson <dougthompson67@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Dogs: we live in THE CITY. Should we get rid of the buildings too?

Dear Sir,

01 This restoration movement doesn't make sense. We live in THE CITY. Should we get rid of the buildings too? Should we return Golden Gate Park to sand dunes? California has a LOT of nature. It just doesn't happen to be in the CITIES, because they are CITIES.

Thank you for listening.
Doug Thompson

Tondelli-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:08 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: SF City Parks Plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:09 AM -----



TopDog <info@topdogsf.com>
10/31/2011 08:42 AM

To bill.wycko@sfgov.org
cc
Subject SF City Parks Plan

Dear Bill Wycko,

I am writing to you as a concerned professional dog walker and resident of San Francisco. I strongly feel that the new proposed legislation restricting professional dog walkers to a maximum of seven dogs is simply disadvantageous for dogs, responsible dog owners, professional dog walkers, and the city of San Francisco. Dog walkers provide an invaluable service that many dog owners rely on to keep their dog well exercised, sociable and mannered. Furthermore, professional dog walkers help keep parks and recreation areas clean and maintained.

I am not in opposition of regulating professional dog walking; in fact I support it as the industry is growing and regulation is long overdue. However limited the number of dogs to seven simply is not financially sustainable for myself and other professionals in this industry. The loss in income from losing one full time client is approximately $6,500 per year, which is a significant portion of my income. I feel that I speak for all dog walkers in the city of San Francisco when I say that there is nothing I would love more than to continue providing this necessary service in a professional manner, however this proposed legislation is something that I may not be able to overcome financially.

01

I believe the most beneficial course of action is to follow the recommendation of the Commission of Animal Control and Welfare of San Francisco. The ACC proposes that professional dog walkers should be limited to **eight** dogs and adhere to strict, professional business practices including a thorough permit process, education and accountability. Eight dogs is a very reasonable limit that a professional dog walker can certain handle with professionalism and attentive care, and also is more financially sustainable.

Please consider revising the proposed legislation to concede with the eight dog limit recommendation from the San Francisco ACC. I truly feel that this is the most beneficial to all parties who participate in dog walking services, including other park users.

Tondelli-1

Sincerely,

Natalie Tondelli, CTC
SPCA Certified Trainer and Counselor

Top Dog SF
3150 Rivera Street
San Francisco, CA 94116
415 225-3081
www.topdogsf.com

Tully-1

Sean Tully
10 Golf Ave.
San Rafael, CA
stully@meadowclub.com

RECEIVED
OCT 3 1 2011
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
RECEPTION DESK

October 1, 2011

San Francisco Planning Department
Attn: Bill Wycko, Environmental Review Officer
1650 Mission St., #400
San Francisco, CA. 94103

Re: Supporting "Historical Resource"
Designation for the Sharp Park Golf Course
Significant Natural Resource Areas, etc.
DEIR No. 2005.1912E

Dear San Francisco Planning Department,

My name is Sean Tully and I have been associated with golf in the Bay area for the last 11 years when I became the Assistant Superintendent at Meadow Club, another Alister MacKenzie designed golf course that is in Marin County. From 1999 to 2005, we did a restoration at Meadow Club to restore as close to the original design as possible. In doing some research on Meadow Club, I rediscovered some of the early history of golf in the Bay area. For the last 10 years, I have been researching golf in the Bay area with the intention of writing a book. I'm also involved with a small group of researchers from around the world that are working on a chronology of the life and times of Alister MacKenzie. In addition, I have assisted a number of golf architects engaged in restoring golf courses by providing historical documentation of the work done on those courses.

In 1997, I made my first visit to the Bay area and one of my first stops was to see Sharp Park. I was taken by the seaside setting and what would have been there originally in 1932 when the course was first opened. Over the years of my research I have found some interesting things about Sharp Park:

1

Tully-1

In 1919, John McClaren envisioned the Sharp Park property to one day be a golf course and was already laying the groundwork to plant trees and make a fresh water lake on the property.

In 1925, even before Harding Park was open there was still concern that there were not enough golf courses to satisfy the number of golfers. There was already talk of adding another golf course to meet the needs of public golfers and some options were looked at including the property at Sharp Park and another at McClaren Park.

In 1929, with nothing done to address the still growing numbers of golfers, additional plans were floated that included turning Harding Park into a 36 hole facility and plans had already been drawn up for both Sharp Park and McClaren Park by both Alister Mackenzie and his partner Robert Hunter!

Sharp Park had at least two benefits that helped to get the golf course built. The first is that the property was already owned by the city and the only cost was building the golf course itself. Secondly, the property would have made it one of, if not the only, municipal seaside links courses in the country.

In giving Sharp Park a historical significance one only needs to look at the body of work that Alister MacKenzie did in his capacity as a Golf Architect. His career spanned 27 years with his latter years showing a very distinguished list of golf courses. He had been a consulting architect for the R&A and St. Andrews in particular. He had only just recently finished the Cypress Point Golf Club, Pasatiempo Country Club, and Union League Golf Club (now Green Hills Country Club)so his work was well known in the Bay area and he was known around the world as one of the best architects in the business. When the Jockey Club in Buenos Aires, Argentina was looking for a world renowned architect, they contacted Findlay Douglas a top amateur golfer and President of the United States Golf Association--he gave them the name of Alister MacKenzie.

In looking at the Top 100 courses in the world as compiled by Golf Magazine for 2011, MacKenzie has four courses in the Top 20! The next closest architect is Old Tom Morris with three, considered one of the greatest golfers in his day as well as a noted architect-not bad company.

MacKenzie not only designed world class golf courses, he also designed and built courses with the simple idea that there should be economy in design and construction. One of his major selling points was the money that he could save

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on construction costs compared to other architects of the day. If he could build a golf course over a shorter period of time and have it grown in and open for play, the course would be in a better financial situation from day one.

His designs over the later part of his career in the early 1930's show a shift to a reduced use of bunkers that relies on a more strategic placement. This work is exemplified at Augusta National, Bayside Golf Links(no longer existing), and Sharp Park. The added benefit of fewer bunkers is a reduction in construction costs and a reduction in the daily maintenance of the bunkers after the course opens.

Of all the courses MacKenzie built, Sharp Park is the only course where he was able to use one of the most famous holes in golf, the Lido Hole. The Lido Hole is named after The Lido Golf Club that was being built on Long Island in the early 1910's. To draw attention to the project a world--wide competition was formed with the intent of designing a hole for the golf course with the winners drawing being implemented into the design of The Lido Golf Club.
The hole at Sharp Park that follows this design is the original 5th hole, which is now the 17th hole. Annually there is a Lido competition held by the Alister MacKenzie Society that celebrates his original design by holding a similar competition of designing a two-shot hole.

Sharp Park Golf Course was and is a wonderful site for golf and the possibility of restoring parts of it to its original design would be incredible. Increasing the playability and sportiness of the course will bring more golfers to the course and add to the enjoyment of golfers of all age and skill levels.

01 In addition to what the San Francisco Public Golf Alliance has already laid out in making its case for Sharp Park Golf Course, I acknowledge that I have read and strongly agree with the determination that Sharp Park Golf Course be considered a "historical resource" under the California Environmental Quality Act.

Sean Tully

Golf Course Superintendent
Meadow Club

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COMMENT ON THE EIR FOR THE NATURAL AREAS PROGRAM

1.0 INTRODUCTION

The Natural Areas Program ("NAP") has proposed alterations of the San Francisco Parks system that are not in the best interest of the residents of San Francisco, and in doing so violate the public confidence. The Mission Statement for SFRPD reads:

"*The San Francisco Recreation and Park Department's Mission is to provide enriching recreational activities, maintain beautiful parks and preserve the environment for the well-being of our diverse community.*"

In an attempt to bring the NAP into compliance with this Mission Statement, Lisa Wayne, Natural Areas Program Director, described the intent of NAP as being, "*Preserve what is left of the original habitat and protect it from further degradation...enhance these little remnants that are degraded*".

In reality, a review of this EIR reveals NAP to be a wholesale takeover of at least one third of San Francisco parklands in a manner that violates current law, violates the social conscience of San Franciscans, violates scientific principles and deprives San Francisco families of the recreational opportunities they require for health and happiness.

01 This violation of the public confidence is highlighted in the EIR itself. On page 2, the EIR misleads the public by asserting the "Maximum Restoration Alternative" is the "Environmentally Superior Alternative." THIS IS WRONG. When this error was brought to the attention of the SFRPD, they refused to publish a retraction or correction until AFTER the public comment period was over. In reality, the "Maximum Recreation" and "Maintenance Alternative" are the environmentally superior alternatives because they have fewer unmitigated significant impacts than either the proposed project or the Maximum Restoration Alternative.

2.0 NAP VIOLATES CURRENT SAN FRANCISCO LAW

"In June 2003, the Board of Supervisors of the City and County of San Francisco became the first government body in the United States to make the Precautionary Principle the basis for all its environmental policy". It is Chapter 1 of SF's Environment Code.

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action." —1998 Wingspread Statement on the Precautionary Principle

NAP is a wholesale abandonment of this promise.

02 ***2.1 NAP ENDANGERS THE PUBLIC SAFETY BY EXPOSING US TO VECTOR BORNE DISEASES AND PESTICIDES***

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02 (Cont.)

Habitat restorations diminish public safety by encouraging the proliferation of mosquitoes and ticks, along with the diseases they carry which affect people, dogs and horses.

NAP advocates the construction of water features which become mosquito breeding grounds in San Francisco and Pacifica recreational areas. The artificial habitats created and supported by NAP have resulted in the propagation of stagnant pools of water, standing water in the stumps of trees that have been cut down, abandoned tires, and brush piles. These sites are all ideal breeding grounds for disease-borne mosquitoes. Evidence of such can be seen at such sites as Glen Park (near the children's day care facility). NAP merely states: *Staff should be provided education regarding the most effective way to avoid contracting WNV, which is to not get bitten by mosquitoes. Clothing such as long pants, long-sleeved shirts, and application of a mosquito repellent may all be helpful in this regard.* What about the public?

The outbreaks of West Nile encephalitis in the U.S. highlight the potential threat of viruses spread by mosquitoes, ticks, and certain other insects, and the need for assays to screen, diagnose and differentiate them from each other. In the U.S., public health officials first recognized West Nile virus (WNV) in 1999, and the disease has since become established in this country. Outbreaks of WNV infections have occurred for 12 consecutive years, infecting two to four million people, causing illness in tens of thousands of people, including more than 13,000 cases of neurological disease, and over 1,150 deaths between 1999 and 2009.

In 2002 WNV was identified as a threat to the blood supply. The potential for human-to-human transmission of WNV through organ transplants and blood transfusion raised concerns among public health officials about the safety of the blood supply. In response, FDA collaborated with industry and blood collection facilities to develop new donor screening tests. In the summer of 2003, the FDA approved these tests for use by scientists studying this problem, and blood testing laboratories began using them to screen the blood supply for this virus.

Of special concern is the fact that these viruses can cause asymptomatic infection during which the virus circulates in the blood. Individuals with such "silent" infections pose a threat of transmission through blood donation because they are not identified as being infected.

02 (Cont.)

The environmental features the CDC instructs you to remove to protect you, your family and your community from ticks are precisely the environmental features NAP is implementing.

The CDC recommends landscaping techniques to create a tick-safe zone around homes, parks, and recreational areas:

- Removal leaf litter, brush piles and woodpiles.
- Clear tall grasses and brush.
- Place wood chips or gravel between lawns and wooded areas to restrict migration to recreational areas.

Plans for "habitat restorations" already implemented and proposed for Sharp Park confirm the objective of enhancing habitat for small mammals and creating "wildlife corridors" which bring these mammals into close proximity to residential neighborhoods. Excerpts from San Francisco's "Natural Areas Program" (NAP) state: "Issue: Important elements within natural habitats for the survival of small mammals as well as reptiles and amphibians include underbrush, fallen logs...debris such as lumber, brush piles...piles of abandoned lumber may be aesthetically unpleasing but provide important refuge habitat for many species...

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02 (Cont.) Recommendation: The natural or biodegradable (branches trees and logs) elements shall be preserved during vegetation management activities or replaced with brush piles." (note-the phrase "vegetation management activities" refers in part to their plan to cut down 15,000 eucalyptus trees merely because they are non-native. They don't intend to remove the resultant lumber or leaf litter, and the remaining stumps will become mosquito-breeding sites as well).

The Bio-Integral Resource Center is a non-profit organization here in the Bay Area dedicated to "Integrated Pest Management" as a means to suppress the pest population below the level that causes economic, aesthetic or medical injury. Their international network of advisors design strategies that minimize effect to human health and the environment. They state: *"To stop vectorborne diseases, we should apply our knowledge of pest biology and ecology. We should manipulate ecological factors to discourage transmission. What we should not do is indiscriminately apply massive amounts of insecticides through aerial spraying. Such an act of desperation will not provide a long-term solution, will kill important beneficial insects, and needlessly expose the population to toxic agents".*

03 ***2.2 NAP EXPOSES THE PUBLIC TO EXCESSIVE USE OF DANGEROUS HERBICIDES***

We are finding out that poisons – poisons more potent than ever before – are now being used in city parks, because most city parks have a portion of them characterized as a "natural area". The reason poisons are being used in our natural areas is to sustain artificially created landscapes as they might have appeared in the year 1776 – "museumscapes" of fragile native plants. We are finding that these are not sustainable on their own, due to changed (and changing) ecological conditions. Without artificial management, which includes poisons, they become failures – as can be seen by the growing failure of the roof garden at the Academy of Sciences, where nonnative plants now outnumber the preplanted "native" species in two of the four roof quadrants. These museumscapes do not belong in our recreational areas where we spend time with our children and pets.

The San Francisco Department of the Environment issued NAP a variance to allow the spraying of Garlon Ultra 4, a poison that had not been permitted for use in parks in San Francisco except under extreme and limited circumstances, and then only by dabbing. The variance now allows the spraying of this chemical.

Glen Canyon Park is a case in point. Notices were posted of impending spraying of Garlon 4 Ultra. This park has a constant stream of walkers – adults, children and dogs. A preschool and a summer camp use the park. And there is a natural creek and resident wildlife. Not only is this dangerous to utilize these types of chemicals around the public, posted notices that NAP is applying pesticides or herbicides are frequently missing the required date and time of application. People seeing the notice don't know whether the poisons were used and whether it's safe to re-enter. This is a clear violation of the SF Department of the Environment's rules regarding the use of herbicides.

03 (Cont.)

Roundup is another of the poisonous pesticides currently used in our parks and being considered as a substitute for the Garlon Ultra 4. The use of Garlon and Roundup by NAP is increasing. In 2009, NAP applied Roundup (or Aquamaster, or glyphosate) only 7 times. One year later, in 2010, they applied it 42 times. In 2009, NAP applied Garlon 16 times. In 2010, NAP applied Garlon 36 times.

NAP has also applied pesticides that the Dept. of the Environment has not approved. For example, NAP applied Imazapyr at Pine Lake in 2009; it was not approved for use by the Dept. of the Environment until 2011. NAP has applied pesticides incorrectly. In November 2010, NAP posted that they were spraying Aquamaster near the shoreline of Lake Merced to kill ludwigia, an aquatic weed. However, Lake Merced is red-legged frog habitat, and Aquamaster is not supposed to be used within

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60 feet of water bodies in red-legged frog habitat. NAP staff have been observed spraying Garlon without a respirator, as required by the Dept. of Environment.

Garlon Ultra 4 and Roundup are not meant to be used in recreational areas.
Scientific American published an article addressing the toxic nature of Roundup's formula in "Weed-Whacking Herbicide Proves Deadly to Human Cells". Most cancers have a cumulative variety of causes. The incidence of cancer cases is growing in dogs, and pesticides are included as one of the culprits (www.health-report.co.uk/cancer-pesticides-245T-24D.html). Indeed, Garlon may be more toxic for dogs than people because dogs' kidneys cannot excrete the chemicals of which it is composed. Will the Garlon have a similar negative effect on coyotes who call Glen Canyon and other natural areas home? No one really knows the impact of the herbicides on the wildlife (raccoons, coyotes, possums, etc.) that are currently living in the natural areas, so collateral damage to the environment and its long term effects are as yet unknown. NAP's use of chemical substances is a clear violation of the Precautionary Principle.

03 (Cont.)

2.3 NAP REFUSES TO PRITOITIZE LEGITIMATE SAFETY ISSUES OVER HABITAT CREATION

NAP proposals for Lake Merced and Sharp Park make no mention of the need for toxic lead waste cleanup as part of any rehabilitation of these parks. In both cases, there is toxic lead in the soil in old rifle range areas that currently endangers wildlife and water quality. At Sharp Park, SFRPD has been promising cleanup since 1994, often citing the expense as a factor preventing completion of this task. How is it SFRPD justifies spending millions of dollars "reinventing" our parks to suit the desires of a few native plant enthusiasts, while toxic waste is allowed to persist in damaging our environment?

04

The NAP proposal acknowledges that erosion in the park properties endangers the public safety. Yet, repeatedly, the NAP plans to remove non-native plants and trees that are proven superior to resist erosion and replace them with native plants. Native plants are inferior in resisting erosion. NAP planners are not deterred.

Even worse, in Sharp Park, SFRPD intends to create a "Natural Area" in over 200 of the 400 acres there. Despite acknowledgement that there is a serious erosion problem within this park, the NAP states specifically it does not intend to address the erosion unless "capital funds are made available". SFRPD intends to utilize capital funds to remove over 200 acres of healthy, non-native plants, remove 15,000 trees in Sharp Park and plant native plants throughout those 200 plus acres. However, SFRPD has no capital funds allocated to resolve a serious erosion problem which poses a significant public safety risk!

05

3.0 NAP DOES NOT MEET SCIENTIFIC SCRUTINY

06

There has been some dispute over the scientific basis for the Natural Areas Plan. While it is true that a Scientific Advisory Board was created, we have the testimony of Professor Edward F. Connor, Professor of Ecology at San Francisco State, before a Board of Supervisors committee last summer. He stated that while he was listed as a member of the Advisory Board, he had never seen The Plan, never been asked to comment on The Plan, and was actually denied a copied of The Plan when he requested one.

Professor Connor stated: "Imagine how much more I was surprised when I finally did obtain access to and read this report to find that the names of scientists on the Scientific Advisory Board, and the

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names of scientists who were invited to but never participated in the Advisory Board were all invoked to sanctify a report to which they had no contribution."

06 (Cont.)

In regard to the Management Plan itself, Professor Connor stated: "I have read this plan and it is without scientific basis, it does not articulate clear, achievable, nor appropriate conservation goals for a set of small urban parks, it is void of an examination of the cost, feasibility, or utility of the management actions recommended, and it is without any sense that our urban parks must satisfy the needs for a wide variety of uses. I acknowledge that conservation numbers among the uses to which I would like to see our parks put, but not necessarily at the expense of other uses that are appropriate for urban parks and inappropriate in wild lands."

Arthur M. Shapiro (Professor of Evolution and Ecology at UC Davis) states the following. It cannot be allowed to trump the clear preferences of the vast : "The Natural Areas Program has its place, and it needs to be kept in that place majority of parkland users in San Francisco. The hatred of "exotic" trees, some of which are California natives anyway, is not only ideological but sometimes verges on the pathological, and has strong overtones of xenophobia and racism (look at the anti-"exotic" rhetoric yourself!). He also notes, "... the extensive adoption of introduced host plants has clearly been beneficial for a significant segment of the California butterfly fauna, including most of the familiar species of urban, suburban, and agricultural environments. Some of these species are now almost completely dependent on exotics and would disappear were weed control more effective than it currently is." (S.D. Graves and A.M. Shapiro, "Exotics as host plants of the California butterfly fauna," *Biological Conservation*, 110 (2003), pp. 413-433) A classic example of this is the migrating Monarch butterflies who overwinter in eucalyptus trees in several locations on the coast of California.

Ecologist James H. Brown provides us with useful advice: "*It has become imperative that [as] ecologists, evolutionary biologists, and biogeographers ... we use our expertise as scientists not for the futile effort to hold back the clock and preserve some romantic idealised version of a pristine natural world, but for a rational attempt to understand the disturbed ecosystems that we have created and to manage them to support both humans and wildlife*".

An official in the State Forestry Department was shocked to learn of the areas NAP had designated for their use. NAP fails to identify park areas which are underutilized and/or undeveloped to become Natural Areas. The decision instead to create natural areas in the portions of the parks already vegetated *and* utilized very heavily for recreation is not reflective of good land use management practices and not mindful of the responsibility the Department has to provide recreation and enjoyment of the parks for the majority of the population.

4.0 NAP DIMINISHES NECESSARY ACCESS TO PARKS FOR RECREATIONAL OPPORTUNITY SO IMPORTANT FOR OUR FAMILIES

07

This City has already forfeited a significant amount of recreational parkland to the GGNRA. Much of this land has been converted from its originally intended recreational purpose to off-limits habitats. Now we are looking at losing an additional one third of our SFRPD parks to natural areas. In this densely populated metropolis, where are we supposed to go for recreation? As the old Cat Stevens ballad asks, "Where will the children play?"

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We can utilize off-leash recreation as an example opf the loss of legitimate recreational use. Currently, there are as many or more dogs in the City of San Francisco as there are children. Additionally, the City of San Francisco enacted a law in 2005 that **requires** dog guardians to provide their dogs with adequate exercise. The ordinance states: "**Adequate exercise** means the opportunity for the animal to move sufficiently to maintain normal muscle tone and mass for the age, size and condition of the animal." Clearly for many of the medium to large size breeds, this can only be accomplished by off-leash recreation. Even a simple game of "fetch", the most basic of activities humans engage in with their dogs, cannot be played unless the dog is off-leash. Yellow Labrador retrievers are a very popular breed of dog in the City, yet they are genetically predisposed to being overweight. These dogs require a good deal of off-leash running exercise as well as some swimming in order to maintain an acceptable, healthy weight. Furthermore, there are some breeds of dogs which require swimming as a primary form of exercise. If they are exercised primarily on grass, pavement or the ground, they develop arthritis at an extremely young age. One example of this would be the Newfoundland—a dog bred primarily for water rescue. This NAP program not only reduces the available area for off-leash recreation at a time when the number of dogs is ever-increasing, it also eliminates all areas where dogs are legally allowed to swim. One of the Commissioners pointed this out to Lisa Wayne at a meeting, and asked if NAP had considered alternative areas for swimming since they planned to eliminate the current areas, and she merely replied, "No". This is not indicative of an attitude which seeks to fulfill the legitimate recreational needs of perhaps the largest "special interest" recreational group in the City-dog guardians. This attitude puts guardians at substantial risk of violating their legal duties and is unconscionable. This NAP cannot be approved without modifications which would increase the available area for off-leash recreation beyond what it is now, as well as designate specified areas for dogs to swim. Anything less would subject the City of San Francisco to litigation; the City has enacted an ordinance placing requirements upon dog guardians, acknowledged in same ordinance it is expected public property will be utilized to fulfill these requirements, and subsequently systematically removed the ability to fulfill these requirements by eliminating access to public property for that use. These actions are clearly discriminatory, and will serve to inflame the dog guardian community. Litigation over this issue would be inevitable and costly. Monies would be better spent fulfilling the City's obvious responsibilities to the recreational needs of the public in order to avoid litigation entirely.

07 (Cont.)

NAP plans call for the immediate closure of about 15% of the legal off-leash space (Dog Play Areas, or DPAs) in San Francisco city parks – the complete closure of the DPA at Lake Merced and reductions in the DPAs at McLaren Park and Bernal Hill. NAP says that dogs "may" impact the plants in natural areas, and therefore the closures are needed. The NAP refers to dogs as "nuisances". NAP offers no proof, however, that any impacts actually occur or ever have occurred. Hard, scientifically rigorous proof must be provided if NAP is to kick people out of areas they have enjoyed for years. The way it's set up now, NAP can take areas that have been legally off-leash for decades and, with the stroke of a NAP staffer's pen (and no real proof), the off-leash is gone. **NAP could close up to 80% of the legal off-leash space in SF city parks**

In this regard, mention must be made of the incredibly ill-advised idea to convert Sharp Park Golf Course into an additional natural area, a habitat for the red-legged frog. The Sharp Park Golf Course is currently generating net income for the City, and provides a valuable recreational resource for a diverse community with respect to age, race, and affluence. To destroy such a valuable recreational resource for a ridiculous notion that red legged frog habitat could be an ecotourism draw is patently absurd. Let us remind you that the terms "recreation" and "park" are a part of the department name for good reason; recreation is an activity the staff is paid to foster, and that happens in parks, not in habitat.

08

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09

5.0 NAP DOES NOT REFLECT THE SOCIAL CONSCIENCE OF SAN FRANCISCANS

Imagine a society with closed borders. Where only those native to that society are allowed to exist. Should you be foreign to that society, or non native, you will be persecuted. You will not be allowed to enjoy the simple entitlements of that society, i.e., liberty and the pursuit of happiness. In this case, however, you will not only be denied the ability to prosper in the foreign land, but you will also be deprived the most precious and fundamental of rights endowed upon all living things by their creator – the right to life. You will not be sent back to your homeland with a mere admonishment. Instead, you will pay the ultimate price. You will be exterminated. Your executioner will be the very society that had welcomed you with open arms a short time ago.

Am I describing an immigration policy gone amok? Is this where our current policies and practices are leading us with respect to our friends south of the border? Perhaps. But in actuality, what I am describing is the Natural Areas Program as perpetrated by the San Francisco Recreation and Parks Department, the Golden Gate National Recreation Area, the Center for Biological Diversity, the Sierra Club, the Yerba Buena Native Plant Society and the Audubon Society. These groups are advocating the violent destruction of trees, plants, flower and fauna that are non native to the San Francisco area. This is what the Natural Areas Program is all about – i.e., biological racism, or nativism, at its worst. Is this the incarnate of Nazi Germany right here in San Francisco in the form of death camps for Eucalyptus, Cypress, pond turtles, etc., simply because they are non native? Consider the hypocrisy of the aforementioned groups the next time you hear their members ranting and raving about the nativism/racism exhibited by our proposed restrictive border policies, and their insistence that San Francisco be a sanctuary city. For these individuals, the borders extend no further than their own backyards.

Those advocating natural areas would have you believe the opposition to them is made up of extremists. They attempt to marginalize opposition as dog lovers or tree huggers. Let's talk about the dog lovers. Dog owners comprise 30% of the households in this community. That's a big voting block in anyone's book.

Think about how to assess how people feel about their trees. There is the obvious - the countless projects implemented as we grew up to "plant a tree" here in our urban community as an approach to improving air quality. We all know trees support the existence of many animal species. But what of their spiritual contribution to our daily lives? I did a search on the Web. I found thousands of poems, extolling the virtues of trees. I couldn't find one poem about lessingia.

The NAP plans to destroy 18,400 mature (defined as over 15 feet tall) trees and untold numbers of seedlings and saplings merely because they are non-native. There can be no legitimate dispute that this does not reflect the desires of the population at large. The overwhelming majority of the public loves trees, and does not care about their origin.

09 (Cont.)

We appreciate the fact that mature trees improve the air quality in our urban environment and improve the beauty of the City. Thus, on one hand, we have the Mayor's program to plant more trees in the City, and on the other hand, we have NAP removing them. This is tantamount to digging a hole and then filling it up. We would point out the trees to be planted under the Mayor's program are *non-native*.

Additionally, there is the matter of NAP proponents historically girdling healthy trees, and City NAP gardeners not routinely removing damaging ivy growing up non-native trees or providing routine care, so that they decline in health. Thereafter, NAP insists these trees be removed as they are dead or

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dying. Such action is akin to denying routine medical care to children, and watching them die. At best, such conduct is reckless, but with NAP it is intentional and malicious. The planned tree removal is so extreme at Sharp Park that it violates anti-logging ordinances in the City of Pacifica. An extreme agenda such as this has no business commandeering one third of public park property as this NAP proposes to do.

09 (Cont.)

In many cases NAP declares all or portions of city parks directly adjacent to residential neighborhoods as "natural areas." Often no plants, birds or animals in the park are listed as endangered or threatened by the State or Federal government. Nor are there any "sensitive" species here as designated elsewhere in the NAP proposal by local native plant and bird enthusiasts. Yet, there is as part of the plan an objective to reduce "predation pressures". This would refer to the killing of feral cats and any other wildlife NAP deems unacceptable. Considering the proximity of this park to residential development, the trapping of cats and other wildlife on this park property could result in the destruction of pets. NAP proposes to kill bullfrogs and non-native turtles because they are believed to be competitors to native animals. This certainly offends the sensibilities of San Franciscans and our long history of devotion to animals in general and our pets in particular.

6.0 NAP SIPHONS FUNDS FROM LEGITIMATE PARK PURPOSES

10

NAP is exorbitantly expensive. At a time when SFRPD is not fulfilling its mandate to repair, maintain and improve existing park facilities, it is poor planning to incur even greater financial responsibility by undertaking the creation of Natural Areas within the parks. These areas are expensive to create and their maintenance is labor intensive and thus expensive to maintain. When children still are forced to play on fields so riddled with gopher holes that they risk serious injury, play in recreational centers that are severely in need of repair, and utilize bathrooms that are so unclean they present a health hazard, serious discussion of this NAP becomes ludicrous.

The SFRPD has failed to even complete the audits that were mandated by the Proposition C that provided SFRPD money to be used for recreational interests. The excuse given was that SFRPD ran out of money. Yet funds have been created to continue the planning of the NAP, and to produce this current plan document. It is rather transparent that funds have been arbitrarily and poorly allocated within the SFRPD, and *now* is the time for the S.F. Recreation and Park Commissioners to step in and put a stop to this type of irresponsible behavior. The two largest "special interest" recreational groups in the City -- parents and dog guardians -- are currently poorly served by SFRPD; the NAP proposal is one glaring example of this fact. The very small segment of the population who are native plant advocates and avid bird enthusiasts are the few people who are pleased with NAP and whose interests are being served by NAP. The needs and desires of the masses must override the preference of the few, because the masses are for the most part footing the bill. There must be accountability when you take tax monies given to you by citizens in good faith. The NAP was never spelled out to the voters in Propositions they voted on; the citizens were not told they would be sacrificing recreational properties to create "Natural Areas". This plan would never have been funded and approved by the voters if it were explained in detail at the time the voting took place. At best, the NAP should devote 5% of the park properties to Natural Areas; a figure proportionate to the population these areas bring pleasure to. That limited development should be put on hold until SFRPD can put its house in order; they must complete their audits, and set and <u>reach</u> standards for all existing park facilities before NAP is even brought up again for implementation in no more than 5% of the SFRPD's undeveloped or underdeveloped park properties.

11

Stop to compare the condition of neighborhood parks before NAP to the condition of those parks today. Stern Grove, for example, showcased beautifully manicured lawns and putting greens. Today,

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you will find dead grass and weeds in their place. The substantial cut in gardening resources gives one a clue as to how this could have happened. In fact, many of the facilities in our neighborhood parks have been neglected over the years – the victims of numerous budget cuts. How can we even consider pouring millions of dollars into NAP when there are so many pressing needs? The once coined "greatest park system in the world" is in danger of becoming a distant memory.

12

7.0 NAP DESTROYS PARK PROPERTY AND IS UNSUSTAINABLE

Is NAP sustainable as proposed? The answer can be found in another project with a significant native plant component and similar concerns, which was created 70 years ago and manned by experts whose credentials would be unlikely to be questioned by anyone. We should look to the UC Davis Arboretum.

The Arboretum is self-described as a "living museum", an outdoor classroom, a HUGE garden encompassing 100 acres isolated at the edge of campus. A 10 year Wildlife Management and Enhancement Plan was recently completed, and the following is clear: even after 70 years, this is still necessarily a HIGHLY MANAGED ECOSYSTEM.

There are no plans to expand the Arboretum. The challenge is to preserve the Arboretum and reduce damage to the project as it is. Wildlife carries diseases that present a public safety risk. Protected species of wildlife have settled at the Arboretum and are killing certain important plant displays. The public does not condone the killing of wildlife that jeopardizes the health of the Arboretum. The concerns are many despite the wealth of expertise UC Davis has to manage this property.

NAP intends to destroy current flora and fauna on 1100 acres, not a mere 100 acres. NAP subsequently must revegetate these areas with native plants, and supervise them until they have matured. Beyond that, those proposing this NAP have failed to advise you that these properties will require intense management in perpetuity.

12 (Cont.)

NAP as proposed and as it is currently implemented is a miserable failure. The NAP Management Plan states that trees (at least those taller than 15 feet) removed will be replaced on a nearly one-to-one basis, although it acknowledges that the replacements may not be planted in the same area, or even in the same park. However, there are reasons to doubt this claim.

In a few parks, NAP has planted native plants to replace non-natives that it cut down. Most of the trees did not survive. NAP and its supporters cut down 25 young trees at Tank Hill about a decade ago. The few trees that NAP left standing had their limbs severely cut back to allow more sunlight to reach a newly planted native plant garden. Only four of the more than two dozen live oaks that were planted as replacements have survived. NAP may claim they will plant native trees to replace the healthy non-natives cut down, but most won't survive and the character of the parks that once had healthy forests will change.

8.0 NAP UNJUSTLY ENRICHES NAP PROPONENTS

Those proposing these "natural areas" have been given unwarranted credibility by management at SFRPD who share their philosophy. Many of these people arrived as consultants from other places years ago--they are not long term residents of San Francisco. I'm referring to the likes of Lisa Wayne, Elizabeth Goldstein, Yomi Agunbiade and the entire cast of non-native humans who have been attempting to impose their vision as to what our parks should be on the citizenry of San Francisco. Their vision is completely arbitrary – one of San Francisco circa 1850.

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Those of us born and raised in San Francisco can speak for friends, family and acquaintances when we say the majority of people in San Francisco prefer the status quo. They treasure their recreational areas, and wish they had more. They love mature trees in the landscape, and they want their parks to look as they did before NAP. The consultants originally proposing these natural areas have reaped great financial gains as NAP is implemented. There has been no effort in this EIR to balance their obvious bias against the wants and needs of the citizens of San Francisco.

NAP is a financial imperative for the highly paid NAP bureaucrats, the specialized NAP gardeners, NAP consultants, the vendors who supply the goods and services to the program and the special interest environmental groups who have conned their big dollar contributors into thinking they are actually saving the planet. Rather than a noble attempt to save embattled species of plants, in reality, NAP is a veritable cash cow for those even tangentially associated with the program.

9.0 IS THERE A PREFERRED ALTERNATIVE?

Yes, but this EIR does not include it. This EIR is designed only to promote NAP which for the reasons outlined above is unconscionable.

Our Preferred Alternative would set aside 50 acres scattered about the City where conversion to natural areas is not overly destructive. This would:

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- minimize loss of recreational facilities in our crowded urban environment
- recognize preferences of native plant advocates
- still provide areas to protect all species endangered or otherwise
- provide an educational forum for native plant advocates
- save lots of taxpayer money
- minimally impact air quality by saving approximately 100,000 trees
- preserve the landscape the way the vast majority of San Franciscans like it

Our own, as well as previous generations of San Franciscans have expended considerable blood, sweat, tears and capital to beautify our parks from their barren state of the 1850's. They did so with the very flora that these non-native humans today so callously label "non-native invasive weeds".

Fifteen years ago, we were still planting Cypress, Monterey Pines and Eucalyptus in order to beautify our parks. Years from now, after NAP has destroyed the ecosystem, we will once again be planting Cypress, Monterey Pines and Eucalyptus.

Comment submitted by:
Dr. Suzanne M. Valente and Stephen R. Golub

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Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:51 PM
To: Bock, John
Subject: Fw: NAP comments
Attachments: NAP letter.pdf

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:51 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:28 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: NAP comments

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:29 PM -----

Lisa Vittori <lisavittori@yahoo.com>
10/31/2011 04:53 PM
Please respond to Lisa Vittori <lisavittori@yahoo.com>

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc: Lisa Vittori <lisavittori@yahoo.com>
Subject: NAP comments

Vittori-1

Dear Mr. Wycko-

I did restoration as a professional and a volunteer for 20 years. I ran a crew with the California Conservation Corps and the National Park Service doing habitat restoration all over the Bay Area. I worked on Bernal Hill, McLaren Park, Glen Canyon, and Sharp Park as a volunteer and community member. Unfortunately, what I have seen has saddened me; I think we've betrayed the principles of integration and inclusion that we started out with. Over time the restoration movement has become exclusionary, pushing the community out of the parks.

This process is a perfect example of community exclusion. I go to Bernal Heights, Glen Park, Stern Grove, Pine Lake, and McLaren Park with my dogs several times a week. There are no official notices anywhere inviting public review. When advocacy groups place notices on the bulletin boards, they've been torn down. 01

Please pay attention to the numerous efforts we have made over the years to make the Natural Areas Program more integrated with city life. I've attached a summary written by Sally Stephens of SFDog. She states, better than I could, the numerous attempts by the public to make this process fair and inclusive. I attended many of these meetings, and have come out with a much more jaded view of the democratic process.

The saddest part is that we could do habitat restoration right. We could easily integrate restoration with existing park uses.

Thank you for your time.

Lisa Vittori
PO Box 31897
San Francisco, Ca 94131
415-931-3075(See attached file: NAP letter.pdf)

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THE NATURAL AREAS PROGRAM
BACKGROUND INFORMATION

The Natural Areas Program (NAP) of the San Francisco Recreation and Park Department (RPD) was originally intended to preserve the few remnants of San Francisco's natural heritage that still existed in city parks. The plan has morphed, however, into an empire that controls one-quarter of all the parkland in San Francisco (one-third of all parkland managed by RPD if you include Sharp Park in Pacifica). Its management plans have become quite controversial, with proposals to cut down healthy trees, drench hillsides in herbicides, close trails and off-leash areas, relocate or kill feral cats, and restrict access for all people to large sections of our parks.

For nearly two decades, NAP has operated with no real oversight and little input from the public about its plans. Its modus operandi is akin to "I know better than you, so go away." Despite years of attempts to get even small amounts of accountability from NAP, the program continues to do pretty much whatever it wants in our city parks. Because, in many cases, NAP claims control of entire neighborhood parks, San Franciscans are losing access to their common "backyards", and most have no idea it's happening until it's done.

BEGINNINGS

In 1991, Policy 13 was added to the Recreation and Open Space Element (ROSE), a document that gives general policy directions for open space in San Francisco. Policy 13 (actually Policy 2.13) sets forth a general policy goal to "preserve and protect significant natural resource areas." Policy 13 sets the following criteria to determine what is a natural area:

1) The site is undeveloped and relatively undisturbed, and is a remnant of the original natural landscape and either supports a significant and diverse or unusual indigenous plant or wildlife habitat or contains rare geological formations or riparian zones.

2) The site contains rare, threatened, or endangered species, as identified by the U.S. Fish and Wildlife Service or California Department of Fish and Game, or contains habitat that has recently supported and is likely again to support rare, threatened, or endangered species.

3) The site is adjacent to another protected natural resource area and, if protected from development, the two areas together would support a larger or more diverse natural habitat.

The policy also says: "Native plant habitats should be preserved and efforts undertaken to remove exotic plant species from these areas."

Policy 13 has been used by NAP advocates to imply a city mandate to preserve natural areas, a mandate that justifies all the restrictions, herbicides, closures, etc. However, the ROSE is actually an advisory document that sets out guidelines, not mandates. It does not have the force of law.

On January 19, 1995, the SF Recreation and Park Commission approved the first management plan for natural areas. This plan identified "candidate" natural areas, and established guidelines for management programs in the areas. The plan called for a consultant to develop the specifics of the implementation of the plan. It also made a commitment to include the public and community organizations in discussions as the plan evolved. The Natural Areas Program, however, did not honor this commitment.

In 1997, the Recreation and Park Department (RPD) signed a contract with EIP Associates as the consultant to develop the ways to implement the plan. According to the contract, EIP was to form a Scientific Advisory Board (SAB) that would meet two to three times per year for a period of three years. SAB members would be paid an

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honorarium for each meeting; the cost of the honorariums was included in the RPD budget. A 2001 draft of the consultant's report stated: "A scientific advisory board, made up of experts in related fields, provided direction and advice during the project's planning and preparation."

NO OVERSIGHT

In fact, Dr. Ed Connor, a member of the SAB, told the SF Board of Supervisors in August 2002, "... the members of the SAB had never seen or been asked to comment on a draft of such a plan in any state of its preparation." They were not paid any honoraria. Drafts of the management plan developed by EIP Associates were supposed to be circulated to a citizen's task force and local community groups. Instead, the first draft was seen only by NAP staff, who then returned it to EIP for revision without seeking any public input on it. NAP was steaming full speed ahead without any real community oversight or input.

In the parks, NAP and its supporters cut down and girdled hundreds of trees (in which the bark is cut completely around the tree, interrupting the flow of sap and nutrients and eventually killing the tree). Fences were erected, blocking access to large sections of parks. NAP staff did not bother to consult with (or even tell) park neighbors and users what they were doing in the natural areas. NAP operated in a secret and arrogant manner.

At the same time, the consultant's draft management plan was finally made available to the public at only one location (the main library). For the first time, people saw the extent of NAP's plans – removing and killing non-native animals, including feral cats; closing trails; putting up fences; and prohibiting fishing and boating where it had traditionally been allowed. The draft management plan made clear that NAP staff and advocates had intentionally planted species of endangered and threatened plants and animals in natural areas. Because of the special status of these species, federal law requires severe restrictions on access wherever they occur. NAP essentially presented the public with a fait accompli of access restrictions before people knew what was happening.

By 2002, people had noticed major changes in some natural areas that they did not like, and they began complaining. In response, RPD formed a Green Ribbon Panel to advise RPD and EIP about the NAP management plans under development. Critics were not happy with the composition of the Green Ribbon Panel, which they viewed as composed primarily of native plant advocates. The Park and Recreation Open Space Committee's (PROSAC) representative to the Green Ribbon Panel, Dr. Joan Roughgarden, confirmed the Panel's bias. In a report to PROSAC, Dr. Roughgarden wrote, "The Green Ribbon Panel was selected on the basis of political advocacy, not on technical credentials, so that discussion of the technical merits of the plan is immediately interpreted in an advocacy framework." Roughgarden continued,

"The management plan advances a highly interventionist view of resource management that is not viable ecologically, economically, or culturally."

[Dr. Roughgarden's critique: Appendix 1]

In response, PROSAC passed a resolution calling for a scientific review of the management plan. The Recreation and Park Commission did not respond to the request.

NAPCAC

NAP critics complained to the SF Board of Supervisors that the way the management plan was being implemented had not been properly vetted, and that NAP was not considering the public's input, as promised by the Recreation and Park Commission in 1995. The Board held three hearings on NAP, beginning in July 2002, and, in response, on September 24, 2002, the Board created a Citizen's Advisory Committee for the Natural

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Areas Program (NAPCAC). The Board of Supervisors gave NAPCAC a year to develop a management plan for natural areas and provide a summary report of its findings. NAPCAC would meet under Sunshine Ordinance rules, so the public would be able to see exactly what it was doing. The Board's resolution disbanded the Green Ribbon Panel and replaced it with NAPCAC. The resolution allowed NAP staff to continue to maintain natural areas as long as their actions did not include: "the removal of healthy trees that pose no safety hazards; trail closures, or restrictions on access and recreation; trapping and removal of wild or feral animals currently inhabiting parks and lakes; and expansion of activities into areas that no longer support predominantly native flora and fauna."

NAPCAC had 12 members, four who were knowledgeable in issues related to natural areas (e.g., restoration, ecology, environmental advocacy), four who were interested in access to and use of parks and open space (e.g., recreational users, neighborhood activists, youth and tree advocates), two at-large members recommended by the Board of Supervisors, and two at-large members recommended by RPD. The Board of Supervisors approved the twelve appointments to NAPCAC on December 18, 2002.

The Board's resolution creating NAPCAC directed RPD to assist NAPCAC, including giving notice of meetings, providing meeting space and publishing minutes. However, RPD repeatedly denied NAPCAC members' requests for meeting space. Finally, NAPCAC members took it upon themselves to find meeting space. NAPCAC met for the first time on February 13, 2003 in the Mission Police Station Community Room. Later meetings were held in a classroom at City College.

At its first meeting, NAPCAC vote unanimously to ask RPD for staff support to provide minutes and to copy and distribute materials to the Committee and member of the public. RPD declined to provide staff to take minutes, but offered to copy materials as long as they were submitted two weeks in advance. Since NAPCAC met every two weeks, this "offer" was largely meaningless.

NAPCAC members complained to the Board of Supervisors about the lack of RPD support. At a City Services Committee hearing on May 15, 2003, speakers showed pictures of fences in three different natural areas that had been built since the Board's NAPCAC resolution had been passed, in direct violation of the resolution's ban on controversial management actions while NAPCAC was meeting. At the hearing, RPD General Manager Elizabeth Goldstein claimed a verbal agreement with Supervisor Matt Gonzalez that RPD would not be required to provide any support to NAPCAC. After the hearing, an aide to Supervisor Gonzalez told the Chair of NAPCAC that the Supervisor had made no such agreement.

NAPCAC continued to meet. A member of the NAP staff attended every meeting, and their message to NAPCAC, given at the end of every meeting (during general public comment) was fairly consistent – you're wasting your time and we will ignore you and your findings. For example, on May 8, 2003, Lisa Wayne, the head of NAP, told the Committee, "The Committee has misinformation and misperceptions. The Committee is spinning its wheels, creating controversy where there isn't any. There is fear being perpetuated in this room. I'm the person that knows these parks better than anyone else in the City." NAP supporters in the audience at meetings verbally attacked NAPCAC members, and disrupted the meetings by talking loudly among themselves during panel discussions.

NAPCAC met for nine months. At these meetings, NAPCAC members who were critics of NAP actively engaged in negotiations, introducing repeated iterations of plans that tried to address concerns raised by NAP advocates. NAP advocates did not introduce their own plan until the next to the last meeting, instead choosing to react to plans introduced by the "other" side and insisting on compromise from them. For example, NAP advocates insisted that NAPCAC accept all 31 of the natural areas that NAP had claimed for itself, even though many had no native plants in them and had been designated as natural areas without any public input.

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NAPCAC FINAL REPORT

Because of the repeated compromises by their side, NAPCAC's final report was barely acceptable to those members who had opposed the way NAP was being administered. Yet they voted to accept the final report because it created a process of scientific and community oversight of the NAP. Unable to convince a majority of NAPCAC members to acquiesce to further demands, NAP advocates on the Committee refused to support the final report that contained the compromises that they had insisted upon. The NAPCAC final report was passed by a vote of 7-5 on November 14, 2003, meeting the one-year deadline imposed by the Board of Supervisors in the resolution that created NAPCAC.

The NAPCAC Final Report, co-authored by two ecology/conservation biologists on the Committee, Drs. Joan Roughgarden and Ed Connor, set up a Natural Areas Program Review Committee (NAPRC) that would review and consult with NAP about its plans to manage natural areas. NAPRC would be composed of 12 members, including four scientists with research credentials in relevant fields (ecology, botany, zoology, conservation, etc.), four representatives of citywide advocacy groups, and four representatives of local neighborhood and park advocacy groups. Committee meetings would be conducted under all Sunshine Ordinance requirements, to ensure no backroom deals were made.

[NAPCAC Final Report: Appendix 2]

The Final Report called on NAP to develop a system-wide "portfolio" plan that would (section 5.1): "provide an overview of the entire system of Natural Areas, showing how each site contributes to the overall goal of the program. This portfolio plan should outline the overall Natural Areas Program conservation and educational goals, specify the priorities for implementation of conservation plans for individual parks, and outline how the acquisition of additional properties will enhance the ability of the NAP to meet its conservation and educational goals." The Final Report recognized that every city park has different issues and doesn't try to enforce a city-wide, one-size-fits-all solution to those problems. The Final Report went on to say (section 5.3): "Detailed plans for the conservation measures to be implemented at each site and how public input will be integrated into each site plan will be developed simultaneously and in parallel by the two subcommittees of NAPRC..."

According to the Final Report, the NAPRC would have two subcommittees, a Scientific Subcommittee and a Community Relations Subcommittee, with six members each. The Scientific Subcommittee would review the management plan at each natural areas site to determine (section7.1):

1. Is it scientifically plausible that the proposed management activities will achieve the proposed outcome?

2. Are the proposed monitoring plans adequate to identify any unforeseen consequences that may arise during the implementation of the plan?

3. Have the secondary consequences of management activities been identified?

4. Is the proposed evaluation plan adequate to determine the success of the plan?

5. Are the educational materials scientifically accurate?

The Scientific Subcommittee would provide the scientific oversight of the management plans that the original consultant and later the Green Ribbon Panel were supposed to do but did not.

The Community Relations Subcommittee would review community outreach plans by the NAP to determine community whether the community was served (section 9.1):

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1. Does the local community favor the proposed management practices for the sites in their district?

2. Has a good faith effort been made to solicit and incorporate public comments on individual site plans?

3. Has the local community been adequately informed of both the potential benefits and secondary consequences of the proposed plan?

4. Have other relevant city Commissions (e.g., Animal Control and Welfare, Urban Forestry Council, etc.) been informed and consulted about any management practices proposed for the Natural Areas?

5. Does the community have any changes they wish to make to the proposed plan?

The Community Relations Subcommittee would ensure that adequate community workshops and meetings were held by NAP, and that professionally designed surveys were conducted to measure public support among park neighbors and users for NAP's plans at each site.

The NAPCAC Final Report expressed strong support for the NAP, and encouraged increased funding and staff for it, especially to handle the added responsibilities of the NAPRC. With the release of its Final Report, NAPCAC was disbanded.

MINORITY REPORT

On January 7, 2004, the Board of Supervisor's City Services Committee heard testimony on the NAPCAC final report. NAP staff and NAP supporters attacked the NAPCAC final report, producing a "minority report" that called for citywide mediation – not any oversight committee – to resolve NAP conflicts. This minority report was written over a month after NAPCAC had been disbanded, and is entirely different from the final plan NAP advocates had presented at the next-to-last NAPCAC meeting. Unlike the NAPCAC Final Report, neither any of the majority members of NAPCAC nor members of the public had an opportunity to comment on the Minority Report before it was introduced to the City Services Committee. Despite this lack of transparency, NAP advocates demanded that it be given equal weight to the Final Report.

NAP critics were concerned. Mediation can work, especially when dealing with a single issue. But NAP issues are many and varied, and affect a multitude of park users and neighbors. In addition, mediation typically takes place in secret, allowing NAP to continue to operate without public oversight. In practice, the people invited to mediation (especially a citywide mediation) represent advocacy groups, not average citizens, further diluting the ability of park users and neighbors to influence what happens in their neighborhood parks.

Ultimately, the City Services Committee took no action on the NAPCAC Final Report. As a result, NAP was allowed to continue on its merry way with little oversight or input from the public.

Later in 2004, an informal working group, with both NAP advocates and NAP critics was established to discuss changes in the way NAP managed the lands under its control. RPD staffer Dan McKenna mediated the negotiations. The idea of three different management zones, from MA-1 for the most sensitive parts of a natural area to MA-3 for the least sensitive, came out of these informal negotiations. The group met for about six months. The informal working group thought they had reached an agreement on what the NAP Management Plan would look like.

But when the NAP Draft Management Plan was released in June 2005, NAP critics who had taken part in the informal working group felt that promises made had been reneged upon, and they fought against its adoption.

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MANAGEMENT PLAN APPROVAL AND EIR

In July 2006, the Recreation and Park Commission considered whether to approve the Draft NAP Management Plan or not. The hearing was attended by hundreds of people. So many people wanted to speak that, even though people were given just one minute to speak, the Commission ran out of time. The item was continued to the August 2006 Commission meeting. At both meetings, people expressed concerns about cutting down healthy trees, killing feral cats, closures of trails and off-leash areas, overuse of herbicides, and general concerns about the loss of access for people to large parts of their parks, the same concerns expressed from the beginning of the program.

The Commission unanimously approved the NAP Draft Management Plan, after adding two minor changes to the plan: 1) the least sensitive MA-3 parts of natural areas would be managed by the RPD Urban Forestry staff, and both native and non-native trees could be planted in MA-3 areas; 2) feral cat "relocation" (a nice euphemism for "killing") would happen only after the Recreation and Park Commission determined that other means of population reduction had failed to adequately reduce the number of feral cats in a natural area. These two changes were the only changes made to the Draft Management Plan by the Commission in response to the torrent of criticism the NAP plan had received.

The Commission then ordered an Environmental Impact Review of the NAP Management Plan that it had approved. The Initial Study for the NAP EIR was published in April 2009. The comments submitted are included as Appendix A of the Draft Environmental Impact Review (EIR) for the NAP Management Plan that was released in August 2011. [Click here to see Appendix A].

Interestingly, many of the concerns about the NAP Management Plan raised in the Initial Study are still problems with the Draft EIR. Those who prepared the Draft EIR do not appear to incorporated very many of the criticisms. Indeed, they don't seem to have listened to the critics at all.

This lack of concern for what people think by NAP has been a problem since its inception. NAP seems to only listen to its most zealous supporters, and ignores the rest of us.

Public comment on the Draft EIR is due on October 31, 2011. A final EIR (that will supposedly address comments submitted about the Draft EIR) is scheduled to be released in Spring or Fall 2012. Once the EIR is finalized and certified by the Planning Commission, we have been told that it will go back to the Recreation and Park Commission to acknowledge the certification and authorize the implementation of the NAP General Management Plan that it approved in 2006. Major changes in your neighborhood parks are coming as the NAP plan is fully implemented, whether you want them or not.

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APPENDIX 1:
DR. ROUGHGARDEN'S CRITIQUE OF NAP

Sept. 1, 2002

Dear Fellow Members of PROSAC,

I'm sorry to be out of town on Tuesday and not able to participate personally in the discussion of the Natural Areas Program (NAP) scheduled on the agenda for Sept. 3. Perhaps I can be of help by offering some comments in this note.

As your representative to the Green Ribbon panel, I have attended the two meetings since I was appointed, have read through the entire draft plan, and have participated in the process. Several conclusions and recommendations can be drawn at this point.

Content of Management Plan

The management plan advances a highly interventionist view of resource management that is not viable ecologically, economically, or culturally.

The plan was developed by a consulting firm, EIP Associates, specializing in environmental impact reports.

a. About half of the specific recommendations have some variant of the words, kill, clear, cut, or control. To illustrate, consider Lake Merced, chosen here simply because Lake Merced is the first of the parks mentioned in the report. Recommendations for the other parks follow in the same vein. On p. 6.1-12--6.1-20, the phrases, "remove eucalyptus, pine, acacia... remove cape ivy ice plant, English ivy, ehrharta, Bermuda buttercup, pampas grass, and sheep sorrel... clear pest species, monitor annually for new invasions... create open grassland through vegetation management and control of invasive plants... trap and remove non-native turtle species... remove all bullfrogs... stock with largemouth bass and catfish... signs, fences and increased enforcement to discourage free-running dogs in unauthorized areas" illustrate the flavor of the specific recommendations made for each park. Yet, in dry parks, water fountains are planned to benefit some favored species.

b. General recommendations that apply to all parks include, "areas of native-dominated vegetation shall be weeded on a routine basis to preserve the integrity of the native plant species and reduce the infestation of non-native species (p. 5-2)... as stands age small groups of trees could be removed within the forest and replanted with the appropriate native species (p. 5-2)... control feral cat populations through a trapping and removal program (p. 5-6)." Furthermore, the "vegetation management decision process" includes two decision points that lead to the use of herbicides: "Is Plant Safe to Handle? No->Is Animal Control Feasible and Efficient? No->Apply Herbicides" and "Is Hand Removal Feasible and Efficient? No->Apply Herbicides" (p. 4-13). The herbicide used is Roundup Pro (p. 4.4).

c. These recommendations are not ecologically viable. Introduced species cannot be eliminated by weeding because of dispersal and presence in the soil's seed bank, bullfrogs cannot be eliminated by volunteers with pitchforks tromping through the marsh at night spearing frogs when thousands of tadpoles swim in the waters (also, usually only a subset of the males call at night, and the non-calling males and females are not locatable), feral cats cannot be trapped out against a stream of influx from neighboring sources, herbicide use is anathema to natural ecosystem function, and so forth. Furthermore, the entire suite of recommendations is not gauged against an index of the conservation potential of each site, as would be revealed in total species-area and nested-subset species area graphs and tables. I have called for this information, but these elementary statistics used in

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conservation and restoration ecology have not been provided. All in all, the recommendations are ad hoc. The recommendations are simply listed without justification, or reference to any justifying literature.

d. The recommendations are not economically viable. The ecosystem envisioned is a human subsidized system, not a self-sustaining ecosystem. The envisioned ecosystem amounts to a grand exercise in horticulture, not to the restoration of a natural ecosystem.

e. Of particular importance to PROSAC, the continuing expenses these recommendations require would apparently be debited from the capital improvement account, and be tantamount to coding maintenance expense as capital expense.

f. The recommendations are not culturally viable. As many have noted, the language used for introduced species is racist and sexist. Introduced plants and animals are not people of course, and cannot object to how they are described. Still, the language in the management plan is insensitive, inviting a carry-over to human affairs, and opening the possibility of naturalizing racist rhetoric in the name of science. In fact, ecology does not privilege the native over the introduced. Every species is native somewhere. The N in NAP has been appropriated to mean native. The goal of the NAP should be to create natural self-sustaining ecosystems that serve the citizens of San Francisco. The NAP should include native species to conserve our biological heritage, as a "natural museum," just as human museums conserve and exhibit our maritime traditions. Even maritime buffs don't suggest that North Beach be restored to a fishing village. Our moral obligation to prevent the extinction of native species does not license the persecution of introduced species.

Public Process for Review of Management Plan

The process being implemented for review of the management plan is not viable politically.

a. No protocol is available to ensure that comments raised by the Green Ribbon Panel are incorporated into the management plan. Although written comments about each of the specific recommendations have been solicited from panel members, EIP has stated publicly that they will make their own subjective and private evaluation about which comments to take into account in any revisions. This absence of any guarantee that comments will be considered is a disincentive to offering feedback, and has provoked frustration and anger among parties who wish to influence the result.

b. The Green Ribbon Panel was selected on the basis of political advocacy, not on technical credentials, so that discussion of the technical merits of the plan is immediately interpreted in an advocacy framework. With public attention and opposition building to the NAP, a circle-the-wagons atmosphere has formed, with any criticism of the plan seen as the onslaught of barbarians. This polarization has subverted the capability of the Green Ribbon Panel to offer substantive feedback.

c. By keeping the public at arms length, the consultants doomed the management plan to controversy from the start. The modern approach to ecosystem management uses the concept of ecosystem services, and asks how an ecosystem should be configured to deliver the services people desire. By knowing what people want from their NAP's to begin with, a plan that melds these needs, including the need for conservation, can be achieved. Even more recently, ecosystem management is being cast in an economic framework using the approach of ecological economics to help sort the allocation of ecosystem resources among competing demands.

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Recommendations

A two-tier process for developing a NAP management plan should be substituted for the current process, and EIP Associates should be terminated as the contractor responsible for developing the plan.

a. The first tier of review should be a small working group of six people, four of whom are appointed for technical expertise and two of whom represent community constituencies. The group's meetings should be public, but focused on a technical review of the management plan. This body should be charged with making recommendations for revisions to the plan, and the contractor should be required to accept the recommendations, or to state publicly why not. This group should meet for six months, and interact with the tier-2 group below.

b. The second tier should be a larger review body of twelve people, eight of whom represent community constituencies, and four selected for technical expertise. This group should be charged with evaluating the extent to which the community's needs are being served by the management plan, to suggest revisions, and ultimately, to endorse the plan before release for general public comment. This group should meet for four months, overlapping the last four months of the tier-1 group, and providing opportunity for interaction.

c. The reports of both tiers of review should be referred to the Recreation and Park Commission or Board of Supervisors, for forwarding to the Department, to ensure that the recommendations are taken seriously.

d. EIP should be terminated because:

1. EIP has not developed a credible resource management plan for the NAP.

2. EIP has not effectively facilitated a public review of the management plan for the NAP.

3. EIP does not have the personnel to develop a management plan for the NAP. EIP's strengths lie in hydrology and geographic information systems (GIS). Yet, the controversial aspects of the NAP pertain primarily to biological restoration and conservation aspects of the parks, not to geologic and geographic issues. Instead, a different firm should be retained that can build on the foundation of GIS maps and the species database that EIP has generated.

Sincerely,

Joan Roughgarden

PROSAC Representative
Supervisoral District 6
San Francisco CA

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APPENDIX 2
MANAGEMENT PLAN FOR THE NATURAL AREAS PROGRAM

Developed by the Natural Areas Program Citizen Advisory Committee (NAPCAC) as per resolution 653-02

November 14, 2003

1.1

San Francisco is blessed with a diverse biological heritage in addition to its beautiful physical surroundings. The same geologic processes that produced its rugged coastline, the bay entrance at Sea Cliff, the hills of Twin Peaks, and the wetlands of Mission Bay produced many opportunities for the plants and animals of our peninsula to differentiate into unique and precious forms not found anywhere else. Moreover, the varied microclimates in our city support a range of ecological communities and ecosystems from maritime to grassland, from rocky coasts to shallow salt marsh. The history of volunteer stewardship in our natural areas helped raise awareness of the need for responsible stewardship of these natural treasures and has prompted the city's General Plan to include Policy 13 declaring the City's clear and strong intention to support conservation. The Natural Areas Program (NAP) of the Department of Recreation and Parks is one of the city's methods to this goal.

1.2

The goal of conserving San Francisco's biological heritage needs to be accomplished in an urban setting, taking into account the many uses that our park lands serve. Also, the tactics employed to conserve our biological resources need to have a reasonable promise of success, and their secondary consequences spelled out. The local communities and park users must be involved in designing and agreeing to the various trade-offs required in the balancing of requirements for multiple uses, and city-wide goals must be furthered as well.

1.3

The Natural Areas Program Citizen Advisory Committee (NAPCAC) was established by the Board of Supervisors Resolution No. 653-02 adopted on September 24, 2002. This document offers NAPCAC's recommendations to the Board of Supervisors on how the NAP should be managed. Our vision is that the city's system of Natural Areas should be a source of civic pride and should take its place along with museums, art galleries, concert halls, libraries, and other assets that define San Francisco as one of the world's best places to live, work and visit.

SAN FRANCISCO NATURAL AREAS

2.1

Appendix 1 lists the 31 sites presently considered Natural Areas. We appreciate that many members of the public have disputed the listing of specific parks within this list because the public process that has led to their designation has at times been irregular. Nonetheless, we accept this list as a *de facto* starting point, and focus on

Vittori-1

process to ascertain what activities shall occur within these sites, and on procedure by which new sites might be added and others dropped as the program evolves.

2.2

Figure 1 presents a map of the location of these sites. Collectively, they span places near the ocean on the west to the bay on the east, and include lowlands and hills.

GOALS AND CONSIDERATIONS

3.1

During our meetings we heard many statements of goals and values that members of the public wish to see achieved and respected by NAP. By offering a brief narrative of these, we set the stage for the specific recommendations that follow.

3.2

One conservation goal, and the one we recommend here, places highest value on species and varieties that are unique to San Francisco, as well as those listed species the City is required by the endangered species act to protect. The area encompassed by the city features native plants and animals found nowhere else, plus others found only in the San Francisco Bay region. We recognize that more species are of special value than presently listed as endangered or threatened in Federal and State lists, and that being proactive using local knowledge can supplement such lists. Focusing on the inherent value of species and varieties means habitats are valued as places that provide a home for them. The importance of conserving habitats therefore derives from the importance of conserving species and varieties. For this goal, conservation practice should consist of steps that promote the population viability of the species and varieties of special interest.

3.3

Another conservation goal places value on representative habitats themselves. Pre-colonial San Francisco featured dune-scrub communities, oak woodland, freshwater ponds, and riparian corridors. Appendix 2 from the Society of Ecological Restoration (SER) in April 2002 is *The SER Primer on Ecological Restoration*. According to SER, ecological restoration assists the recovery of a degraded, damaged, or destroyed ecosystem, and returns it to its historic developmental trajectory. Criteria for a restored ecosystem include: it contains the characteristic assemblage of species seen in a reference ecosystem, all functional groups necessary for the continued development and/or stability of the ecosystem are present, and the restored ecosystem is self-sustaining to the same degree as its reference ecosystem. Focusing on restoring healthy ecosystems means species are valued because of their role in ecosystem functions. The importance of conserving species therefore derives from their importance to ecosystem function. Biodiversity is not valued for itself, but for its possible contribution to ecosystem resilience. For this goal, conservation practice should consist of steps that protect native species and reintroduce missing species that are essential for ecosystem function.

Vittori-1

3.4

Many people affirm both species and habitat conservation goals, but others do not. To some, certain habitats have little value in themselves whereas the species are of primary interest, and to others the aesthetic or spiritual sense of the landscape is more important than the details of which species occur there.

3.5

Another goal debated at NAPCAC meetings is whether a Natural Area should be self-sustaining. The ecological tradition, especially in North America, emphasizes attaining self-sustainability, whereas the horticultural tradition envisions continual human involvement. As SER writes in their *Primer*, when "the ecosystem under manipulation may no longer require external assistance to ensure its future health and integrity… restoration can be considered complete." In contrast, many have spoken of limitations inherent in an urban park, and argued that every species and habitat will always require continual maintenance, and that self-sustainability is an impossible goal. By this view, Natural Areas are relatively large botanical and zoological gardens stocked mostly with native species. This view of Natural Areas is similar to a European model, in which people even construct the nest boxes for bird populations in wooded parks.

3.6

It is impossible to reach compromise later on further issues such as criteria for success, program costs, multiple uses, and openness of access without offering guidance on how the conflicts concerning the goals of conserving species, conserving habitat, and attaining sustainability are resolved to begin with. We endorse both the goals of conserving species and of conserving habitat, but suggest a greater present emphasis on species rather than on habitats *per se* for reasons below. We endorse the goal of long-term sustainability for natural areas, including as much self-sustainability as possible, following the North American rather than the European model, for reasons below.

3.7

The reason for emphasizing species over habitats is that the goal of species conservation is presently more attainable and defensible than that of habitat conservation. To obtain self-sustainability for a population, clear criteria exist: the demographics for the species must be positive, that is, its birth rate plus immigration rate must exceed its death rate and emigration rate. Appendix 3 shows the species-area graph for the natural areas. Seven of the largest presently support over 100 native species of plants plus an unknown number of animal species as well. Every species inherently has a "self-seeding" scale, which is the minimum area a site must have to support a self-sustaining population of that species. Species with low reproductive rates and long dispersal distance need bigger sites than species with high reproductive rates and short dispersal distances. The large sites in the NAP are already sustaining many species. Meanwhile, the small sites could sustain more than their area might suggest provided the species in them are subsidized by seed and pollen flow from native plantings in neighboring residential areas, thus leveraging the conservation value of the small sites. Furthermore, species and varieties are relatively well-defined, managing for species conservation is not new, and has a track record of legislative support and judicial precedent.

Vittori-1

3.8

In contrast, objective criteria cannot be given even to define habitat types. No official definitions exist for "coastal scrub," "coastal prairie" and so forth. The literature supplied by NAP contains limited citations, not because of poor research on NAP's part, but because a habitat type is fundamentally not as well defined as a species is. Without a reliable definition of the habitat types, it's nearly impossible to indicate what would constitute success for its conservation---is 50% of the original species enough, will 25% do, or even one or two species if they're conspicuous enough? Furthermore, ecologists do not know how to tell whether an ecosystem is stable or resilient without perturbing it. Simply looking at what's in the ecosystem doesn't indicate much about its dynamic integrity. A glance at current publications in professional journals such as *Restoration Ecology* shows a great deal of present debate and research about how to define restoration tactics and endpoints. As Margaret Palmer of the University of Maryland wrote in 1997, "Many untested assumptions concerning the relationship between physical habitat structure and restoration ecology are being made in practical restoration efforts. We need rigorous testing of these assumptions" (*Restoration Ecology*, 5:291—300). We wish to see NAP participate in the ongoing development of restoration ecology. Still, we feel the majority of present emphasis should be tilted toward species conservation, with habitat conservation developed as an outgrowth of species-conservation plans. Furthermore, we await legislative and judicial experience with habitat conservation. There is for example, presently no "endangered habitat act" analogous to the endangered species act, nor have the objectivity of programs focused on restoring ecosystem function been tested in court. Nonetheless, we endorse the objective of conserving a spectrum of the habitats that represent San Francisco's overall environment. We do not wish to exclude future options for the conservation of ecological processes, environmental education and enjoyment by allowing the indiscriminate loss of habitats because of over-tilting toward the value of species alone.

3.9

We support the North American model of a natural area as sustainable, including a possible long-term role for human participation, rather than the European model. We see human activities in the Natural Areas as potentially being included among the other ecosystem processes that also occur there. We are also conscious that establishing a program of intensive human intervention in an ecosystem can be expensive and may divert resources from acquisition and capital improvements or from social services supplied by other city departments. Furthermore, a European-model natural area program would tend to duplicate the missions of the City's existing botanical gardens and zoo. Also, we suspect that most San Franciscans prefer the Natural Areas to contain largely self-sufficient ecosystems rather than intensively managed systems. So, we endorse plans that promote self-sustainability while encouraging justified and programmatically sustainable human activities as well.

3.10

The NAP also serves a valuable education role in San Francisco, a role we endorse and encourage. Still, objection has been raised to the tone in some of the materials distributed by NAP, especially with respect to the value of non-native species. As SER states in their *Primer*, "not all exotic species are harmful. Indeed some even fulfill ecological roles formerly played by the native species that have become rare or extirpated. In such instances, the rationale for their removal may be tenuous." Demonizing introduced species as enemies has raised unnecessary opposition to NAP, and we endorse a scientific review of the educational literature distributed by NAP.

Vittori-1

3.11

Finally, we return to the resolution that authorized NAPCAC. Among the conclusions of the Board of Supervisors, as expressed in the Resolution, were the following concerns:

"The Recreation and Park Department has not fulfilled its responsibilities to ensure public and open process with regard to the Natural Areas Program…", "Legitimate concerns regarding access to and use of open space [within natural areas] were raised" at a Board of Supervisors Committee hearing on July 11, 2002., "The activities of the Recreation and Park Department Natural Areas Program…have ignored both public process and public policy…" Therefore, a simple continuation of the status quo for managing the Natural Areas is not a viable option. To address the Supervisor's concerns we offer the following recommendations.

PLANNING AND REVIEW PROCESS

4.1

The Natural Areas Program Review Committee (NAPRC), will convene within 30 days of the appointments, under sunshine rules. This Committee of volunteer citizens will meet as needed to review and consult with NAP about its plans for management of Natural Areas. NAP should submit both a system wide work plan (the portfolio plan) as well as work plans for individual sites.

4.2

This committee should be composed of 12 voting members and the Manager of the Natural Areas who will serve ex officio. The voting members will include four scientists with research credentials, preferably PhDs in relevant disciplines such as ecology, botany, zoology, conservation and natural history, four who are representatives of city-wide advocacy groups, and four representatives of local neighborhood and park advocacy groups. The Board of Supervisors will appoint committee members initially. However, the Rec and Park Commission will appoint individuals to fill all subsequent vacancies to the committee.

4.3

The initial appointments of members for the committee will be for periods of 1-4 years. In each of the three subgroups defined above (scientists, city-wide community advocates, and neighborhood and park advocates), one member will be appointed for one year, one member for two years, one member for three years, and one member for four years. These staggered terms will result in the entire committee being replaced after 4 years, but only one quarter of the committee will be replaced in any single year.

4.4

Three months prior to the end of a committee member's term, public notice of the vacancy will be made via the RPD website and during regularly scheduled and announced meetings of the NAPRC. Applications from individuals wishing to serve on the committee will be received by the NAPRC and forwarded with comment to the Parks and Recreation Commission for their review and decision. All individuals filling vacancies will serve a term of two years. No committee member can serve for more six consecutive years without rotating off the

Vittori-1

committee for at least one year. Committee members will normally be selected from among individual who are residents of the city of San Francisco, but exceptions can be made to secure the participation of scientists.

4.5

The committee will contain two subcommittees, a Scientific Subcommittee and a Community Relations Subcommittee. Each subcommittee should consist of at least six members. The scientific subcommittee should normally include, but not be limited to, the four scientists (preferably Ph.D.s), and the community relations subcommittee should normally include, but not be limited to, the four representatives of local neighborhood and park advocacy groups. The responsibilities of this committee and the subcommittees are specified below.

4.6

The success of the NAPRC should be reviewed and evaluated after five years. A written report should be provided to the Board of Supervisors and Rec and Park Commission. At that time, the Board of Supervisors may decide to reauthorize the NAPRC, modify its function, or terminate its existence.

4.7

We invite NAP to contribute a letter of support for such a committee at this time.

SYSTEM-WIDE PORTFOLIO PLAN

5.1

The NAP should develop a system-wide or portfolio plan that will provide an overview of the entire system of Natural Areas, showing how each site contributes to the overall goal of the program. This portfolio plan should outline the overall Natural Areas Program conservation and educational goals, specify the priorities for implementation of conservation plans for individual parks, and outline how the acquisition of additional properties will enhance the ability of the NAP to meet its conservation and educational goals.

5.2

This portfolio plan will necessarily be more conceptual than will the individual plans for each site. Each year at the first meeting of the full NAPRC, the NAP should submit an update of the Portfolio Plan and the specific activities anticipated for the upcoming year. NAP should indicate their allocation of effort across the sites. Also at this occasion, NAP should indicate potential acquisitions to the system, as well as any sites that have ceased to be effective and are slated for removal from the program. The Portfolio Plan and its updates should be available to the public on the RPD website. The entire committee will receive the system-wide portfolio plan and forward their evaluation to the RPD General Manager and Rec and Park Commission.

5.3

Detailed plans for the conservation measures to be implemented at each site and how public input will be integrated into each site plan will be developed simultaneously and in parallel by the two subcommittees of NAPRC

Vittori-1

(e.g., the scientific subcommittee for the site plan and the community relations subcommittee for the community outreach plan).

INDIVIDUAL SITE PLANS

6.1

NAP should present to NAPRC a plan for each site for detailed consideration by both subcommittees and eventual review and endorsement of the full committee by majority vote. Each individual site plan should also be available to the public on the RPD website. Each Plan should contain the following information:

The steps and management practices to be carried out at the site in relation to both long term and short term objectives. It is anticipated that the degree of intervention on behalf of a species or habitat will be scaled to the degree of conservation risk faced by the species or habitat of concern

The proposed outcomes of the Plan.

A timeline for both the proposed management practices and the anticipated outcomes.

A summary inventory of the plant and animal species that currently exist at the site, including any indications of the special significance of these species.

A summary inventory of the present environmental condition at the site, such as wind exposure, and soil and erosion conditions. Significant alterations by humans to original conditions shall be identified if known.

A summary of present recreational uses at the site, as well as any cultural or historical value of the present condition of the site.

A description of the secondary consequences of the management practices, such as:

removal or killing of trees, trail closures, fences and other restrictions on access, restrictions on existing forms of recreation, such as boating, fishing, etc., the potential impact on existing animals, including trapping and removal of animals, use of herbicides, potential for erosion and wind damage resulting from the removal of trees and other non-native vegetation.

A description of the educational aspect of the Natural Area Plan, such as signage and other educational materials.

A plan for monitoring the project during its development, and evaluating its success periodically to its completion. Participation of children and volunteers in these experiments with reported results will contribute to the educational value of the Natural Areas Program.

An estimate of the resources necessary to implement the proposed plan including the current level of volunteer activity and the potential benefit to the NAP site of enhancing volunteer participation and advancing the goal of stewardship.

Vittori-1

Scientific Subcommittee Responsibilities

7.1

The responsibilities of the scientific subcommittee of the committee shall be to review the Natural Area Site Plans prepared by the Natural Areas Program to determine the following:

Is it scientifically plausible that the proposed management activities will achieve the proposed outcome?

Are the proposed monitoring plans adequate to identify any unforeseen consequences that may arise during the implementation of the plan?

Have the secondary consequences of management activities been identified?

Is the proposed evaluation plan adequate to determine the success of the plan?

Are the educational materials scientifically accurate?

7.2

The subcommittee will also review progress reports including monitoring data during the implementation of the plan in order to identify potential problems and make modification to the plans as needed. Recognizing that conservation and restoration practices are experimental, i.e. the outcome cannot be accurately predicted, conservation practices shall include a protocol for on-going monitoring to measure the effectiveness of the practice and to determine whether modifications are required. Therefore records shall be kept of management practices, such as plant lists and planting techniques.

7.3

Records include baseline measures and descriptions of any manipulations of native species, introduced species, and substrate. Subsequent monitoring (annual monitoring, at the minimum) will determine the relative success of different management practices so that future efforts will be informed by the results. The monitoring data will be reported to the Scientific Subcommittee for their review and possible recommendation of modifications to the individual site plans. Participation of children and volunteers in these monitoring programs and reporting the results to the public will contribute to the educational value of the Natural Areas Program.

7.4

The meetings of the scientific subcommittee shall be announced in advance on the website of the Recreation and Park Department and be open to the public.

Vittori-1

COMMUNITY OUTREACH PLAN

8.1

NAP should also present to NAPRC a community outreach plan for each site for detailed consideration by the community relations subcommittee. The Plan should contain the following information:

A record of community workshops held in each district regarding the natural area sites in the district, and presenting and explaining the site plan for relevant sites within that district. These public meetings are to be coordinated with Friends Groups, Neighborhood Associations and other interested parties. The neighbors of each site shall be informed by mail of these public presentations as well as other interested groups by appropriate means. Announcement of the presentation should also be posted at the site so that visitors to the site are informed of the meeting and given the opportunity to attend. Anyone wishing to provide their feedback on the plan in writing can submit comments to be reviewed by the NAPRC. NAP should use available databases to notify as many interested parties as possible. Interested parties may be informed of the meetings by email, postings in a park, posting on the RPD website, and by US mail. NAP will solicit and report on any concerns and issues that were raised. This report will be made available to the public on the RPD website.

Explanation of the ongoing outreach plans at that site to continually recruit and replace volunteers.

Professionally designed surveys to determine the support of the public shall be distributed to the users of the park and the neighbors of the site of the project after the community meeting. The returned surveys shall be reviewed by NAPRC and NAPRC shall consider the survey responses as an important factor in determining the public's support for the NAP plan.

8.2

To facilitate the meetings and help the NAP with public outreach and communication, the NAP should hire a public relations or community-outreach intern. This intern should be working toward an advanced degree in a relevant discipline. The NAPRC may recommend that ~~and~~ the Manager of the Natural Areas Program employ a professional mediator to assist in resolving contentious issues.

Community Relations Subcommittee Responsibilities

9.1

The responsibilities of the Community Relations Subcommittee of the Committee shall be to attend the community meetings and to review the Natural Area Outreach Plans prepared by the Natural Areas Program to determine the following:

Does the local community favor the proposed management practices for the sites in their district?

Has a good faith effort been made to solicit and incorporate public comments on individual site plans?

Has the local community been adequately informed of both the potential benefits and secondary consequences of the proposed plan?

Vittori-1

Have other relevant city Commissions (e.g., Animal Control and Welfare, Urban Forestry Council, etc.) been informed and consulted about any management practices proposed for the Natural Areas?

Does the community have any changes they wish to make to the proposed plan?

9.2

The meetings of the Community relations subcommittee shall be announced in advance on the website of the Recreation and Park Department and be open to the public.

Whole Committee Responsibilities

10.1

The full NAPRC will prepare a written evaluation of the portfolio plan and forward these reports with their findings to the RPD General Manager and Rec and Park Commission. The full committee will receive and evaluate the reports of the subcommittees for each site. Upon favorable review of the reports for individual sites, the full committee will recommend that NAP schedule a final public meeting to receive comments on the final draft plan. After integrating the final public input, the full committee will prepare a written evaluation of the site plan and forward these reports with their findings to the RPD General Manager and Rec and Park Commission.

10.2

Until an individual site plan has been endorsed by the majority of the full committee removal of adult trees, relocation or closure of trails, removal of animals, introducing plants or animals that are listed (endangered, threatened, special concern) or endemic, erection of fences, or other capital improvements specifically proposed in the Natural Area site plan should be delayed.

11.1

The NAPCAC is committed to the success of the Natural Areas Program. Increased staffing and enhanced financial resources will allow the NAP to advance its conservation goals more rapidly. The creation of a Natural Areas Program Review Committee will also incur additional costs to the RPD. The NAPCAC therefore recommends increasing the staff and funding available to the NAP beginning with the City's 2004-2005 budget.

Vitulano-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:50 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments on the NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:51 AM -----



Karen <kv@peoplepc.com>
10/31/2011 09:29 AM
Please respond to
Karen <kv@peoplepc.com>

To bill.wycko@sfgov.org
cc
Subject Comments on the NAP EIR

Dear Mr. Wycko -

01 I'm writing to express concern regarding the proposal to reduce access for me and my dog for recreation activities and spiritual well-being - the two main uses for me in SF's parks. Hiking with my dog is a main source of exercise for me - it keeps me active and allows me to enjoy nature. I especially enjoy observing the changes that occur with the seasons, such as the many varied mushroms that sprout up after the rains in the Winter, and the flowering trees in the Spring. I frequent McLaren Park and Bernal Hill, as well as Golden Gate Park and several other parks. The Dog Play Areas (DPA) are important for adults and children, and this impact comes as the GGNRA is also proposing radical cuts to dog recreation space. The cumulative impacts to recreation from these plans are unacceptable. No legal off-leash space should be removed from our parks.

02

03 The Plan should be more precise and identify specific problem areas where observations directly attributable to dogs have been made. This is not done. It is especially curious why the small DPA at Lake Merced is proposed for closure. This area is hardly used - mainly because its not big enough - but the City should specifically state what the plans are for this area and how restoration is not compatible with continued recreation with our dogs. Mitigation measures should be explored and evaluated for each area that is proposed to be limited, to see if any documented imapcts can be reduced through mitigation before closures are considered.

04 I personally see much more damage from people without dogs - especially kids hanging out, breaking glass, littering, The EIR should identify which percentage of impacts are attributable to dogs versus humans.

05 I am also concerned with the use of chemicals, including herbicides like Garlon, which is harmful to dogs. The City should stick with its IPM strategy and emphasize non-chemical methods, or discuss an adaptation strategy for non-natives that considers any ecosystem services they provide.

Thanks -

Sincerely -

Karen Vitulano
4124 Moraga St.
San Francisco, CA 94122

PeoplePC Online
A better way to Internet
http://www.peoplepc.com

Von Erb-1



Bill Wycko/CTYPLN/SFGOV
10/27/2011 12:11 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Leave the off leash areas for dogs and their owners alone.

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/27/2011 12:11 PM -----



Jon Von Erb <jvonerb@gmail.com>
10/27/2011 11:25 AM

To bill.wycko@sfgov.org
cc
Subject Leave the off leash areas for dogs and their owners alone.

It is ridiculous that your org. keeps attempting to close parks and open state and federal land to dogs and their owners. Some time ago SF govt. put section 8 units all over the city opening up the way to theft, property and civilian harm. We only have our trusted dogs to assist us in protecting ourselves from harm. Dogs, like people, must exercise to remain healthy. If there are no places in the city with wide open spaces to run and play and eliminate then we, the owners, will be forced to use our neighbors lawns and other private property to achieve this function.

01 If you expect the voters in the bay area to vote in improvements for fire and police and parks in general then STOP this outrage against the people of the Bay Area and San Francisco in particular.

It is high time that the needs of, We the People, are considered by our elected and appointed officials.

Look at what is happening all over America as well as in San Francisco and Oakland. The people are tired of all this oppression and REVOLT is going to be the only answer to situations like this.

LEAVE OFF LEASH AREAS ALONE AND CREATE MORE SPACES FOR US, THE DOGS AND THEIR OWNERS, TO OCCUPY.

Jon Von Erb, Taxpayer, born San Franciscan, and dog owner.

Wade-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:53 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:53 AM -----



npc
<isabelwade@gmail.com>
10/31/2011 11:51 AM

To Bill.Wycko@sfgov.org
cc
Subject NAP EIR

To: Bill Wycoff
Environmental Review Officer, Planning Department
From: Isabel Wade
Date: October 21, 2011
Re: Natural Areas Plan EIR

Dear Bill,

The essential environmental issue related to the proposed Natural Areas Program Management Plan is still the same one that many of us have spoken about at public hearings for the last decade: the planned destruction of thousands of mature trees. The plan is based on naive species preference related to habitat values(always ignoring the scientific studies on habitat value of non-native trees), with seemingly no acknowledgement of the vital role that **mature** trees play in many other aspects of the environment from air quality, storm water reduction, and carbon sequestration, wind and dust/particulate reduction. There is also the important visual environment for city dwellers and removal of tall trees (usually eucalyptus are the target) in many parks such as Buena Vista will significantly alter the vistas and unique visual aspects of some of our signature parks.

01

02

Finally, the cost of the proposed NAP Plan tree removals must be considered in relation to implementing this plan. San Francisco's park trees need serious attention and many older ones do need to be removed because they are dangerous. However, the Recreation and Park Department has almost no funding for this critical task. We cannot afford to maintain even the most hazardous trees in the most visited areas of popular parks; how can we possibly justify prioritizing the removal of perfectly healthy trees, all at huge financial and environmental cost to our City?

03

Sincerely,

Isabel Wade, Ph.D.
Founding President, Friends of the Urban Forest, Founder, Neighborhood Parks Council

Walker-1

From: Bill Wycko
To: Jessica Range
Subject: Fw: draft EIR
Date: 10/11/2011 05:02 PM

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/11/2011 05:02 PM -----

Josh Walker
<josh.walker@gmail.com>

10/11/2011 10:29 AM

To bill.wycko@sfgov.org
cc
Subject draft EIR

Hello,

I'm writing to you because I read this article on SFGate.com:

http://blog.sfgate.com/jscarlett/2011/10/03/dogs-in-the-parks-speak-up-now/

01

I'd like to add my voice to those of us who feel that dogs are overrunning our public spaces. Everywhere I go there are dogs running around, often off-leash, uriniating and defecating everywhere, and the owners frequently don't clean up after them. I can't take my children to the beach because people simply let their dogs run wild. I take them to the park and I'm having to constantly hover over them to make sure they dont fall into a big steaming pile or run afoul of some aggressive off-leash dog.

I want to let my kids run free and play, but I really can't. Instead, they end up in the fenced-in playgrounds while the dogs run free in the tall grass.

Please add my support to the idea of more public spaces that are simply off-limits to dogs, regardless of leash status, and to the idea of stricter enforcement of existing leash laws.

Thanks for reading,

Josh Walker
2535 45th Ave
SF, CA 94116

Weed-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 11:47 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Remove Sharp Park From The Natural Areas Plan!

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 11:47 AM -----



ThomasWeed@aol.com
10/31/2011 10:32 AM

To bill.wycko@sfgov.org
cc
Subject Remove Sharp Park From The Natural Areas Plan!

01 Please consider removing the Sharp Park from the Natural Areas Plan. Thanks,

Thomas Weed
360-32nd Avenue #12
San Francisco, CA 94121
(415) 387-3448
ThomasWeed@aol.com

Werger-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:00 PM
To: Bock, John
Subject: Fw: Nap

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:01 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 02:58 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Nap

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 02:59 PM -----

Al Werger <alisonwerger@yahoo.com>
11/01/2011 07:54 AM

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: Nap

1

Werger-1

01

Hello- I was working late last night and was not able to get an email to you....I am a sf voter/homeowner/business owner and am completely against the nap plan to take over off leash dog areas- there are more dogs than children in San Francisco and the dogs need a place to go. Especially with all that is happening with the ggnra, it boggles my mind to think that the city would ok this action. What's even more distressing is that most dog owners don't realize that it's happening. I take my dogs to Mcclaren park and bernal hill regularly and those offleash dog areas need to remain as such.
I am disheartened that this issue is a constant battle. I would think that the city would realize how many dogs are here and how important they are to their owners - who by the way, are the residents and voters of San Francisco-
Please do the right thing and leave the off leash dog areas alone.
Thank you for your time
Alison Werger
Citipets pet store and animal care
member of Fort Funston dog coalition
alisonwerger.com

Sent from my iPhone

2

Wilford-1

Bock, John

From: Jessica Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:51 PM
To: Bock, John
Subject: Fw: NAP EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
Phone: (415) 575-9018 / Fax: (415) 558-6409 www.sfplanning.org

---- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:52 PM ----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:29 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: NAP EIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:30 PM ----

Linda W <tamdiablo@att.net>
10/31/2011 04:49 PM

To: bill.wycko@sfgov.org
cc:
Subject: NAP EIR

1

Wilford-1

01 I am writing in support of the maintenance plan. I was in favor of preserving natural areas in San Francisco when the plan first started, and when I thought these areas were a few out of the way pockets of land, but I don't want to see the areas San Franciscans need for recreation being turned into native plant habitats. We city dwellers don't have big suburban backyards in which to play; our parks are where we go to run around, throw frisbees, toss balls, etc. I am in favor of lots of grass meadows with surrounding trees and flowers.

Linda Wilford
435 Dewey Blvd.
San Francisco, CA 94116

2

Wilson-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:16 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Natural Area Plan Comments

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:17 PM ----



"Bill Wilson" <bill.f.wilson@gmail.com>
10/31/2011 02:15 PM

To <bill.wycko@sfgov.org>
cc
Subject Natural Area Plan Comments

- The Natural Areas Plan goals are excellent.

01 - The SNRAMP DEIR, with notable exceptions, does an excellent job analyzing the environmental impacts of the Natural Areas Plan.

02 -The plan is NOT radical. In fact, the Proposed Project neglects to fully address the long-term sustainable management and control of invasive plants, due to the retention of weed-nurturing eucalyptus groves in the MA-3 areas, which designation perpetuates a fragmented approach to natural resources management.

03 - For the purposes of the SNRAMP DEIR, recreation should include community stewardship. This would change the balance of purported recreational impacts.

04 - That the recreation and maintenance alternatives are the "**environmentally superior alternatives**" and neither the *restoration* nor the proposed project are, is, apparently, an unfortunate paradox of CEQA, where biodiversity is considered no more important than aesthetics or recreation within the *human* environment.

05 - The true **impacts (and benefits!) of the maximum restoration alternative cannot be properly evaluated** against the proposed project, since the description is only two pages long. Thus, no such definitive conclusions about recreation impacts or biological benefits can be made because there is no substance to the alternative. It is totally general.

06 **- SEPARATE out SHARP PARK from the Natural Areas Plan!**

Bill Wilson
215 Edna Street
San Francisco, CA 94112

Winquist-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 04:18 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Comments re: the NAP EIR

—— Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 04:18 PM ——



Kelly Winquist
<kwinquist@yahoo.com>
10/31/2011 01:27 PM
Please respond to
Kelly Winquist
<kwinquist@yahoo.com>

To "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc
Subject Comments re: the NAP EIR

Dear Mr. Wycko,

I am writing to comment on the NAP EIR. While I recognize the importance of native plants to the Bay Area, the NAP EIR is inadequate and additional work must be done. I frequently walk in Buena Vista and Bernal Hill parks with my dog, both of which I've visited for the past 8 years, and this plan will adversely affect the public's access to those areas, among many others.

01

An EIR needs to be based on solid scientific evidence. However, the NAP EIR repeatedly states that dogs may be impacting plants or wildlife without offering evidence of any impacts, past or present. It also ignores scientific studies that show off leash dogs to have little impact on plants and wildlife.

Additionally, the analysis of the effects of the proposed closures of up to 80% of the Dog Play Areas in the city is not adequate. Specifically, the impacts on other parks, DPAs, and the effects of transportation required to the remaining DPAs on the environment have not been considered. It also does not consider the impact the DPA closure would have on the physical and mental health benefits of people who walk with their dogs or on the social communities that exist within and around the parks.

02

Kelly Winquist
San Francisco home owner/member of the Nature Conservancy

Woo-1



Bill Wycko/CTYPLN/SFGOV
10/31/2011 09:25 AM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Oppose GGNRA Draft Dog Management Plan

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 10/31/2011 09:25 AM -----



Giny Woo
<ginylee1@yahoo.com>
10/29/2011 05:29 PM
Please respond to
Giny Woo
<ginylee1@yahoo.com>

To "Bill.wycko@sfgov.org" <Bill.wycko@sfgov.org>
cc
Subject Oppose GGNRA Draft Dog Management Plan

Mr. Bill Wycko,

I writing to express my opposition to the GGNRA Draft Dog Management Plan.

We need place to take our dogs for off leash dog walk. It's vital for our health and our dogs health. Most of the parks - city, state, federal - are either on leash only or does not allow dogs at all. Off leash area is so limited and few. We need these spaces. Please do not take away

01 these spaces but instead expand it. There are 4 millions perfectly adoptabled pets being killed in shelters each year. We need to encourage caring people to adopt these pets and we need tc give them a place for them to enjoy time with their dogs off leash. Imagine having to live on leash all your life. You wouldn't want that for yourself. Why make our dogs? Please please leave our off leash areas alone.

Thank you!!!

Giny woo

Yip-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:47 PM
To: Bock, John
Subject: Fw: Comment on NAP EIR

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
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San Francisco, CA 94103
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----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:48 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:21 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Comment on NAP EIR

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:22 PM -----

Yunny Yip <yunnyip@yahoo.com>
10/31/2011 10:37 PM
Please respond to Yunny Yip <yunnyip@yahoo.com>

To: "bill.wycko@sfgov.org" <bill.wycko@sfgov.org>
cc:
Subject: Comment on NAP EIR

1

Yip-1

Thank you for taking the time to note my comments:

01 1) The NAP EIR repeatedly says: "dogs MAY be impacting" plants or wildlife, yet offers no evidence that any impacts are actually occurring now or ever have occurred. An EIR must be based on solid scientific evidence. Because the NAP EIR's analysis of impacts from dogs on plants and wildlife is based on unsubstantiated claims, the analysis is inadequate.

02 2) The NAP EIR's analysis of the impacts of the closure of all or part of Dog Play Areas (off-leash areas) is inadequate. The NAP EIR must consider the impacts on other DPAs and other parks, on recreation, and on transportation, global warming and climate change because people must drive to other DPAs because of DPA closures if up to 80% of the total off-leash space in city parks is closed (the amount of off-leash located either within or adjacent to natural areas).

03 3) The NAP EIR defines dogs as "nuisances". The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the physical and mental health benefits of people who walk with their dogs. The EIR does not consider the impacts of DPA closures (especially the 80% potential closures) on the social community of dog walkers in parks and in the neighboring communities surrounding the parks.

04 4) The NAP EIR does not consider impacts on recreation of NAP plans to plant threatened and endangered species throughout the natural areas. Because of their special status, these plants trigger automatic restrictions on access and, therefore, have much more negative impacts on recreation and access than planting native plants that are not threatened or endangered.

05 5) Support the Maintenance Alternative and the Maximum Recreation Alternative. The NAP EIR identifies them as "environmentally superior."

TY Yip
San Francisco
CA 94102

2

Zeiger-1



Bill Wycko/CTYPLN/SFGOV
06/11/2012 02:52 PM

To Jessica Range/CTYPLN/SFGOV@SFGOV
cc
bcc
Subject Fw: Public Comment on the Natural Areas Program - DEIR

---- Forwarded by Bill Wycko/CTYPLN/SFGOV on 06/11/2012 02:52 PM ----



Felicia <feliciazee@aol.com>
06/11/2012 02:13 PM

To Bill.Wycko@sfgov.org
cc
Subject Public Comment on the Natural Areas Program - DEIR

Public Comment on the Natural Areas Program:

01 There are many problems with the Natural Areas Program. I don't have the time or capacity to enumerate all of them in my following brief comment. However, the SF Forest Alliance has done a monumental job of research to accomplish that feat. Hopefully their careful and incisive research will be given the close attention it justly deserves.

The nap agenda wrongly advocates a concept that puts *plants before people* . Several surveys have been taken regarding what park visitors want from their parks. Not one person asked to please cut down thousands of trees and replace them with native plants and grasslands - sand dunes and dune scrub. Nor did anyone ask for a replication of the landscape from a few hundred years past. Not one! Yet this is the nap ideology and plan for our urban city parks.

The surveys which have been taken over the years and their results are on record. Park visitors want trails to walk and jog on. They want clean and safe parks to relax in. They want clean and accessible bathrooms. They want safe and clean playgrounds for their children. They want a variety of recreational opportunities and open recreation centers with someone in charge to manage them.

However millions of tax dollars are given over to nap while park visitor wants and needs are on hold due to the ongoing budget shortfall. Nonetheless, park users and the public will be paying for what they didn't ask for. It's as if the public's preferences be damned - the nap will prevail - like it or not. Makes no sense to me.

Zeiger-1

There's been no attempt to inform the public at large about nap though it's been in the works for 15 years. One might ask what is nap afraid of? I've chatted randomly with over a hundred visitors at the park I go to daily - Stern Grove. The people I've talked to give a blank look when asked: do you know about the natural areas program? And these are the frequent park users! The few people I've run across at the park who do know about nap - oppose it.

How does the nap plan translate into the reality of our urban parks? In my neighborhood park, not so well. At the western tip of Pine Lake, 25 trees were cut down in 2004. These trees served as a windbreak from the prevailing western winds for thousands of the other park trees for approximately a hundred years. Though it's denied by the chairwoman of nap that the windbreak trees were destroyed so that native's could be planted in their place - natives *were* planted in their place. In a very short time the native's all died and the windbreak trees are gone forever. The nap chairwoman claims all those 25 trees were hazardous and taking them down had nothing to do with wanting an unshaded space for planting native's. However it challenges plausibility that on a narrow hillside not more than about 100 feet wide that every single one of those 25 trees were in a hazardous condition. They were not judged all hazardous in 2003 when the Hort Science Arborists' examined and graded every tree in the park. It's been my experience that misleading responses from nap is not an unusual occurrence.

02

I've been walking in Stern Grove/Pine Lake park since 1970 when I got my first dog. So I can vouch for the fact that more trees have fallen onto public paths since the taking down of the windbreak trees than had happened in the past 42 years. In fact a death by falling tree limb did occur in 2008. Whether or not the removal of those trees played a part in that tragedy can't be known for certain. However it is certain that park visitor's life and limb have been more at risk since the irresponsible destruction of all those windbreak trees.

Lopping off branches in Glen Park and using toxic herbicides have been carried out illegally by nap during this critical nesting season. Why? Because a grant would have run out otherwise. Money over ethics! Not surprising. A much less significant but revealing unsavory tactic has been to continually rip posters from the Stern Grove bulletin board if they aren't favorable to nap. Posting a rebuttal would show some integrity and openness to other viewpoints but that's not how nap conducts itself. As a result, reliance on ethical conduct regarding nap's pursuits in our parks is questionable and suggests a harmful risk potential to our parks and environment.

Zeiger-1

01 (Cont.)

Nap needs to be scaled back substantially mainly because it's failed to accept that urban parks represent a respite from city life and the opportunity for recreational uses first and aa a very distant second, a museum for native plants. I see no justification for nap's self-anointed permission to exert control over how park visitors may use and enjoy their parks - imposing fences and signage.

The West of Twin Peaks Council, a coalition of 20 neighborhood associations, upon hearing what nap was about and what it's up to voted unanimously to eliminate nap altogether. Nap's plan has been noted scientifically not to be ecologically sound in very many of it's conclusions. For example, that grasslands absorb as much carbon as trees. Shouldn't these instances give reasonable pause to decision makers regarding nap's final certification as it exists in it's present state? It's my opinion that nap needs to be carefully scrutinized for it's ecological authenticity before going forward considering the potential impactful consequences of it's extreme ideology.

Must the public be forced to fund a program they very likely would not want once they learned what it entailed or afterward when it would already be too late to find that so many of the trees they cherished were gone and find themselves very much constrained by nap's bias for *plants before people* ?

Felicia Zeiger
District 4 Rep: Park, Recreation Open Space Advisory Committee.
Note: I speak for myself not for prosac

Zendarski-1

Bock, John

From: Jessica.Range@sfgov.org
Sent: Tuesday, November 01, 2011 3:48 PM
To: Bock, John
Subject: Fw: Please Preserve Off-Leash Access in City Parks!

Jessica Range, LEED AP
San Francisco Planning Department
Environmental Planning
1650 Mission Street, Suite 400
San Francisco, CA 94103
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----- Forwarded by Jessica Range/CTYPLN/SFGOV on 11/01/2011 03:49 PM -----

Bill Wycko/CTYPLN/SFGOV
11/01/2011 03:25 PM

To: Jessica Range/CTYPLN/SFGOV@SFGOV
cc:
Subject: Fw: Please Preserve Off-Leash Access in City Parks!

----- Forwarded by Bill Wycko/CTYPLN/SFGOV on 11/01/2011 03:26 PM -----

"Art Zendarski" <art@zendarski.com>
10/31/2011 06:09 PM

To: <bill.wycko@sfgov.org>
cc:
Subject: Please Preserve Off-Leash Access in City Parks!

1

Zendarski-1

Mr. Wycko,

One of the great pleasures of living in San Francisco is walking in some of the most beautiful parks in the country with my four-legged companion.
Crissy Field is the most frequented park we enjoy and hope to continue to enjoy with your help.

Please realize that dog walking is a wonderful form of exercise both physically and mentally. This is true for both me and Winston. As I would never propose closing parks to people due to the small percentage of people who vandalize and litter, let's not close the parks to off-leash due to a small percentage of irresponsible dog owners. The majority of dog owners are good stewards of the parks of San Francisco and are responsible, caring people.

01

I think it is interesting to hear arguments of how dogs have a negative impact on the parks when the facts listed in their own reports prove otherwise. The beauty of urban parks are the diversification of activities that take place nearly every day.

Please do not be swayed by the small minority of narrow minded individuals who do not understand the true pleasures of urban living!

Thanks you,
Art Zendarski

2

Attachment C Draft EIR Public Hearing Transcript

PH

REPORTER'S TRANSCRIPT OF THE

SAN FRANCISCO PLANNING COMMISSION MEETING

Agenda Item No. 13

---oOo---

Significant Natural Resources Area Management Plan

Hearing on the Draft Environmental Impact Report

Case No. 2005.1912E

---oOo---

San Francisco, California

October 6, 2011

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FILE NO.: A508EA7

PH

THE CLERK: We are now on Item 13 for Case No. 2005.1912E, Significant Natural Resources Area Management Plan, public hearing on the draft environmental impact report.

Please note that written comments will be accepted at the planning department's office until the close of business of October 17th, 2011.

MS. RANGE: Good afternoon, President Olague, members of the commission. I am Jessica Range with the Environmental Planning Division of the Planning Department.

This is a hearing to receive public comments on the draft environmental impact report for Case No. 2005.1912E, the Significant Natural Resources Area Management Plan.

The Recreation and Parks Department developed the natural areas program to protect and manage the remaining natural areas owned by the City. There are 32 designated natural areas, 31 in San Francisco and one, Sharp Park, is located in Pacifica.

The management plan identifies management actions within each of these natural areas and is intended to guide resource protection, habitat restoration, and trail and access improvements, other capital projects, and maintenance activities over the next 20 years. The EIR

PH

also addresses the impacts of the routine maintenance and the Sharp Park restoration project at the project level.

Routine maintenance activities are similar to the current scale and scope of the Natural Areas Program and would not change substantially with implementation of the management plan. Project level details have been developed for the Sharp Park restoration project, enabling this aspect of the management plan to be addressed at the project level.

The purpose of the Sharp Park restoration project is to enhance the habitat for the California red-legged frog and the San Francisco garter snake. The main components of the Sharp Park restoration project includes dredging and re-contouring of the Laguna Salada wetland complex, creating an upland and wetland habit in and around the lagoon, and creating a habit corridor between Laguna Salada and Horse Stable pond.

The project evaluated in the EIR is the project proposed by Rec and Park. As part of the environmental review under CEQA, we are required to analyze alternatives to the project. These alternatives are not Rec and Park proposals for management of the natural areas.

Staff is not here to answer comments today. Comments will be transcribed and responded to in writing in a comments and responses document, which will respond

PH

to all verbal and written comments received and make revisions to the draft EIR as appropriate.

I would, however, like to note one correction that will be made in the comments and responses document, which may clarify some comments received today. Page 2 of the summary erroneously identifies the environmentally superior alternative as the maximum restoration alternative.

A comprehensive analysis of the environmentally superior alternative is provided on draft EIR pages 525 through 526 and determines that the maintenance alternative is the environmentally superior alternative. Page 2 of the summary chapter will be corrected in the comments and responses document.

This is not a hearing to consider approval or disapproval of the project. That hearing will follow the final EIR certification. Comments today should be directed at the adequacy and accuracy of the information -- of the information contained in the draft EIR.

Commenters should speak slowly and clearly so that the court reporter can produce an accurate transcript. Also, commenters should state their name and address so that they can be properly identified and so that they can be sent a copy of the comments and responses

PH

when completed.

After hearing comments from the general public, we will also take any comments on the draft EIR by the Planning Commission. The public comment period for this project began on August 31st and it extends until 5:00 p.m, on Monday, Augu- -- October 17th.

This concludes my presentation on this matter, and unless the commission members have any questions, I would respectfully suggest that the public hearing be opened. Thank you.

PRESIDENT OLAGUE: Great. I do want to extend the comment period until the end of October, so by a couple of weeks at least. Okay. And we can discuss it if we both want to extend it beyond that, you know, later on.

We have a few speaker cards, Sarah Ballard followed by Sally Stephens.

PH-Ballard

MS. BALLARD: Good afternoon, Commissioners, Director Rahaim. I'm Sarah Ballard from the Recreation and Parks Department, and I just briefly wanted to put this plan in a little bit of context for you.

As you may know, we own about 14 percent of the land in San Francisco, about 4,000 acres, and of that, about a thousand acres are what we refer to as natural areas. As Jessica said, they're made up of 32 distinct areas, including Bernal Hill, Twin Peaks, Sharp Park.

PH

The plan -- the Natural Areas Management Plan was established through a decades-long process. It was published in 2006, and about ten years of expert research and community process went into creating the plan. Uhm, and as Jessica spoke to, it really creates a road map for us as the department for how to manage our sensitive natural habit, including some threatened and endangered species, directs us how to prioritize our scarce resources and our volunteer time.

Our job as the Recreation and Parks Department is to balance a variety of needs, and sometimes those needs are competing. And we feel that this management plan does that through a very carefully crafted process. As you know, what's before you today is the draft EIR, and we look forward to continuing to receive public feedback on that, to hear your feedback, uhm, and continue working with your staff. They've been really exceptional through this process.

Uhm, I just did want to point out that, uhm, to echo what Jessica said about the alternatives, we -- as you know, there are -- we are required under CEQA to study a variety of alternatives, but the project and the plan for us has not changed. And I think there's been some confusion around that, particularly as it pertains to the dog play areas, and just wanted to clarify that for you.

PH

Thank you very much.

PRESIDENT OLAGUE: Thank you. Renee Pittin, Bo Links, Linda Shaffer.

PH-Stephens

MS. STEPHENS: Yeah. Hi, my name is Sally Stephens, and I'm the chair of the San Francisco Dog Owners Group. Urban parks are for people. They're our collective back yards, the places where we go to play with our kids and our dogs and simply sit in the sun.

We have so little open space in San Francisco, we cannot afford to lock a third of it away in plant museums where you can look but not enter, which is what the project and the maximum restoration alternatives would do.

01

We obviously support the maintenance or maximum recreational alternatives because they protect existing natural areas yet preserve access for people. The EIR incorrectly states the number and total acreage of all placed dog play areas, or DPA's. There are actually 29, which cover about 120 acres total, but 80 percent of that total is located either within or adjacent to a natural area and is therefore at risk of future closure if NAP claims impacts from the dogs.

02

Many were designated as DPA's years before the N -- the NAP came around, yet with a simple stroke of a planner's or a NAP staffer's pen, they can be gone. If

PH

you're going to force people out of the parks, you better have a good reason.

The NAP EIR reportedly -- repeatedly says dogs may have an impact, but there's no evidence cited in the EIR that dogs are now or ever have done so. EIR's must be based on documented impacts, not hypothetical conjectures. Specific proof of impacts, not just claims of observations with no details given, must be added to the EIR.

03

Give us unbiased proven facts or don't kick us out. NAP has become a way to get rid of DPA's and city parks since the only real remedy from the alleged impacts from dogs is closure of the DPA. As such, the EIR must consider the impact of those closures on the human and urban environments, not the just the natural environment.

04

Throughout the EIR, dogs are described solely as nuisances. The EIR does not consider any benefits of dogs and off-leash dog walking to people and communities. The NAP EIR must consider impacts of a physical and emotional health of people who can no longer walk their dogs in closed DPA's, and on the sense of neighborhood and park community that will be impacted if DPA's are closed or significantly reduced. Yet it does not.

05

This is particularly important with the maximum restoration alternative that will essentially close DPA's at McClaren, Bernal Hill, Buena Vista, and Lake Merced.

06

Page 8

PH

These DPA's constitute roughly 75 percent of the total legal off-leash area in the city parks. The EIR does not adequately analyze the impact of that local closure on the remaining DPA's and other nearby parks, especially when combined with the Golden Gate National Recreation Area's plan to close 90 percent of its off-leash space. The dogs and dog people aren't going to go away or be quietly forced out of our parks. Thank you. Copies of what I said.

PH-Links MR. LINKS: Good afternoon. My name is Bo Links. I'm a lifelong San Francisco resident, and as I'm sure you can imagine with a last name like mine, I'm a very passionate golfer.

I've been playing Sharp Park golf course for 45 years now, and I've also served for a number of years as a volunteer golf historian for the City and County of San Francisco, and what I wanted to convey to you -- and I've submitted some written comments as well, and my friend and colleague Richard Harris I think with will speak later on behalf of the San Francisco Public Golf Alliance, which we co-founded -- but I wanted to add some historical words and specifically to say the staff got it a hundred percent correct in the draft EIR designating this precious golf course as an historic resource.

01

This is the legacy of John McLaren. It was his

Page 9

PH

vision, and he brougnt in one of the greatest architects in the history of the world, Alister MacKenzie, to create this very special asset for the City and County of San Francisco even though it's on property in Pacifica.

This is clearly the work of a master. It's the equivalent of a Rembrandt that would hang in a museum, and the fact that it's old and maybe a little faded doesn't take away its luster. People come from all over the world to walk it, to play it, to see it, to admire it, to know it, to understand it. It's a symbol of golf's golden age. It's part of our historic legacy just the way Sharp -- the way Coit Tower is, the way the cable cars are.

01 (Cont.)

And the habitat restoration that's in the works in the subject of this EIR is by no means incompatible with maintaining that golf course. The species in question are fresh water species. This product -- this property, excuse me, was a salt marsh before MacKenzie transformed it into the oasis it is today. It's going to celebrate its 80th anniversary next year, and the process that's under way in this draft EIR should continue without interruption so the city can move forward to do what's needed to do, and that is to implement a very responsible habitat restoration protocol.

02

The frogs are thriving down there. This is one of the biggest birth years in recent memory, and that

PH

evidence is on the record, and what the city plans to do, we support. It's consistent with maintaining this property in a way that serves a variety of interests, and I want to thank you for giving me the opportunity to speak to you, and you consider in addition to written comments that have been submitted. Thank you so much.

PH-Pittin

MS. PITTIN: Good afternoon, Commissioners. My name is Renee Pittin. The Hippocratic Oath says first do no harm. This seems to be a good approach for any person and certainly for government.

I don't think that this applies to the National Areas Program. As a senior, whose primary -- okay, whose only exercise is walking with my dog, I feel that the increased removal of our shared open space is -- by the

01

Natural Areas Program, which is a single purpose and exclusionary program, will drive more and more local residents into increasingly smaller areas for exercise, access, and enjoyment of our San Francisco landscape.

I live near Glen Canyon, and too many times I have not been able to walk there because the Natural Areas Program was engaging in yet another round of toxic warfare, laying waste to new generations of hapless and helpless flora and fauna and exposing the local neighborhood and everyone moving through the area to these poisons.

PH

I oppose this unfettered increase of the Natural Areas Program into more and more of San Francisco's parkland and open space, and I ask that you all, as members of the planning commission, recognize that this program removes shared space from the community on the basis of sharply and scientifically contested assumptions about what is native or natural and makes equally unfounded assumptions about what actions, such as walking with one's pooch, can or cannot occur in our shared and all-too-limited San Francisco open spaces.

01 (Cont.)

Please oppose any expansion of this program. Thank you.

PH-Shaffer

MS. SHAFFER: Good afternoon, Commissioners. My name is Linda Shaffer. That's spelled S-h-a-f-f-e-r. I am currently the vice-president of the local chapter of the California Native Plant Society, and I would like to thank you for this opportunity to address you. Uhm, I have three points that I would like to try to make in this limited time.

The first one is, uhm, that I have -- I have to admit I was very curious to see what an environmental impact analysis would look like, given that it's of a program that is environmental in nature, and I have to say in the time that I've had to read it so far, I've been very impressed. It's -- I think that those involved have

PH

done a good job, a wonderful job, particularly with respect to the 31 natural areas that are located in the City of San Francisco. So I would like to commend those involved.

I would also like to add that the Native Plant Society is in the process of having people who have volunteered in a lot of these natural areas for many years read over the sections that pertain specifically to the projects proposed for those natural areas and make sure that, uhm, based on their knowledge of the area that the report is both accurate and complete.

And I'm delighted to hear that there will be an extension to the public comment period because it's been very difficult. The same group of people that's been involved in commenting on this has also been involved in commenting on the recreation/open space element, and the first 30 days of this comment period overlapped with the last 30 days of that. So it's been kind of crazy. So thank you for that. The other -- that was actually the second point that I wanted to make.

The third point that I would like to make is that I'm still in the process of reading this. The complexity in this document has to do with the issue at Sharp Park. You can already tell that this is a controversial issue -- issue, a controversial program.

PH

Uhm, I have so far identified one factual error in the portion of the document that deals with Sharp Park.

I will be submitting comments in writing, but I don't have them finished yet, and I would like to add, please, I do not want to receive a copy of the comments and responses, so I'd like to get that -- I had that happen to me once when I wasn't expecting it, so no thank you. That was just fine.

Thank you very much for your attention.

PRESIDENT OLAGUE: Thank you. Tenzin Sherap, George Mozingo, Patrick Skain, followed by Clarence Bryant.

PN-Sherap

MR. SHERAP: My name is Tenzin Sherap, and my -- my address is General Delivery, San Francisco, 94142. I would like -- I know that there's been comments about the golf course as being -- whether or not the golf course is going to be preserved, and I would like to say that I'm speaking highly in favor of the golf course being preserved.

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It seems as though Mr. Antonini and -- or maybe the rest of this board has been mercilessly okaying practically any request that has to do with children's -- such as in our beautiful Dolores Park that is being defaced for this child's park. And it's very important that a place like this golf course, which is for teenagers

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and for elderly and older people to get exercise and enjoy the environment, that this be maintained for San Francisco residents. Thank you very much.

PRESIDENT OLAGUE: Thank you. If I did call your name, if you can just keep coming up to the mic.

PH-Mozingo

MR. MOZINGO: Good morning, my name is -- or good afternoon, rather. My name is George Mozingo. I'm a resident of the City and County of San Francisco, and I'm an employee of the County of San Mateo.

Our counties have worked collaboratively and cooperatively to come up with a plan that really does address the issues of habitat preservation and to protect those species that are enumerated in the article -- in the draft EIR, specifically frogs, the red-legged rana aurora draytonii, the garter snake, and others. Those are, in fact, as Mr. Links previously stated, fresh water species. That original geography was called in the colonial period, Laguna Salada, which I believe to be meaning a still body of water that is salty.

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Now, those frogs do not exist in those environments, so this is, in fact, a construction. It is a historical construction by a -- one of the great architects of golf courses ever. It is also a -- of cultural value. If you were to go there on any day, you would find old people and young people and students and

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every -- people from every group and nation playing on as groups, as -- and as individuals. It is also affordable relative to other golf courses in the area.

In the county, we don't have a lot of inexpensive golf courses. Here in the city and county we have even fewer. This is an opportunity for people of limited income to play in a golf course that is stunningly beautiful and can be restored.

Uhm, it is also -- uhm, this plan will protect those species that are enumerated. Without it, it will, again, become a rather dry and difficult place for those species to exist. Particularly in the plan, the creating of the contours for the snakes to exist where they can go down and feed on the frogs I thought was just nothing short of engineering brilliance on the part of the two park -- park groups.

And finally, it is a recreational. Even those like myself who don't golf, it is a wonderful place to go walk. Thank you.

PRESIDENT OLAGUE: Again, I'd like to ask those who are standing in front of the door to either find a seat or move to this other side since it is creating a fire hazard, just those standing in front of the door. Have to clear the doorways.

So if you've heard your name called, please come

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up to the mic. Greg Gaar, Paul Rotter, and Neff Rotter -- Roter?

PH-Skain MR. SKAIN: Good afternoon, Commissioners. My name is Pat Skain. I was a member of the Citizens Advisory Committee for the Natural Areas Program. And I see this draft environmental impact report as a continuance of those efforts in past years. We need to move ahead with these -- this study itself in the defined, and give Park and Rec staff wherewithal to actually begin to improve our recreational facilities and our natural areas in San Francisco.

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I do want to -- specifically to comment on the great work that staff did in preparing this and work done by all the consultants on it. We're never going to be 100 percent happy. There are some elements in the city that want to occupy everything. There are activities that simply have significant impacts on every area of our recreation facilities.

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We've seen in the last year exponential growth in requests for soccer fields and whatnot, so it's not just any one group, but these are simply 32 areas. It was even culled town in terms of 32 areas. And the management of those 32 areas have been looked into significantly by the staff, the individuals working on this report.

I think it's very important to move this

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environmental impact report forward. It's a 20-year project. I'm sure it will be tweaked in the course of the next 20 years, but it's important to give staff and the citizens an opportunity to see what San Francisco can be and how good our recreational facilities can become. I want to thank you all.

PH-Bryant

MR. BRYANT: Good afternoon, Commissioners. My name is Clarence Bryant. I am a resident of San Francisco and a product of its streets, its environment. I'm also a golfer, and I would like to read into -- I'm not sure what the protocol is for this hearing, but I would like to read into the record a copy of a letter that the Bay Area Golf Association has submitted to Congressman Speier, Mayor Ed Lee, Board of Supervisors of both San Francisco and San Mateo.

And, to wit, it says, Dear Congressman Speier, Sharp Park is well known as the people's golf course, public course, where racial minorities, retired seniors, school children, working men and women, and in these days even unemployed can play golf.

Because of its modest fees, all these groups play golf in large numbers in Sharp Park. The Bay Area Golf Club represents such golfers. We are a mostly African-American club formed in 1954 and based in San Francisco.

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We are a founding member of the Western States Golf Association, one of America's oldest African-American golf associations. We were the host club for the Western States Inaugural Championship Tournament in 1955, where the founding members of the clubs met and played golf together for the first time. The tournament was held at Sharp Park.

It is significant that Sharp Park was built by history's greatest golf architect, Alister MacKenzie. Most of MacKenzie's courses include the most famous ones, like Augusta National, the site of the annual Master's Tournament, and Cypress Point. These are private and inaccessible to common people. Sharp Park is part of San Francisco's legatorian tradition of providing great classical architecture for its public places. This is the spirit of San Francisco.

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Is that my dong?

PRESIDENT OLAGUE: There's a second one, but you have about 30 seconds, but you can certainly submit the letter.

MR. BRYANT: I'd like to submit this into the record if possible.

PRESIDENT OLAGUE: Into the record, yeah, definitely.

MR. BRYANT: Okay. Thank you very much for your

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time.

PRESIDENT OLAGUE: Thank you, sir. If I've called your name, please feel free to come to the mic, and Peter Brastow is the last card I have, and I know I did call a few other names, so please feel free to come up.

PH-Rotter-P

MR. ROTTER: Commissioners, my name is Paul Rotter. I'm a resident of San Francisco. This program is offering the city a major expansion of NAP programs into the MA3 -- maintenance area 3. And in support of that, the statement on page 2 says that the EIR considers the maximum restoration alternative as the environmentally superior.

However, if you wade yourself -- wade through it back to page 525, the EIR says, the maximum recreation and maintenance alternatives are the environmentally superior alternatives, and it ends the statement that the maintenance alternative, on the other hand, would preserve the existing distribution extent of biological resources, including sensitive habitats.

For these reasons the maintenance alternative is environmentally superior alternative. That's not what's being proposed by this EIR. The EIR is proposing that you adopt a program that is environmentally least good.

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Second thing about that is that this proposal is a violation of CEQA. CEQA says that public agencies

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should not approve projects proposed if there are feasible alternatives or feasible mitigation measures available. There are -- from what they propose is the maintenance intervention of into the environment.

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There are alternatives, and it says so in this EIR. This EIR is not a good one. This is a bad policy for the city. NAP largely is also a bad policy for the city with their environmental destruction, use of toxic sprays.

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I walk on Twin Peaks almost every weekday morning, and on there I run into the department doing spraying of pesticides when they should be -- the members doing that should be wearing respirators. Things like that when I point out to them they say that's none of your business.

So it's important that you realize that this EIR is not the direction that you should be going. We should be going into a more environmentally protected type of alternative, and that is maximum maintenance of the existing environment.

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The environment also decides the use of toxics. The destruction of the number of trees is a gross violation. San Francisco has barely one tree per citizen in this city, and this proposes to turn down a large percentage of that. It shouldn't be done. Thank you very

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much.

PRESIDENT OLAGUE: Any additional public comment on this item?

PH-Rotter-N

MS. ROTTER: Hi, I'm Neff Rotter, and I agree with my husband that the maintenance alternative would be the very best way for San Francisco to go.

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PH-Bowman

MS. BOWMAN: Hello. I'm Arnita Bowman, and I'm a user of these parks, and I really feel that recreational funding and open space for people is being hijacked by this plan. San Francisco has already taken extreme position of excluding all people from the San Francisco watershed. The 26,000 acres there is surrounded by a seven foot chain link fence, and this plan ignores that this has been already allocated to natural areas.

The San Francisco park sites are only ten percent or tenth of the size of that single refuge, and this extreme plan takes 40 percent of that little space for more native plant projects. For me, the gardening projects will provide little benefit and will destroy the new ecosystems that have been developed over the past 400 years and will destroy this treasured San Francisco landscape that is part of our diverse culture, history, and future.

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This costly plan is not even the environmentally superior plan that's been mentioned and does not

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necessarily improve the beauty of the parks or quality of the life for residents. In addition, introducing new or expanding endangered species habitats will permanently hijack our small but precious recreational areas.

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For example, the historic Sharp Park recreational area is under attack even though man made the fresh water habit that wasn't previously there, and neither the endangered snake nor the endangered frog could live there if the saltwater habitat was restored.

This plan doesn't take into consideration these future impacts on people or recreation. People with dogs are only allocated freedom in three percent of the city park areas, and the hoarding plan treats us like an invasive nuisance and takes away an additional 20 percent, and the monitoring plan will probably eliminate the rest. I resent being treated like an invasive part of the community in our treasured city parks.

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Please support the -- either the recreational plan or the maintenance plan so that we won't wake up from the nightmare of NAP to an ugly and uninviting open space. Thank you very much.

PRESIDENT OLAGUE: Thank you.

PH-Gaar

MR. GAAR: Good afternoon, Commissioners. My Name's Greg Gaar. I've lived in San Francisco all my life, and I've volunteered with the Natural Areas Program

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and the National Park Service doing habitat restoration. I also started a San Francisco native plant nursery in Golden Gate Park because I want to propagate San Francisco native plants that can be used for habitat restoration throughout the city and would help complement the Natural Areas Program.

I already sent my written comments in to the environmental review officer. So that will be on the record. But some of the criticisms I have of the draft EIR is although I support the plan, the Natural Areas Management plan, there are a few little flaws that I would like to tweak in the -- the draft EIR.

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Number one, what is recreation? Well, recreation in the draft EIR is predominantly traditional recreation: Bicycle riding, hiking, dog walking, et cetera. But for a lot of us who are naturalists, we do a lot of vigorous habitat restoration, which is real hard, physical labor, controlling the weeds from over-running the native plant communities, and that is very invigorating recreation. And also you get to meet other -- you get to work with other city workers, and you work with your community.

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It's unfortunate that the draft EIR cannot talk about the environmental benefits of restoring San Francisco's natural heritage. The 31 natural areas in San

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Francisco are natural areas because they're remnants of the original landscape containing flora and fauna that were here when the Spaniards arrived in 1769.

So the goal is to try to protect what remains of San Francisco's natural heritage. And, you know, it's been a long time coming trying to get this EIR adopted, and I think we're getting very close now, and we can start implementing some of the action items in the management plan. I'm very excited by that. So I hope we have your support. Thank you.

PRESIDENT OLAGUE: Thank you.

PH-Brastow

MR. BRASTOW: Good afternoon, Commissioners. My name is Peter Brastow. I'm director of Nature in the City, and I want to make a few comments about the natural areas planned EIR today.

First, I want to commend the goals which are in the ratural areas plan. These, in fact, are the goals -- should be the goals of the PUC and DPW and for the rest of the Recreation and Parks in managing their lands, frankly. I think the DEIR in general has done a terrific job of analyzing the environmental impacts of the proposed project, and I'd like to say that the plan is not radical at all.

In fact, it was a pretty serious compromise. It was negotiated with the working group several years ago

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chaired by General Manager Agunbiade I guess at the time.

And so the -- all the myths that I keep hear being perpetuated about natural resource management and weeds and lagoons and this, that, and the other thing, I don't want to take up all my time dispelling those myths, but you're hearing a lot of mythology today, unfortunately.

So I support the plan wholeheartedly. I would like to see it go forward. I hope we have your support, but I also have some constructive criticism that I would like to offer. And that is to say that it's -- it is a lot of -- kind of ironic that the recreation and the maintenance -- that was a typo, by the way, sir.

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The true environmentally superior alternatives apparently are the recreation and maintenance alternatives, which I find to be quite ironic, considering that we're trying to restore the natural environment. So the project plan -- neither the project plan nor the maximum restoration alternative are the environmentally superior alternatives, and I would just like to ask a few questions about that.

What are the assumptions behind those alternatives becoming the environmentally superior alternative? Which human environment are we actually trying to create if the maximum restoration alternative is

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not the environmentally superior alternative? One where nature conservation is not paramount?

What, in fact, is environmental sustainability without the actual conservation of our indigenous biodiversity? I mean, that should be the underlying fabric of sustainability. And so I thank you for extending the comment period because I'm going to need some more time to help you answer these questions.

And a couple more things, so I'm afraid that the true impacts of the maximum restoration alternative are really hard to evaluate because the description of that is literally only two pages long, and then it goes into the impacts, which is a few pages, but within describing the impacts, there's no specifics.

There's nothing about how the maximum restoration alternative varies from the project plan -- from the project at the remainder -- at all of the sites, and so I find it really hard for the public to say, well, this is what the maximum restoration alternative is going to do or this is what the maximum recreation alternative is going to do at any given site.

And finally, we would like to have a lot more specifics, as I said, included in those other alternatives, including at Sharp Park. I think given that the proposed project includes the 18-hole golf alternative

02 (Cont.)

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from the alternatives report, the maximum restoration alternative should include restoring all of Sharp Park golf course. Thank you.

04 (Cont.)

PRESIDENT OLAGUE: Thank you. John Keating, Richard Harris.

PH-Keating

MR. KEATING: Good afternoon. I'm John Keating. I want to thank you for your public service. I'm a native and resident, and curiously, I realize my first house was right across the street from the speaker a couple ago, Greg Gaar. So I appreciate all the ardent advocacy of the citizen comments on all sides of this issue.

I think your highest duty and your highest benefit you can provide in society is making sure that the staff reports you're getting in the environmental impact reports are straight up. That's all I think you can really do is make -- because you got to rely on your -- those reports, but make sure they're straight up, and I don't know the answer to that. I've heard a lot of things both ways.

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What I suggest generally in other areas I've been involved in are the two easiest ways to find out whether you're getting good, impartial analysis is, one, what are the presumptions that are being made, the unfounded presumptions? Everyone always makes unfounded presumptions. So to find out whether it's biased or not,

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find out whether they're all sort of in one favor.

Do they make presumptions that always go in one favor, or are the presumptions balanced in valuing recreation versus natural restoration, in evaluating whether these restoration efforts will have adverse short term impacts regardless of the long term impacts? So you look at whether the presumptions all go one way.

The second thing I think you look at is what's being considered and what's not being considered. Are they looking at the relevant issues? We have maybe, what, 100, 150 years of managing these parks in our city balancing these issues. I think if you're finding that they're making a radical departure in a general management strategy, you ought to have a heightened scrutiny then.

And, you know, quick analogy is when we got our house -- and I live on sort of the east end of the Sunset up above the Sunset looking out -- the biggest attraction on our day looking at it a blue heron flew right over the top. So I thought this was cool. We had a lot of blue herons coming over, and we had hawks. We had a hill nearby, and there was a natural restoration plan, which I favored, and it was a good deal.

Subsequently, we lost some habitat for the blue herons and all those hawks. I don't know whether they'll ever come back, but now we have ravens all over the place.

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So the question is what's the short term?

The other analogy is I spent my childhood clearing out what we called greasewood, which is coyote brush that grows when you let things grow wild around here. And it's called greasewood because the cities made us cut it out --

PRESIDENT OLAGUE: Thank you.

MR. KEATING: -- because so it was so dangerous for fires. Thank you.

PRESIDENT OLAGUE: Thank you.

PH-Harris

MR. HARRIS: Good afternoon, Commissioners. I'm Richard Harris. Thank you for your time on this. I am a founder of the Public Golf Alliance, and we are concerned with issues having to do with the city's golf courses. We have submitted previously to Bill Wycko a letter with substantial exhibits on the history of the Sharp Park golf course.

We are -- we want to assist you and your staff in knowing the history. We've done a lot of research on it. There's old newspaper articles, old photographs. There's writings of MacKenzie himself. The staff has designated the golf course as a historic resource, and we support that designation.

The -- and we -- given very substantial amount of additional support than the matter that was in the

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staff's report. The -- we will be submitting additional comment. Generally the notion of sharing the property between species and golfers, uhm, we support that. Uhm, and, uhm, we think there are ways that it can be done where the property can be shared to mutual benefit by the species and the golfers.

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There are some details in the -- in the draft EIR that we will make more comment -- more detailed comment on. We have architects and engineers that are looking at that, and we will have detailed comment. We give preliminary comment in the letter that you've had. We will have much more detailed comment about that.

Uhm, and we, uhm, look forward to continuing to participate in this process with the city, with the County of San Mateo, and with your body and with your staff. This is very important property. It's significant to the world of golf. And I have some letters that have come in from the World Golf Association, the PGA, the National Golf Course Superintendents Organizations, and we will be submitting those as well.

Thank you very much. We look forward to working -- cooperating with you and with your staff.

PH-Noetzel

MR. NOETZEL: Good afternoon. I'm Steven Noetzel. I live in the mission. I happen to also be a commissioner on the veterans affairs commission in San

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Francisco. So I thank you all for your service as well.

I -- I do have a dog in this fight. She happens to be a beautiful black lab mix that we got from the SPCA some six years ago. And that's what I want to take a moment to talk about, the squeeze that's happening in this city between dog adoption numbers and at the same time restriction of space for dogs to run free.

And so I hope that you all recognize that we in San Francisco have probably the most progressive and most productive SPCA in the entire United States. The ratio of dogs adopted by families in San Francisco is higher than almost anywhere in the United States, and almost no dogs are euthanized in San Francisco.

So you have this squeeze while at the same time young families and young people are adopting dogs in record numbers, at the same time there's a squeeze in some plans to restrict the places that those dogs can run, either on leash or off leash, and I think this needs to be seriously looked into and addressed by any EIR or any planning for off-leash dog areas in the future.

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Don't restrict them. There's more dogs coming every day. Thank you.

PRESIDENT OLAGUE: Thank you.

PH-Emanuel

MR. EMANUEL: Hello, I'm David Emanuel. I've lived in Glen Park. I am for the maximum recreational

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01 (Cont.)

alternative, and I just wanted to point out the Golden Gate National Recreational Area just proposed a dog management plan, and they forcefully cited the dog play areas in the San Francisco parks as alternatives.

So if those areas are closed, like the maximum plan is suggesting, people with dogs will not have places to take their animals for exercise with them. So I just want to point out that it's -- that this plan is just a further reduction of those areas, and please consider allowing our animals to have space because they are compatible with plants. Thank you.

PRESIDENT OLAGUE: Thank you.

PH-Solomon

MR. SOLOMON: Good afternoon, Commissioners. Mark Solomon again, an invasive nuisance in the north Mission, who rolled into town 22 years ago today to a police riot on the Castro, and the ultimate Natural Areas Program happened 11 years later when the earth shook violently.

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I think that this EIR is probably going to be incomplete unless it analyzes the option of taking Sharp Park and giving it to the Golden Gate National Recreation Area. That's something that has been proposed already. I don't believe it's covered in this. I really think that should be on the table for analysis in order for this to be a complete EIR. Thank you very much.

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PRESIDENT OLAGUE: Thank you. Is there additional public comment on this item? Seeing none, public comment is closed. And just wanted to repeat that the comment period has been extended to October 31st? Is that a Monday or -- at 5:00 p.m.? Commissioner Antonini.

PH-Antonini

COMMISSIONER ANOTONINI: Thank you. Thank you all for your comments. Just a few overviews and some questions. Of the 31 areas within the City and County of San Francisco under consideration, leaving Sharp Park out for the moment, of course, we have to realize that these are not there by design but rather by happenstance.

Many of them happened to be in areas that were un-accessible or hard to build on or at the tops of hills or various other things, and so I don't know that we necessarily have to look at whatever exists there as being the best use. I'm not saying that these are areas that should be developed.

Obviously, we have to kind of consider the situation and decide whether or not what has developed over the years is what we want on the lands and if every inch of these lands should be maintained as public property.

I mean, I often walk around when bigs, walk around a lot of the areas that are under consideration, and one thing that's quite clear is many have become

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overgrown over the years. Trees are wonderful things, but too many trees, like anything else, is not the best thing and, you know, thinning them out makes for a healthier environment sometimes. Makes it safer; makes it the ones that remain healthier, and they're -- I think careful tree removal would be something that is important.

However, on the other side of it is those who want everything completely removed back to the so-called natural environment. The pictures I've seen of San Francisco, you know, in 1850 or before is mostly sand, wind, and almost an un-inhabitable area. So we've done a wonderful job in making this city that people can live in.

So I think to -- you know, I don't know what native plants are really native. There couldn't have been very much from the pictures I've seen, but maybe some scrub grass and an occasional tree here or there, but not a lot. Uhm, so you know, I think we have to look carefully at a lot of these areas.

For example, you take places like Bayview Park, which is brought up in here, parts of McLaren Park, the PUC lands around Laguna Honda, even parts of Mount Davidson, but, you know, make sure that we're looking at this and maximizing our natural resources so that people can use them as well as possible, and some of these areas probably need improvements. Just to leave the mess they

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are probably may not be the best thing.

You know, people talk about dog walking areas. People talk about recreational areas. We have a big shortage of playing fields and other things and these are things that we need to really look into. 03

The other thing in regards to Sharp Park in particular, I'm glad the one speaker brought up the fact that before there was a break water, you know, the Laguna Salida [sic] means Salt Lake, and it was basically -- or salt lagoon, you know, which was a salty environment that would not have supported the red-legged frog and the garter snake. So we actually created a breeding ground and, you know, to eliminate the break water would, of course, eliminate those species. 04

So I think that part of this whole thing is protecting something that was never there in the first place, but I'm not saying that we shouldn't protect them, but they're not really indigenous to the area. The most important thing is to make sure that, in my opinion, that the Sharp Park golf course is maintained. 05

I did not see -- and maybe staff can answer this question, Jessica Range in particular -- uhm, I didn't see -- there's talk about removing one of the holes of Sharp Park, and is there a replacement? I did not see that in the EIR. Maybe it's in there and I didn't read 06

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carefully enough, because a 17-hole golf course doesn't work real good for me.

And also I did not see an alternative that utilized some of the space to the east of Highway 1, which now has four holes -- I believe it's either three or four -- and I always thought when I was golfing there that that would be a great place to put a couple of extra holes.

Because back in 1981 when we had one of our big storms, I remember what happened to number 16 and 17, and they got washed out for quite a few years. Took a long time to get them back in there, and mostly you were playing golf in the sand. So I think you may be fighting kind of a losing battle on it.

I'm not saying you should ever really change this historic course, but you know, some of the things you have to look at is if you're losing a hole somewhere, certainly maybe you can reclaim it on the other side of Highway 1 and make sure that the holes you do have can withstand the forces of Mother Nature and make the course a really good, playable course at all times.

Maybe you can answer my question about these alternatives.

MS. RANGE: Jessica Range, planning staff. Uhm, we did identify that removal of the hole would be a

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significant impact on the Sharp Park golf course as a recreational resource. And so the recreation section identifies a mitigation measure at the very end, which is to restore the playability of the Sharp Park golf course as an 18-hole course, and after the mitigation section, there's also a programmatic analysis of the impact of the mitigation measure, and there's two options that are -- are proposed programmatically.

And one is to restore the hole on the east side of the highway, and the other one is to restore the hole on the west side of the highway. That project would need to be further evaluated. It's only addressed very programmatically at this stage, so Rec and Park would have to come back for additional environmental clearance to do that.

COMMISSIONER ANTONINI: Okay. Thanks for your answer. I would say whatever you need to do to make sure you end up with an 18-hole course is important, and also work with the San Francisco Public Golf Alliance and Bo Links and Richard Harris and the other people who spoke to make sure we're as close to the historic Alister MacKenzie design as possible.

But where there are situations where, even without the frog and snake habitat issue, if it's kind of a losing battle with nature, we have to make sure that,

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you know, we make a course that's going to work. So thank you very much for your work on this.

PRESIDENT OLAGUE: Commissioner Sugaya?

COMMISSIONER SUGAYA: Oh, I should have taken off. I'll submit something in writing.

PRESIDENT OLAGUE: Okay.

COMMISSIONER SUGAYA: Had a concern about the way the resources --

PRESIDENT OLAGUE: Thank you. I think we're done with the public hearing on this item, and we will be taking a 15-minute recess after this.

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CERTIFICATE

I, the undersigned, a Certified Shorthand Reporter for the state of California, hereby certify that the foregoing proceedings were reported by me, a disinterested person, and were thereafter transcribed under my direction into typewriting; that the foregoing is a full, complete, and true record of said proceedings.

Executed this 15th day of November, 2011.

_____
LAURA AXELSEN, CSR NO. 6173